

Anthera Pharmaceuticals Inc  
Form 424B3  
November 19, 2010

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**Filed Pursuant to Rule 424(b)(3)  
Registration No. 333-170433**

**PROSPECTUS**

**6,741,733 Shares of  
Common Stock**

This prospectus covers the sale of an aggregate of 6,741,733 shares of our common stock, \$0.001 par value per share, by the selling stockholders identified in this prospectus, including their transferees, pledgees, donees or successors. The common stock covered by this prospectus consists of 6,547,797 shares of common stock and 193,936 shares of common stock issuable upon outstanding warrants held by existing stockholders.

The selling stockholders may sell their shares of common stock from time to time at market prices prevailing at the time of sale, at prices related to the prevailing market price, or at negotiated prices. We will not receive any proceeds from the sale of common stock by the selling stockholders, other than as a result of the exercise of warrants held by the selling stockholders for cash.

No underwriter or other person has been engaged to facilitate the sale of shares of our common stock in this offering. We are paying the cost of registering the shares of common stock covered by this prospectus as well as various related expenses. The selling stockholders are responsible for all selling commissions, transfer taxes and other costs related to the offer and sale of their shares of common stock.

Our common stock is traded on the NASDAQ Global Market under the symbol ANTH. On November 18, 2010, the closing sale price of our common stock on the NASDAQ Global Market was \$5.61 per share.

**This investment involves risks. See Risk Factors beginning on page 11.**

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

**The date of this prospectus is November 18, 2010.**

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**You should rely only on the information contained in this prospectus, any applicable prospectus supplement and the information incorporated by reference in this prospectus. We have not authorized anyone to provide you with additional or different information. This document may only be used where it is legal to sell these securities. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of shares of our common stock.**

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**PROSPECTUS SUMMARY**

This summary highlights certain information contained elsewhere in this prospectus. Because this is only a summary, it does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the information set forth under the headings Risk Factors and Management's Discussion and Analysis of Financial Condition and Results of Operations and our financial statements and the related notes appearing at the end of this prospectus, before making an investment decision.

**Our Company**

We are a biopharmaceutical company focused on developing and commercializing products to treat serious diseases associated with inflammation, including cardiovascular and autoimmune diseases. We currently have one Phase 3 clinical program, varespladib, and two Phase 2 clinical programs, A-623 and A-001. Varespladib and A-001 inhibit a novel enzyme target known as secretory phospholipase A<sub>2</sub>, or sPLA<sub>2</sub>. Elevated levels of sPLA<sub>2</sub> have been implicated in a variety of acute inflammatory conditions, including acute coronary syndrome and acute chest syndrome, as well as chronic diseases such as stable coronary artery disease, or CAD. Our Phase 2 product candidate, A-623, targets elevated levels of B-lymphocyte stimulator, or BLYS, also known as B-cell Activating Factor, or BAFF, which has been associated with a variety of B-cell mediated autoimmune diseases, including systemic lupus erythematosus, or lupus. We have worldwide rights to our product candidates, with the exception of Japan, where Shionogi & Co., Ltd. retains commercial rights to our sPLA<sub>2</sub> product candidates.

**Product Development Programs**

We have focused our product development programs on anti-inflammatory therapeutics for cardiovascular diseases, lupus and other serious diseases for which we believe current treatments are either inadequate or non-existent. Our current product development programs are listed in the figure below.

**Varespladib for the Treatment of Acute Coronary Syndrome**

We have commenced a pivotal Phase 3 clinical study named VISTA-16 (Vascular Inflammation Suppression to Treat Acute coronary syndrome - 16 Weeks) for our lead product candidate, varespladib, an oral sPLA<sub>2</sub> inhibitor, in combination with Lipitor (atorvastatin), a HMG-CoA reductase inhibitor, for short-term (16-week) treatment of patients experiencing an acute coronary syndrome. The American Heart Association defines acute coronary syndrome as any group of clinical signs and

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symptoms related to acute myocardial ischemia, or heart muscle damage. Patients experiencing an acute coronary syndrome suffer from significant inflammation and abnormal lipid profiles, which may lead to further vascular damage and a second cardiovascular event. sPLA<sub>2</sub> enzymes act to directly amplify inflammation, and adversely modify lipids. Varespladib, when combined with lipid-lowering therapies, is one of only a few therapeutics in development with the potential to offer a unique and synergistic approach targeting inflammation, elevated lipid levels and atherosclerosis.

Clinical results from FRANCIS (Fewer Recurrent Acute coronary events with Near-term Cardiovascular Inflammation Suppression), our Phase 2b clinical study enrolling 625 acute coronary syndrome patients, and two Phase 2 clinical studies enrolling 534 stable CAD patients demonstrated statistically significant reductions in low-density lipoprotein cholesterol, or LDL-C, a known predictor of cardiovascular risk. Reductions in LDL-C were greater when used in combination with commonly prescribed statin therapies. In addition, rapid and sustained anti-inflammatory activity was also evident as sPLA<sub>2</sub> concentrations were statistically significantly reduced from baseline levels throughout dosing in all clinical studies. In our Phase 2b clinical study, C-reactive protein, or CRP, and interleukin-6, or IL-6, both independent predictors of cardiovascular risk, were lower at all time points among varespladib treated patients as compared to placebo. The percent decrease in CRP at week two in our Phase 2b clinical study was nearly two-fold greater among varespladib treated patients than those treated with placebo (p = 0.183) and by week 16, the difference between the two groups achieved statistical significance (p = 0.0067). A p-value is a probability with a value ranging from 0 to 1, which indicates the likelihood that a clinical study is different between treatment and control groups. P-values below 0.05 are typically referred to as statistically significant.

The VISTA-16 acute coronary syndrome study is a multinational, randomized, double-blind, placebo-controlled Phase 3 clinical study designed to evaluate short-term (16-week) therapy with varespladib in combination with Lipitor (atorvastatin) for the prevention of secondary major adverse coronary events in patients who have recently experienced an acute coronary syndrome. As part of our Special Protocol Assessment, or SPA, agreement with the U.S. Food and Drug Administration, or FDA, the VISTA-16 study is estimated to enroll up to 6,500 patients with similar characteristics to patients in FRANCIS. Patients are randomized within 96 hours of an acute coronary syndrome and will receive 16 weeks of either once-daily varespladib or placebo in addition to a dose of Lipitor (atorvastatin). VISTA-16 will continue enrollment until a minimum of 385 primary endpoint events have occurred. The primary endpoint of the VISTA-16 study will assess the time to the first occurrence of the combined endpoint of cardiovascular death, non-fatal myocardial infarction, non-fatal stroke or documented unstable angina with objective evidence of ischemia, which is lack of blood to tissues due to a blockage of a vessel, requiring hospitalization. Survival status will be obtained for all patients six months after the completion of dosing. Based upon our statistical calculations, this number of primary endpoint events will allow us to detect a treatment effect on the composite endpoint as low as 18.1% with a p-value of less than 0.05. As in the FRANCIS study, changes in sPLA<sub>2</sub>, CRP and LDL-C will be measured at baseline, 24 hours, and at weeks one, two, four, eight and 16. An independent committee comprised of individuals who are not involved with the VISTA-16 clinical study will conduct a data review of these biomarkers after at least 1,000 patients have been enrolled in the clinical study. This biomarker futility analysis is designed to confirm that relevant biomarkers have met pre-specified statistical reductions versus placebo at various time-points. Elevations of each of these biomarkers, sPLA<sub>2</sub>, CRP, LDL-C, and IL-6 are known to be independently correlated with adverse cardiovascular outcomes. At the same time, our independent Data Safety Monitoring Board, or DSMB, will review all available clinical data from VISTA-16 to assess overall safety.

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**Our Special Protocol Assessment Agreement with the FDA**

We have reached agreement with the FDA on an SPA, for the VISTA-16 acute coronary syndrome study protocol, including patient inclusion/exclusion criteria, study size, statistical considerations, efficacy endpoints, study duration, randomization and lipid management strategies.

**A-623 Our BAFF Antagonism Program for the Treatment of Lupus**

BAFF has been associated with a wide range of B-cell mediated autoimmune diseases, including systemic lupus erythematosus, or lupus. The beneficial role of BAFF inhibition to improve clinical outcomes in patients with lupus has been evaluated in multiple phase 3 studies with another BAFF antagonist. We intend to advance the development of A-623, a BAFF inhibitor, in a number of autoimmune diseases including lupus and rheumatoid arthritis. Our peptibody is a novel fusion protein that is distinct from an antibody, binds to both soluble and membrane-bound BAFF and is manufactured using bacterial fermentation. Recent clinical and non-clinical studies have reported that membrane-bound BAFF is a more potent stimuli for B-cell maturation and survival than the soluble form of BAFF. In fact, lupus disease severity can be correlated with higher levels of membrane-bound BAFF. We are actively evaluating a partnership opportunity with major pharmaceutical companies to develop and commercialize A-623. We licensed A-623 from Amgen Inc. in December 2007 and have worldwide product rights in all indications.

Two randomized, dose-ranging, placebo-controlled Phase 1 clinical studies evaluating A-623 in 104 patients have been completed. Results from these studies demonstrated antagonism of BAFF by A-623 led to statistically significant reductions in B-cells of approximately 50-70% ( $p < 0.001$ ) among lupus patients across multiple subcutaneous and intravenous formulations. We believe A-623 could offer

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a number of advantages over other BAFF (or BLYS) antagonists as well as other novel B-cell directed therapies including:

convenient, at-home, patient-administered subcutaneous dosing;

a range of dosing frequencies including monthly and weekly;

binding to both membrane-bound and soluble forms of BAFF;

low cost of goods based on a bacterial fermentation manufacturing process; and

multiple binding domains achieve highest reported affinity for inhibition of BAFF.

Based on results from 104 patients in our Phase 1a and 1b clinical studies, we have commenced patient dosing in our Phase 2b clinical study with A-623 in lupus patients. PEARL-SC (A Randomized, Double-Blind Phase 2b Study to Evaluate the Efficacy, Safety, and Tolerability of A-623 Administration in Subjects with Systemic Lupus Erythematosus) is a randomized, placebo-controlled, phase 2b clinical study that allows enrollment of up to 600 patients in 60 centers worldwide. Subjects will be randomized into three active subcutaneous treatment arms and one subcutaneous placebo treatment arm for a minimum of 24 weeks and a maximum of one year. The primary endpoint of the PEARL-SC study will be clinical improvement at 24 weeks in responder rates of a systemic lupus erythematosus responder index, or SRI, in the pooled treatment arms versus placebo. The primary endpoint is based upon changes in SELENA and SLEDAI disease activity scale, Physician's Global Assessment scores and British Isles Lupus Assessment Group scores, which are clinical standards for the measurement of disease severity in lupus patients. Secondary endpoints will include safety, improvement in other clinical assessment scores, clinical response in patients with various baseline disease severities, resolution of fatigue, steroid utilization and time to flare. A blinded interim biomarker analysis to establish the appropriate drug effect on B-cells is included early in the study.

On November 16, 2010, we placed a voluntary hold on the PEARL-SC study due to problems found with product vials. Patient enrollment in the study has been temporarily suspended and patients currently enrolled in the study will discontinue dosing while we conduct a complete analysis of the problem. There have been no reports of patient-related side effects or problems with drug administration that could be attributed to this problem.

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The following table represents our current PEARL-SC study as well as the option to extend the study to collect long-term safety data.

**A-001 for the Prevention of Acute Chest Syndrome Associated with Sickle Cell Disease**

Our next product candidate, varespladib sodium, A-001, is an intravenously administered inhibitor of sPLA<sub>2</sub>, which is in a Phase 2 clinical study for the prevention of acute chest syndrome associated with sickle cell disease. Acute chest syndrome is a form of inflammation-induced lung failure and is the most common cause of death in patients with sickle cell disease. sPLA<sub>2</sub> levels increase substantially in the 24 to 48 hours before the onset of acute chest syndrome. According to the Sickle Cell Information Center, sickle cell disease is a genetic disorder afflicting more than 70,000 people in the United States alone. Given the small patient population and lack of approved drugs for the prevention of acute chest syndrome, we have received orphan drug designation and fast track status from the FDA for A-001.

A pre-specified interim review of our Phase 2 clinical study results by a DSMB indicate A-001, at a certain dose, reduced sPLA<sub>2</sub> activity by more than 80% from baseline within 48 hours. Furthermore, the incidence of acute chest syndrome appeared to be related to the level of sPLA<sub>2</sub> activity.

**Other sPLA<sub>2</sub> Inhibitors**

We also have an additional novel sPLA<sub>2</sub> inhibitor, A-003, in preclinical development for existing target indications as well as other therapeutic areas. A-003 has shown increased potency against sPLA<sub>2</sub> and favorable characteristics in preclinical studies. We plan to file an investigational new drug application for A-003 in the future.

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### **Our Strategy**

Our objective is to develop and commercialize our product candidates to treat serious diseases associated with inflammation, including cardiovascular and autoimmune diseases. To achieve these objectives, we intend to initially focus on:

advancing the development of varespladib through the Phase 3 VISTA-16 clinical study;

advancing the development of A-623 through the Phase 2b PEARL-SC clinical study;

leveraging our sPLA<sub>2</sub> expertise to develop products for additional disease indications; and

developing commercial strategies designed to maximize our product candidates' market potential, including securing corporate partners whose capabilities complement ours.

### **Risks Related to Our Business**

The risks set forth under the section entitled "Risk Factors" beginning on page 11 of this prospectus reflect risks and uncertainties that could significantly and adversely affect our business and our ability to execute our business strategy. For example:

We are a development-stage company with no revenue and no products approved for marketing. We will need substantial additional capital to fund our operations and develop our product candidates.

For the nine months ended September 30, 2010, we had net losses of approximately \$27.4 million, and as of September 30, 2010, we had an accumulated deficit of approximately \$92.6 million. We expect to incur continued significant losses for the foreseeable future.

We are largely dependent on the success of our development-stage product candidates, particularly our primary product candidates, varespladib, A-623 and A-001, and our clinical studies may fail to adequately demonstrate their safety and efficacy. If a clinical study fails, or if additional clinical studies are required, our development costs may increase and we may be unable to continue operations without raising additional funding.

The regulatory approval process is expensive, time-consuming and uncertain, and our product candidates have not been, and may not be, approved for sale by regulatory authorities or be successfully commercialized. Even if approved for sale by the appropriate regulatory authorities, our products may not achieve market acceptance and we may never achieve profitability.

Our preclinical development programs may not produce any other viable or marketable product candidates.

Our and our licensors' patent positions may not adequately protect our present or future product candidates or permit us to gain or keep a competitive advantage.

### **Commercialization Strategy**

We have worldwide rights to develop and commercialize our products in all indications and markets, with the exception of Japan, where Shionogi & Co., Ltd. retains commercial rights to our sPLA<sub>2</sub>

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product candidates. Our current development plans are focused on acute treatment and orphan indications that may provide an accelerated and cost-efficient path to regulatory approval and commercialization. We believe that certain of these markets can be commercialized through a limited specialty sales force. In addition, we believe that our product candidates can also address market opportunities in chronic indications and we may seek development and commercialization partners to address these non-specialty and international markets.

**Company Information**

We were incorporated in Delaware on September 9, 2004 as Anthera Pharmaceuticals, Inc. Our corporate headquarters are located at 25801 Industrial Boulevard, Suite B, Hayward, California 94545 and our telephone number is (510) 856-5600. Our website address is [www.anthera.com](http://www.anthera.com). The information contained on our website or that can be accessed through our website is not incorporated by reference into this prospectus and is not part of this prospectus.

We use various trademarks, service marks and trade names in our business, including without limitation Anthera Pharmaceuticals and Anthera. This prospectus also contains trademarks, services marks and trade names of other businesses that are the property of their respective holders.

Unless the context otherwise requires, we use the terms Anthera Pharmaceuticals, Anthera, we, us, the Company our in this prospectus to refer to Anthera Pharmaceuticals, Inc. and its sole subsidiary.

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**THE OFFERING**

This prospectus relates to the resale by the selling stockholders identified in this prospectus of up to 6,741,733 shares of common stock, of which 6,547,797 shares are issued and outstanding as of the date of this prospectus, and 193,936 shares of which are issuable upon the exercise of certain warrants. Such shares and warrants were issued to the selling stockholders in various transactions as described under the section entitled Selling Security Holders beginning on page 46 of this prospectus. All of the shares, when sold, will be sold by the selling stockholders. The selling stockholders may sell their shares from time to time at market prices prevailing at the time of sale, at prices related to the prevailing market price, or at negotiated prices. We will not receive any proceeds from the sale of shares by the selling stockholders, other than as a result of the exercise of warrants held by the selling stockholders for cash.

**Table of Contents****SUMMARY FINANCIAL DATA**

The following summary financial data should be read together with our financial statements and the related notes and Management's Discussion and Analysis of Financial Condition and Results of Operations appearing elsewhere in this prospectus. The summary financial data in this section is not intended to replace our financial statements and the related notes. Our historical results are not necessarily indicative of the results to be expected for any future period.

We were incorporated on September 9, 2004. The following statement of operations data, including share data, for the years ended December 31, 2007, 2008 and 2009 have been derived from our audited financial statements and related notes appearing elsewhere in this prospectus. The statement of operations data, including share data, for the nine months ended September 30, 2009 and 2010 and the balance sheet data as of September 30, 2010 have been derived from our unaudited interim financial statements appearing elsewhere in this prospectus. The unaudited interim financial statements have been prepared on the same basis as the audited financial statements and reflect all adjustments necessary to fairly state our financial position as of September 30, 2010 and results of operations for the nine months ended September 30, 2009 and 2010. The operating results for any period are not necessarily indicative of financial results that may be expected for any future period.

	<b>Fiscal Year Ended December 31,</b>			<b>Nine Months Ended</b>	
	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>September 30,</b>	<b>2009</b>
				<b>2010</b>	
<b>Statement of Operations</b>					
<b>Data:</b>					
<b>Operating expenses</b>					
Research and development	\$ 23,921,932	\$ 10,882,322	\$ 8,415,414	\$ 18,565,088	\$ 7,727,129
General and administrative	2,468,607	2,980,170	3,425,690	4,244,000	2,730,482
Total operating expenses	(26,390,539)	(13,862,492)	(11,841,104)	(22,809,088)	(10,457,611)
<b>Other income (expense)</b>					
Interest and other income	696,962	178,129	23,534	76,562	21,559
Interest and other expense		(296,303)	(385,922)	(4,641,169)	(289,776)
Beneficial conversion feature		(4,118,544)			
Total other income (expense)	696,962	(4,236,718)	(362,388)	(4,564,607)	(268,217)
Net loss	\$ (25,693,577)	\$ (18,099,210)	\$ (12,203,492)	\$ (27,373,695)	\$ (10,725,828)
Net loss per share-basic and diluted <sup>(1)</sup>	\$ (28.15)	\$ (13.47)	\$ (8.06)	\$ (1.40)	\$ (7.16)
Weighted-average number of shares used in share calculation-basic and diluted <sup>(2)</sup>	912,668	1,343,420	1,513,598	19,567,058	1,498,108

- (1) Diluted earnings per share, or EPS, is identical to basic EPS since common equivalent and shares are excluded from the calculation, as their effect is anti-dilutive.
- (2) For accounting purposes only, the number of issued and outstanding shares for the years ended December 31, 2007, 2008 and 2009 and the nine months ended September 30, 2009 and 2010 do not include weighted-average shares of unvested stock of 261,649, 230,028, 110,079, 121,542 and 52,612, respectively. These shares are subject to a risk of repurchase by us until such shares are vested. See Note 2 to our financial statements for more information.

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**As of September 30, 2010**

**Balance Sheet Data:**

Cash and cash equivalents	\$	51,208,720
Short-term investments		21,878,890
Working capital		70,063,385
Total assets		74,923,205
Indebtedness		4,837,707
Deficit accumulated during the development stage		(92,603,647)
Total stockholders (deficit) equity		70,085,498

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**RISK FACTORS**

*Before you decide to invest in our common stock, you should carefully consider the risks described below, together with the other information contained in this prospectus, including the financial statements and the related notes that appear at the end of this prospectus. We believe the risks described below are the risks that are material to us as of the date of this prospectus. If any of the following risks occur, our business, financial condition, results of operations and future growth prospects would likely be materially and adversely affected. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment.*

**Risks Related to Our Financial Condition and Capital Requirements**

*We have incurred significant losses since our inception and anticipate that we will incur continued significant losses for the foreseeable future.*

We are a development stage company with only six years of operating history. We have focused primarily on developing our three product candidates, varespladib, A-623 and varespladib sodium (A-001). We have financed our operations exclusively through equity offerings and private placements of convertible debt and we have incurred losses in each year since our inception in September 2004. Our net losses were approximately \$15,000 in 2004, \$540,000 in 2005, \$8.7 million in 2006, \$25.7 million in 2007, \$18.1 million in 2008, \$12.2 million in 2009 and \$27.4 million for the nine months ended September 30, 2010. As of September 30, 2010, we had an accumulated deficit of approximately \$92.6 million. Substantially all of our losses resulted from costs incurred in connection with our product development programs and from general and administrative costs associated with our operations.

We expect to incur additional losses over the next several years, and these losses may increase if we cannot generate revenues. These losses, combined with expected future losses, have had and will continue to have an adverse effect on our stockholders' equity and working capital. We expect our development expenses, as well as our clinical product manufacturing expenses, to increase in connection with our pivotal Phase 3 clinical study named VISTA-16 for varespladib, our Phase 2b clinical study named PEARL-SC for A-623, and other clinical studies related to the development of A-623. In addition, we will incur additional costs of operating as a public company and, if we obtain regulatory approval for any of our product candidates, we may incur significant sales, marketing, in-licensing and outsourced manufacturing expenses as well as continued product development expenses. As a result, we expect to continue to incur significant and increasing losses for the foreseeable future.

*We have never generated any revenue and may never be profitable.*

Our ability to generate revenue and achieve profitability depends on our ability, alone or with collaborators, to successfully complete the development of our product candidates, conduct preclinical tests in animals and clinical studies in human beings, obtain the necessary regulatory approvals for our product candidates and commercialize any approved products. We have not generated any revenue from our development-stage product candidates, and we do not know when, or if, we will generate any revenue. The commercial success of our development-stage product candidates will depend on a number of factors, including, but not limited to, our ability to:

obtain favorable results for and advance the development of our lead product candidate, varespladib, for the treatment of acute coronary syndrome, including successfully launching and completing the VISTA-16 study;

obtain favorable results for and advance the development of our product candidate A-623, for the treatment of B-cell mediated autoimmune diseases, including successfully launching

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and completing a Phase 2b clinical study in patients with systemic lupus erythematosus, or lupus, or other indications related to the development of A-623;

obtain favorable results for and advance the development of our product candidate A-001, for the prevention of acute chest syndrome associated with sickle cell disease, including completing a multi-center Phase 2 clinical study;

successfully execute our planned preclinical studies in animals and clinical studies in human beings for our other product candidates;

obtain regulatory approval for varespladib, A-623, A-001 and our other product candidates;

if regulatory approvals are obtained, begin the commercial manufacturing of our product candidates with our third-party manufacturers;

launch commercial sales and effectively market our product candidates, either independently or in strategic collaborations with third parties; and

achieve broad market acceptance of our product candidates in the medical community and with third-party payors.

All of our product candidates are subject to the risks of failure inherent in the development of therapeutics based on new technologies. Currently, we have three product candidates in clinical development: varespladib, A-623 and A-001. These product candidates could fail in clinical studies if we are unable to demonstrate that they are effective or if they cause unacceptable adverse effects in the patients we treat. Failure of our product candidates in clinical studies would have a material adverse effect on our ability to generate revenue or become profitable. If we are not successful in achieving regulatory approval for our product candidates or are significantly delayed in doing so, our business will be materially harmed.

Additionally, all of our other product candidates are in preclinical development. Our drug discovery efforts may not produce any other viable or marketable product candidates. We do not expect any of our potential product candidates to be commercially available until at least 2013.

Even if our product candidates are approved for commercial sale, the approved product candidate may not gain market acceptance or achieve commercial success. Physicians, patients, payors or the medical community in general may be unwilling to accept, utilize or recommend any of our products. We would anticipate incurring significant costs associated with commercializing any approved product. Even if we are able to generate product sales, which we cannot guarantee, we may not achieve profitability soon thereafter, if ever. If we are unable to generate product revenues, we will not become profitable and may be unable to continue operations without additional funding.

***Because we will need substantial additional capital in the future to fund our operations, our independent registered public accounting firm included a paragraph regarding concerns about our ability to continue as a going concern in their report on our financial statements. If additional capital is not available, we will have to delay, reduce or cease operations.***

We will need to raise substantial additional capital to fund our operations and to develop our product candidates. Our future capital requirements could be substantial and will depend on many factors including:

the rate of progress of our Phase 3 clinical study named VISTA-16 study for varespladib and our Phase 2b clinical study named PEARL-SC for A-623;

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the scope, size, rate of progress, results and costs of our preclinical studies, clinical studies and other development activities for one or more of our other product candidates;

manufacturing campaign of A-623 clinical matters, including formulation development and enhancement;

non-clinical activities that we may pursue parallel to clinical trials for each clinical compound;

the cost, timing and outcomes of regulatory proceedings;

payments received under any strategic collaborations;

the filing, prosecution and enforcement of patent claims;

the costs associated with commercializing our product candidates if they receive regulatory approval, including the cost and timing of developing sales and marketing capabilities, or entering into strategic collaboration with others relating to the commercialization of our product candidates; and

revenues received from approved products, if any, in the future.

As of the date of this prospectus, we anticipate that our existing cash, cash equivalents and short-term investments, will enable us to maintain our currently planned operations through at least the next 12 months. Changing circumstances may cause us to consume capital significantly faster than we currently anticipate. Additional financing may not be available when we need it or may not be available on terms that are favorable to us. If adequate funds are not available to us on a timely basis, or at all, we may be required to:

terminate, reduce or delay preclinical studies, clinical studies or other development activities for one or more of our product candidates; or

terminate, reduce or delay our (i) establishment of sales and marketing capabilities, (ii) pursuit of strategic collaborations with others relating to the sales, marketing and commercialization of our product candidates or (iii) other activities that may be necessary to commercialize our product candidates, if approved for sale.

***The timing of the milestone and royalty payments we are required to make to each of Eli Lilly and Company, Shionogi & Co., Ltd. and Amgen Inc. is uncertain and could adversely affect our cash flows and results of operations.***

In July 2006, we entered into a license agreement with Eli Lilly and Company, or Eli Lilly, and Shionogi & Co., Ltd. to develop and commercialize certain secretory phospholipase A<sub>2</sub>, or sPLA<sub>2</sub>, inhibitors for the treatment of cardiovascular disease and other diseases. Pursuant to our license agreement with them, we have an obligation to pay to each of Eli Lilly and Shionogi & Co., Ltd. significant milestone and royalty payments based upon how we develop and commercialize certain sPLA<sub>2</sub> inhibitors, including varespladib and A-001, and our achievement of certain significant corporate, clinical and financial events. For varespladib, we are required to pay up to \$32.0 million upon achievement of certain approval and post-approval sales milestones. For A-001, we are required to pay up to \$3.0 million upon achievement of certain clinical development milestones and up to \$25.0 million upon achievement of certain approval and post-approval sales milestones. For other product formulations that we are not currently developing, we would be required to pay up to \$2.0 million upon achievement of certain clinical development

milestones and up to \$35.5 million upon achievement of certain approval and post-approval sales milestones. In addition, in December 2007, we entered into a license agreement with Amgen Inc., or Amgen, pursuant to which we obtained an exclusive worldwide license to certain technology and compounds relating to A-623.

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Pursuant to our license agreement with Amgen, we are required to make various milestone payments upon our achievement of certain development, regulatory and commercial objectives for any A-623 formulation. We are required to pay up to \$10.0 million upon achievement of certain pre-approval clinical development milestones and up to \$23.0 million upon achievement of certain post-approval milestones. We are also required to make tiered quarterly royalty payments on net sales, which increase as a percentage from the high single digits to the low double digits as net sales increase. The timing of our achievement of these events and corresponding milestone payments becoming due to Eli Lilly, Shionogi & Co., Ltd. and Amgen is subject to factors relating to the clinical and regulatory development and commercialization of certain sPLA<sub>2</sub> inhibitors or A-623, as applicable, many of which are beyond our control. We may become obligated to make a milestone payment during a period in which we do not have the cash on hand to make such payment, which could require us to delay our clinical studies, curtail our operations, scale back our commercialization and marketing efforts or seek funds to meet these obligations at terms unfavorable to us.

### ***Our limited operating history makes it difficult to evaluate our business and prospects.***

We were incorporated in September 2004. Our operations to date have been limited to organizing and staffing our company, acquiring product and technology rights, conducting product development activities for our primary product candidates, varespladib, A-623 and A-001, and performing research and development. We have not yet demonstrated an ability to obtain regulatory approval for or commercialize a product candidate. Consequently, any predictions about our future performance may not be as accurate as they could be if we had a history of successfully developing and commercializing pharmaceutical products.

## **Risks Associated with Development and Commercialization of Our Product Candidates**

***We depend substantially on the success of our three primary product candidates, varespladib, A-623 and A-001, which are still under clinical development. We cannot assure you that these product candidates or any of our other product candidates will receive regulatory approval or be successfully commercialized.***

To date, we have not marketed, distributed or sold any product candidates. The success of our business depends primarily upon our ability to develop and commercialize our three primary product candidates successfully. Our lead product candidate is varespladib, which has completed its Phase 2 clinical studies and for which we have received (i) an agreement from the U.S. Food and Drug Administration, or FDA, on a Special Protocol Assessment, or SPA, for the VISTA-16 Phase 3 study protocol, and (ii) scientific advice from the European Medicines Agency on our European development strategy for varespladib. We initiated the VISTA-16 study for varespladib in June 2010.

Our next product candidate is A-623, which has completed several Phase 1 clinical studies and recently began enrollment for our Phase 2b clinical study. In July 2010, we received clearance from the FDA to begin recruitment of lupus patients into the PEARL-SC Phase 2b clinical study. On November 16, 2010, we placed a voluntary hold on the PEARL-SC study due to problems found with product vials. Patient enrollment in the study has been temporarily suspended and patients currently enrolled in the study will discontinue dosing while we conduct a complete analysis of the problem. There have been no reports of patient-related side effects or problems with drug administration that could be attributed to this problem.

Our third product candidate, varespladib sodium (A-001), is an intravenously administered inhibitor of sPLA<sub>2</sub>. We have completed a Phase 2 clinical study for the prevention of acute chest syndrome associated with sickle cell disease. A pre-specified interim review of our Phase 2 clinical study results by a Data Safety Monitoring Board, or DSMB, indicated A-001, at a certain dose, reduced sPLA<sub>2</sub> activity by more than 80% from baseline within 48 hours. Furthermore, the incidence of acute chest syndrome appeared to be related to the level of sPLA<sub>2</sub> activity.



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Our product candidates are prone to the risks of failure inherent in drug development. Before obtaining regulatory approvals for the commercial sale of any product candidate for a target indication, we must demonstrate with substantial evidence gathered in preclinical and well-controlled clinical studies, and, with respect to approval in the United States, to the satisfaction of the FDA and, with respect to approval in other countries, similar regulatory authorities in those countries, that the product candidate is safe and effective for use for that target indication and that the manufacturing facilities, processes and controls are adequate. Despite our efforts, our product candidates may not:

- offer therapeutic or other improvement over existing, comparable therapeutics;
- be proven safe and effective in clinical studies;
- meet applicable regulatory standards;
- be capable of being produced in sufficient quantities at acceptable costs;
- be successfully commercialized; or
- obtain favorable reimbursement.

We are not permitted to market our varespladib and A-001 product candidates in the United States until we receive approval of a new drug application, or NDA, or with respect to our A-623 product candidate, approval of a biologics license application, or BLA, from the FDA, or in any foreign countries until we receive the requisite approval from such countries. We have not submitted an NDA or BLA or received marketing approval for any of our product candidates.

Preclinical testing and clinical studies are long, expensive and uncertain processes. We may spend several years completing our testing for any particular product candidate, and failure can occur at any stage. Negative or inconclusive results or adverse medical events during a clinical study could also cause the FDA or us to terminate a clinical study or require that we repeat it or conduct additional clinical studies. Additionally, data obtained from a clinical study are susceptible to varying interpretations and the FDA or other regulatory authorities may interpret the results of our clinical studies less favorably than we do. The FDA and equivalent foreign regulatory agencies have substantial discretion in the approval process and may decide that our data are insufficient to support a marketing application and require additional preclinical, clinical or other studies.

***Any termination or suspension of, or delays in the commencement or completion of, clinical testing of our product candidates could result in increased costs to us, delay or limit our ability to generate revenue and adversely affect our commercial prospects.***

Delays in the commencement or completion of clinical testing could significantly affect our product development costs. We do not know whether planned clinical studies will begin on time or be completed on schedule, if at all. The commencement and completion of clinical studies can be delayed for a number of reasons, including delays related to:

- obtaining regulatory approval to commence a clinical study or complying with conditions imposed by a regulatory authority regarding the scope or design of a clinical study;
- reaching agreement on acceptable terms with prospective clinical research organizations, or CROs, and study sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and study sites;

manufacturing, including manufacturing sufficient quantities of a product candidate or other materials for use in clinical studies;

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obtaining institutional review board, or IRB, approval or the approval of other reviewing entities to conduct a clinical study at a prospective site;

recruiting and enrolling patients to participate in clinical studies for a variety of reasons, including size of patient population, nature of clinical study protocol, the availability of approved effective treatments for the relevant disease and competition from other clinical study programs for similar indications;

severe or unexpected drug-related adverse effects experienced by patients in a clinical study; and

retaining patients who have initiated a clinical study, but may withdraw due to treatment protocol, adverse effects from the therapy, lack of efficacy from the treatment, personal issues or who are lost to further follow-up.

Clinical studies may also be delayed, suspended or terminated as a result of ambiguous or negative interim results, or results that are inconsistent with earlier results. For example, the independent committee that is conducting the data review may recommend that we stop our VISTA-16 study for varespladib if certain biomarkers of inflammation and lipid profiles fail to meet pre-specified reductions from a subset of the first 1,000 or more patients. In addition, a clinical study may be suspended or terminated by us, the FDA, the IRB or other reviewing entity overseeing the clinical study at issue, any of our clinical study sites with respect to that site, or other regulatory authorities due to a number of factors, including:

failure to conduct the clinical study in accordance with regulatory requirements or our clinical protocols;

inspection of the clinical study operations or study sites by the FDA or other regulatory authorities resulting in the imposition of a clinical hold;

unforeseen safety issues or any determination that a clinical study presents unacceptable health risks; and

lack of adequate funding to continue the clinical study, including the incurrence of unforeseen costs due to enrollment delays, requirements to conduct additional clinical studies and increased expenses associated with the services of our CROs and other third parties.

Product development costs to us and our collaborators will increase if we have delays in testing or approval of our product candidates or if we need to perform more or larger clinical studies than planned. For example, we may need to increase our sample size for our VISTA-16 study for varespladib if the overall major adverse cardiovascular event, or MACE, rate is lower than expected. We typically rely on third-party clinical investigators at medical institutions and health care facilities to conduct our clinical studies and, as a result, we may face additional delaying factors outside our control.

Additionally, changes in regulatory requirements and policies 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 IRBs for reexamination, which may impact the costs, timing or successful completion of a clinical study. If we experience delays in completion of, or if we, the FDA or other regulatory authorities, the IRB or other reviewing entities, or any of our clinical study sites suspend or terminate any of our clinical studies, the commercial prospects for our product candidates may be harmed and our ability to generate product revenues will be delayed. In addition, many of the factors that cause, or



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lead to, termination or suspension of, or a delay in the commencement or completion of, clinical studies may also ultimately lead to the denial of regulatory approval of a product candidate. Also, if one or more clinical studies are delayed, our competitors may be able to bring products to market before we do, and the commercial viability of our product candidates could be significantly reduced.

***The results of biomarker assays in earlier clinical studies in varespladib are not necessarily predictive of future results, and therefore the results of biomarker assays in the VISTA-16 study may not be similar to those observed previously.***

Success in our Phase 2 clinical studies in lowering low-density lipoprotein cholesterol, or LDL-C, C-reactive protein, or CRP, sPLA<sub>2</sub> and interleukin-6, or IL-6, during treatment with varespladib does not ensure that later clinical studies, such as our VISTA-16 study, will demonstrate similar reductions in these biomarkers. Each of these biomarkers has been associated with an increased risk for secondary MACE following an acute coronary syndrome. Our inability to demonstrate similar biomarker effects in our VISTA-16 study may reduce our ability to achieve our primary endpoint to reduce MACE and to achieve regulatory approval of varespladib.

***Because the results of preclinical testing or earlier clinical studies are not necessarily predictive of future results, varespladib, A-623, A-001 or any other product candidate we advance into clinical studies may not have favorable results in later clinical studies or receive regulatory approval.***

Success in preclinical testing and early clinical studies does not ensure that later clinical studies will generate adequate data to demonstrate the efficacy and safety of an investigational drug or biologic. A number of companies in the pharmaceutical and biotechnology industries, including those with greater resources and experience, have suffered significant setbacks in Phase 3 clinical studies, even after seeing promising results in earlier clinical studies. Despite the results reported in earlier clinical studies for our product candidates, including varespladib, A-623 and A-001, we do not know whether any Phase 3 or other clinical studies we may conduct will demonstrate adequate efficacy and safety to result in regulatory approval to market any of our product candidates. If later stage clinical studies do not produce favorable results, our ability to achieve regulatory approval for any of our product candidates may be adversely impacted.

***If we breach the license agreements for our primary product candidates, we could lose the ability to continue the development and commercialization of our primary product candidates.***

We are party to an agreement with Eli Lilly and Shionogi & Co., Ltd. containing exclusive, worldwide licenses, except for Japan, of the composition of matter, methods of making and methods of use for certain sPLA<sub>2</sub> inhibitors. We are also party to an agreement with Amgen containing exclusive, worldwide licenses of the composition of matter and methods of use for A-623. These agreements require us to make timely milestone and royalty payments, provide regular information, maintain the confidentiality of and indemnify Eli Lilly, Shionogi & Co., Ltd. and Amgen under the terms of the agreements.

If we fail to meet these obligations, our licensors may terminate our exclusive licenses and may be able to re-obtain licensed technology and aspects of any intellectual property controlled by us that relate to the licensed technology that originated from the licensors. Our licensors could effectively take control of the development and commercialization of varespladib, A-623 and A-001 after an uncured, material breach of our license agreements by us or if we voluntarily terminate the agreements. While we would expect to exercise all rights and remedies available to us, including seeking to cure any breach by us, and otherwise seek to preserve our rights under the patents licensed to us, we may not be able to do so in a timely manner, at an acceptable cost or at all. Any uncured, material breach under the licenses



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could result in our loss of exclusive rights and may lead to a complete termination of our product development and any commercialization efforts for varespladib, A-623 or A-001.

***Our industry is subject to intense competition. If we are unable to compete effectively, our product candidates may be rendered non-competitive or obsolete.***

The pharmaceutical industry is highly competitive and subject to rapid and significant technological change. Our potential competitors include large pharmaceutical and more established biotechnology companies, specialty pharmaceutical and generic drug companies, 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. All of these competitors currently engage in, have engaged in or may engage in the future in the development, manufacturing, marketing and commercialization of pharmaceuticals and biotechnologies, some of which may compete with our present or future product candidates. It is possible that any of these competitors could develop technologies or products that would render our product candidates obsolete or non-competitive, which could adversely affect our revenue potential. Key competitive factors affecting the commercial success of our product candidates are likely to be efficacy, safety profile, reliability, convenience of dosing, price and reimbursement.

The market for inflammatory disease therapeutics is especially large and competitive. All of the sPLA<sub>2</sub> inhibitor compounds we are currently developing, if approved, will face intense competition, either as monotherapies or in combination therapies. We are aware of other companies with products in development that are being tested for anti-inflammatory benefits in patients with acute coronary syndrome, such as Via Pharmaceuticals, Inc. and its 5-lipoxygenase, or 5-LO, inhibitor, which has been evaluated in Phase 2 clinical studies; and GlaxoSmithKline plc and its product candidate, darapladib, which is a lipoprotein associated phospholipase A<sub>2</sub>, or Lp-PLA<sub>2</sub>, inhibitor currently being evaluated in Phase 3 clinical studies. Although there are no sPLA<sub>2</sub> inhibitor compounds currently approved by the FDA for the treatment of acute chest syndrome associated with sickle cell disease, Droxia, or hydroxyurea, is approved for the prevention of vaso-occlusive crisis, or VOC, in sickle cell disease and thus could reduce the pool of patients with VOC at risk for acute chest syndrome. Further, we are aware of companies with other products in development that are being tested for potential treatment of lupus, including Human Genome Sciences, Inc. and GlaxoSmithKline plc, who have a BAFF antagonist monoclonal antibody product candidate, Benlysta, which recently reported favorable results from a Phase 3 clinical study in lupus; ZymoGenetics, Inc. and Merck Serono S.A., whose dual BAFF/APRIL antagonist fusion protein, Atacicept, is in a Phase 3 clinical study for lupus; and Immunomedics, Inc. and UCB S.A., who recently reported favorable results for their CD-22 antagonist humanized antibody, epratuzumab, which completed a Phase 2b clinical study in lupus.

Many of our potential competitors have substantially greater financial, technical and human resources than we do and significantly greater experience in the discovery and development of drug candidates, obtaining FDA and other regulatory approvals of products and the commercialization of those products. Accordingly, our competitors may be more successful than we may be in obtaining FDA approval for drugs and achieving widespread market acceptance. Our competitors' drugs may be more effective, have fewer adverse effects, be less expensive to develop and manufacture or be more effectively marketed and sold than any product candidate we may commercialize and may render our product candidates obsolete or non-competitive before we can recover the expenses of developing and commercializing any of our product candidates. We anticipate that we will face intense and increasing competition as new drugs enter the market and advanced technologies become available. These entities may also establish collaborative or licensing relationships with our competitors. Finally, the development of new treatment methods for the diseases we are targeting could render our drugs non-competitive or obsolete. All of these factors could adversely affect our business.



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***Our product candidates may cause undesirable adverse effects or have other properties that could delay or prevent their regulatory approval or limit the commercial profile of any approved label.***

Undesirable adverse effects caused by our product candidates could cause us, IRBs or other reviewing entities, clinical study sites, or regulatory authorities to interrupt, delay or halt clinical studies and could result in the denial of regulatory approval by the FDA or other regulatory authorities. Phase 2 clinical studies conducted by us with our product candidates have generated differences in adverse effects and serious adverse events. The most common adverse effects seen with any of our product candidates versus placebo include diarrhea, headache, nausea and increases in alanine aminotransferase, which is an enzyme that indicates liver cell injury. The most common serious adverse events seen with any of our product candidates include death, VOC and congestive heart failure. While none of these serious adverse events were considered related to the administration of our product candidates by the clinical investigators, if serious adverse events that are considered related to our product candidates are observed in any Phase 3 clinical studies, our ability to obtain regulatory approval for our product candidates may be adversely impacted. Further, if any of our product candidates receives marketing approval and we or others later discover, after approval and use in an increasing number of patients, that our products could have adverse effect profiles that limit their usefulness or require their withdrawal (whether or not the therapies showed the adverse effect profile in Phase 1 through Phase 3 clinical studies), a number of potentially significant negative consequences could result, including:

regulatory authorities may withdraw their approval of the product;

regulatory authorities may require the addition of labeling statements, such as warnings or contraindications;

we may be required to change the way the product is administered, conduct additional clinical studies or change the labeling of the product;

we could be sued and held liable for harm caused to patients; and

our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the affected product candidate and could substantially increase the costs of commercializing our product candidates.

***After the completion of our clinical studies, we cannot predict whether or when we will obtain regulatory approval to commercialize our product candidates and we cannot, therefore, predict the timing of any future revenue from these product candidates.***

We cannot commercialize any of our product candidates until the appropriate regulatory authorities have reviewed and approved the applications for the product candidates. We cannot assure you that the regulatory agencies will complete their review processes in a timely manner or that we will obtain regulatory approval for any product candidate we develop. Satisfaction of regulatory requirements typically takes many years, is dependent upon the type, complexity and novelty of the product and requires the expenditure of substantial resources. In addition, we may experience delays or rejections based upon additional government regulation from future legislation or administrative action or changes in FDA policy during the period of product development, clinical studies and FDA regulatory review.

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***Our agreement with the FDA on an SPA for our VISTA-16 study of varespladib for the potential treatment of acute coronary syndrome does not guarantee any particular outcome from regulatory review of the study or the product candidate.***

The FDA's SPA process creates a written agreement between the sponsoring company and the FDA regarding clinical study design and other clinical study issues that can be used to support approval of a product candidate. The SPA is intended to provide assurance that if the agreed upon clinical study protocols are followed and the clinical study endpoints are achieved, the data may serve as the primary basis for an efficacy claim in support of an NDA. However, the SPA agreement is not a guarantee of an approval of a product or any permissible claims about the product. In particular, the SPA is not binding on the FDA if public health concerns unrecognized at the time of the SPA agreement is entered into become evident, other new scientific concerns regarding product safety or efficacy arise or if the sponsor company fails to comply with the agreed upon clinical study protocols. Although we have an agreement with the FDA on an SPA for our VISTA-16 clinical study of varespladib for the potential short-term (16-week) treatment of acute coronary syndrome, we do not know how the FDA will interpret the commitments under our agreed upon SPA, how it will interpret the data and results or whether it will approve our varespladib product candidate for the short-term (16-week) treatment of acute coronary syndrome. Regardless of our SPA agreement, we cannot guarantee any particular outcome from regulatory review of our VISTA-16 study.

***Even if our product candidates receive regulatory approval, they may still face future development and regulatory difficulties.***

Even if U.S. regulatory approval is obtained, the FDA may still impose significant restrictions on a product's indicated uses or marketing or impose ongoing requirements for potentially costly post-approval studies or post-market surveillance. For example, the label ultimately approved for varespladib, if any, may include restrictions on use. Further, the FDA has indicated that long-term safety data on varespladib may need to be obtained as a post-market requirement. Our product candidates will also be subject to ongoing FDA requirements governing the labeling, packaging, storage, distribution, safety surveillance, advertising, promotion, recordkeeping and reporting of safety and other post-market information. In addition, manufacturers of drug products and their facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with current good manufacturing practices, or cGMP, regulations. If we or a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory agency may impose restrictions on that product, the manufacturing facility or us, including requiring recall or withdrawal of the product from the market or suspension of manufacturing. If we, our product candidates or the manufacturing facilities for our product candidates fail to comply with applicable regulatory requirements, a regulatory agency may:

issue warning letters or untitled letters;

seek an injunction or impose civil or criminal penalties or monetary fines;

suspend or withdraw regulatory approval;

suspend any ongoing clinical studies;

refuse to approve pending applications or supplements to applications filed by us;

suspend or impose restrictions on operations, including costly new manufacturing requirements; or



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seize or detain products, refuse to permit the import or export of products, or require us to initiate a product recall.

The occurrence of any event or penalty described above may inhibit our ability to commercialize our products and generate revenue.

***New legal and regulatory requirements could make it more difficult for us to obtain approvals for our product candidates and could limit or make more burdensome our ability to commercialize any approved products.***

New federal legislation or regulatory requirements could affect the requirements for obtaining regulatory approvals of our product candidates or otherwise limit our ability to commercialize any approved products or subject our products to more rigorous post-approval requirements. For example, the FDA Amendments Act of 2007, or FDAAA, granted the FDA new authority to impose post-approval clinical study requirements, require safety-related changes to product labeling and require the adoption of risk management plans, referred to in the legislation as risk evaluation and mitigation strategies, or REMS. The REMS may include requirements for special labeling or medication guides for patients, special communication plans to health care professionals, and restrictions on distribution and use. Pursuant to the FDAAA, if the FDA makes the requisite findings, it might require that a new product be used only by physicians with specified specialized training, only in specified designated health care settings, or only in conjunction with special patient testing and monitoring. The legislation also included the following: requirements for providing the public information on ongoing clinical studies through a clinical study registry and for disclosing clinical study results to the public through such registry; renewed requirements for conducting clinical studies to generate information on the use of products in pediatric patients; and substantial new penalties, for example, for false or misleading consumer advertisements. Other proposals have been made to impose additional requirements on drug approvals, further expand post-approval requirements, and restrict sales and promotional activities. The new legislation, and the additional proposals if enacted, may make it more difficult or burdensome for us to obtain approval of our product candidates, any approvals we receive may be more restrictive or be subject to onerous post-approval requirements, our ability to successfully commercialize approved products may be hindered and our business may be harmed as a result.

***If any of our product candidates for which we receive regulatory approval does not achieve broad market acceptance, the revenue that we generate from its sales, if any, will be limited.***

The commercial success of our product candidates for which we obtain marketing approval from the FDA or other regulatory authorities will depend upon the acceptance of these products by the medical community, including physicians, patients and health care payors. The degree of market acceptance of any of our approved products will depend on a number of factors, including:

demonstration of clinical safety and efficacy compared to other products;

the relative convenience, ease of administration and acceptance by physicians and payors of varespladib in the treatment of acute coronary syndrome, A-623 in the treatment of lupus and A-001 in the prevention of acute chest syndrome associated with sickle cell disease;

the prevalence and severity of any adverse effects;

limitations or warnings contained in a product's FDA-approved labeling;

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availability of alternative treatments, including, in the case of varespladib, a number of competitive products being studied for anti-inflammatory benefits in patients with acute coronary syndrome or expected to be commercially launched in the near future;

pricing and cost-effectiveness;

the effectiveness of our or any future collaborators' sales and marketing strategies;

our ability to obtain and maintain sufficient third-party coverage or reimbursement from government health care programs, including Medicare and Medicaid; and

the willingness of patients to pay out-of-pocket in the absence of third-party coverage.

If our product candidates are approved but do not achieve an adequate level of acceptance by physicians, health care payors and patients, we may not generate sufficient revenue from these products, and we may not become or remain profitable. In addition, our efforts to educate the medical community and third-party payors on the benefits of our product candidates may require significant resources and may never be successful.

***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 Mr. Paul F. Truex, our President and Chief Executive Officer, Dr. Colin Hislop, our Senior Vice President and Chief Medical Officer and the other principal members of our executive team listed under Management on page 109. The loss of the services of any of these persons might impede the achievement of our research, development and commercialization objectives. Recruiting and retaining qualified scientific personnel and possibly 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 personnel from universities and research institutions. Failure to succeed in clinical studies may make it more challenging to recruit and retain qualified scientific personnel. 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.

***Recently enacted and future legislation or regulatory reform of the health care system in the United States and foreign jurisdictions may affect our ability to sell our products profitably.***

Our ability to commercialize our future products successfully, alone or with collaborators, will depend in part on the extent to which reimbursement for the products will be available from government and health administration authorities, private health insurers and other third-party payors. The continuing efforts of the U.S. and foreign governments, insurance companies, managed care organizations and other payors of health care services to contain or reduce health care costs may adversely affect our ability to set prices for our products which we believe are fair, and our ability to generate revenues and achieve and maintain profitability.

Specifically, in both the United States and some foreign jurisdictions, there have been a number of legislative and regulatory proposals to change the health care system in ways that could affect our ability to sell our products profitably. In March 2010, President Obama signed into law the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the Health Care Reform Law, a

sweeping law intended to broaden access to health

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insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms.

We will not know the full effects of the Health Care Reform Law until applicable federal and state agencies issue regulations or guidance under the new law. Although it is too early to determine the effect of the Health Care Reform Law, the new law appears likely to continue the pressure on pharmaceutical pricing, especially under the Medicare program, and also may increase our regulatory burdens and operating costs. We expect further federal and state proposals and health care reforms to continue to be proposed by legislators, which could limit the prices that can be charged for the products we develop and may limit our commercial opportunity.

Also in the United States, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, also called the Medicare Modernization Act, or MMA, changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for drug purchases by the elderly and introduced a new reimbursement methodology based on average sales prices for drugs. In addition, this legislation authorized Medicare Part D prescription drug plans to use formularies where they can limit the number of drugs that will be covered in any therapeutic class. As a result of this legislation and the expansion of federal coverage of drug products, we expect that there will be additional pressure to contain and reduce costs. These cost reduction initiatives and other provisions of this legislation could decrease the coverage and price that we receive for any approved products and could seriously harm our business. While the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates, and any reduction in reimbursement that results from the MMA may result in a similar reduction in payments from private payors.

The continuing efforts of government and other third-party payors to contain or reduce the costs of health care through various means may limit our commercial opportunity. It will be time-consuming and expensive for us to go through the process of seeking reimbursement from Medicare and private payors. Our products may not be considered cost-effective, and government and third-party private health insurance coverage and reimbursement may not be available to patients for any of our future products or sufficient to allow us to sell our products on a competitive and profitable basis. Our results of operations could be adversely affected by the MMA, the Health Care Reform Law, and additional prescription drug coverage legislation, by the possible effect of this legislation on amounts that private insurers will pay and by other health care reforms that may be enacted or adopted in the future. In addition, increasing emphasis on managed care in the United States will continue to put pressure on the pricing of pharmaceutical products. Cost control initiatives could decrease the price that we or any potential collaborators could receive for any of our future products and could adversely affect our profitability.

In some foreign countries, including major markets in the European Union and Japan, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take six to 12 months or longer after the receipt of regulatory marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical study that compares the cost-effectiveness of our product candidates to other available therapies. Such pharmacoeconomic studies can be costly and the results uncertain. Our business could be harmed if reimbursement of our products is unavailable or limited in scope or amount or if pricing is set at unsatisfactory levels.

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***We face potential product liability exposure, and, if successful claims are brought against us, we may incur substantial liability.***

The use of our product candidates in clinical studies and the sale of any products for which we obtain marketing approval expose us to the risk of product liability claims. Product liability claims might be brought against us by consumers, health care providers, pharmaceutical companies or others selling or otherwise coming into contact with our products. If we cannot successfully defend ourselves against product liability claims, we could incur substantial liabilities. In addition, regardless of merit or eventual outcome, product liability claims may result in:

- impairment of our business reputation;
- withdrawal of clinical study participants;
- costs of related litigation;
- distraction of management's attention from our primary business;
- substantial monetary awards to patients or other claimants;
- the inability to commercialize our product candidates; and
- decreased demand for our product candidates, if approved for commercial sale.

Our product liability insurance coverage for our clinical studies may not be sufficient to reimburse us for all expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive, and, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. If and when we obtain marketing approval for any of our product candidates, we intend to expand our insurance coverage to include the sale of commercial products; however, we may be unable to obtain this product liability insurance on commercially reasonable terms. On occasion, large judgments have been awarded in class action lawsuits based on drugs that had unanticipated adverse effects. A successful product liability claim or series of claims brought against us could cause our stock price to decline and, if judgments exceed our insurance coverage, could decrease our cash and adversely affect our business.

***If we use hazardous and biological materials in a manner that causes injury or violates applicable law, we may be liable for damages.***

Our research and development activities involve the controlled use of potentially hazardous substances, including toxic chemical and biological materials. We could be held liable for any contamination, injury or other damages resulting from these hazardous substances. In addition, our operations produce hazardous waste products. While third parties are responsible for disposal of our hazardous waste, we could be liable under environmental laws for any required cleanup of sites at which our waste is disposed. Federal, state, foreign and local laws and regulations govern the use, manufacture, storage, handling and disposal of these hazardous materials. If we fail to comply with these laws and regulations at any time, or if they change, we may be subject to criminal sanctions and substantial civil liabilities, which may harm our business. Even if we continue to comply with all applicable laws and regulations regarding hazardous materials, we cannot eliminate the risk of accidental contamination or discharge and our resultant liability for any injuries or other damages caused by these accidents.

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***We rely on third parties to conduct, supervise and monitor our clinical studies, and those third parties may perform in an unsatisfactory manner, such as by failing to meet established deadlines for the completion of these clinical studies, or may harm our business if they suffer a catastrophic event.***

We rely on third parties such as CROs, medical institutions and clinical investigators to enroll qualified patients and conduct, supervise and monitor our clinical studies. Our reliance on these third parties for clinical development activities reduces our control over these activities. Our reliance on these third parties, however, does not relieve us of our regulatory responsibilities, including ensuring that our clinical studies are conducted in accordance with good clinical practices, or GCP, and the investigational plan and protocols contained in the relevant regulatory application, such as the investigational new drug application, or IND. In addition, the CROs with which we contract may not complete activities on schedule, or may not conduct our preclinical studies or clinical studies in accordance with regulatory requirements or our clinical study design. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, our efforts to obtain regulatory approvals for, and to commercialize, our product candidates may be delayed or prevented. In addition, if a catastrophe such as an earthquake, fire, flood or power loss should affect one of the third parties on which we rely, our business prospects could be harmed. For example, if a central laboratory holding all of our clinical study samples were to suffer a catastrophic loss of their facility, we would lose all of our samples and would have to repeat our studies.

***Any failure by our third-party manufacturers on which we rely to produce our preclinical and clinical drug supplies and on which we intend to rely to produce commercial supplies of any approved product candidates may delay or impair our ability to commercialize our product candidates.***

We have relied upon a small number of third-party manufacturers and active pharmaceutical ingredient formulators for the manufacture of our material for preclinical and clinical testing purposes and intend to continue to do so in the future. We also expect to rely upon third parties to produce materials required for the commercial production of our product candidates if we succeed in obtaining necessary regulatory approvals. If we are unable to arrange for third-party manufacturing sources, or to do so on commercially reasonable terms, we may not be able to complete development of our product candidates or market them.

Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured product candidates ourselves, including reliance on the third party for regulatory compliance and quality assurance, the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control (including a failure to synthesize and manufacture our product candidates in accordance with our product specifications) and the possibility of termination or nonrenewal of the agreement by the third party, based on its own business priorities, at a time that is costly or damaging to us. In addition, the FDA and other regulatory authorities require that our product candidates be manufactured according to cGMP and similar foreign standards. Any failure by our third-party manufacturers to comply with cGMP or failure to scale up manufacturing processes, including any failure to deliver sufficient quantities of product candidates in a timely manner, could lead to a delay in, or failure to obtain, regulatory approval of any of our product candidates. In addition, such failure could be the basis for action by the FDA to withdraw approvals for product candidates previously granted to us and for other regulatory action, including recall or seizure, total or partial suspension of production or injunction.

We received a request from the FDA for additional information regarding the characterization and qualification of the manufactured vials of A-623 we intend to use in our PEARL-SC clinical study. In addition, the FDA has asked for a proposal to establish comparability of future manufactured A-623 to be included in clinical studies. Any inability to use A-623 in our inventory would require manufacture

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of additional A-623 for use in our clinical study and would result in additional expense and potential delay of our clinical development plans.

We rely on our manufacturers to purchase from third-party suppliers the materials necessary to produce our product candidates for our clinical studies. There are a small number of suppliers for certain capital equipment and raw materials that we use to manufacture our drugs. Such suppliers may not sell these raw materials to our manufacturers at the times we need them or on commercially reasonable terms. We do not have any control over the process or timing of the acquisition of these raw materials by our manufacturers. Moreover, we currently do not have any agreements for the commercial production of these raw materials. Although we generally do not begin a clinical study unless we believe we have a sufficient supply of a product candidate to complete the clinical study, any significant delay in the supply of a product candidate or the raw material components thereof for an ongoing clinical study due to the need to replace a third-party manufacturer could considerably delay completion of our clinical studies, product testing and potential regulatory approval of our product candidates. If our manufacturers or we are unable to purchase these raw materials after regulatory approval has been obtained for our product candidates, the commercial launch of our product candidates would be delayed or there would be a shortage in supply, which would impair our ability to generate revenues from the sale of our product candidates.

Because of the complex nature of our compounds, our manufacturers may not be able to manufacture our compounds at a cost or in quantities or in a timely manner necessary to make commercially successful products. If we successfully commercialize any of our drugs, we may be required to establish large-scale commercial manufacturing capabilities. In addition, as our drug development pipeline increases and matures, we will have a greater need for clinical study and commercial manufacturing capacity. We have no experience manufacturing pharmaceutical products on a commercial scale and some of these suppliers will need to increase their scale of production to meet our projected needs for commercial manufacturing, the satisfaction of which on a timely basis may not be met.

***If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our product candidates, we may be unable to generate any revenue.***

We do not currently have an organization for the sales, marketing and distribution of pharmaceutical products and the cost of establishing and maintaining such an organization may exceed the cost-effectiveness of doing so. In order to market any products that may be approved by the FDA, we must build our sales, marketing, managerial and other non-technical capabilities or make arrangements with third parties to perform these services. If we are unable to establish adequate sales, marketing and distribution capabilities, whether independently or with third parties, we may not be able to generate product revenue and may not become profitable. We will be competing with many companies that currently have extensive and well-funded marketing and sales operations. Without an internal team or the support of a third party to perform marketing and sales functions, we may be unable to compete successfully against these more established companies.

***Guidelines and recommendations published by various organizations may adversely affect the use of any products for which we may receive regulatory approval.***

Government agencies issue regulations and guidelines directly applicable to us and to our product candidates. In addition, professional societies, practice management groups, private health or science foundations and organizations involved in various diseases from time to time publish guidelines or recommendations to the medical and patient communities. These various sorts of recommendations may relate to such matters as product usage and use of related or competing therapies. For example, organizations like the American Heart Association have made recommendations about therapies in the cardiovascular therapeutics market. Changes to these recommendations or other guidelines advocating



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alternative therapies could result in decreased use of any products for which we may receive regulatory approval, which may adversely affect our results of operations.

### **Risks Related to Our Intellectual Property**

*If our or our licensors patent positions do not adequately protect our product candidates or any future products, others could compete with us more directly, which would harm our business.*

As of the date of this prospectus and as described in the section entitled **Business Intellectual Property** on page 92, we hold a total of four pending U.S. non-provisional patent applications, two pending U.S. provisional patent applications and two pending Patent Cooperation Treaty, or PCT, patent applications. Another PCT application has entered the national phase in the European Patent Office, the Eurasian Patent Organization and 17 other countries. We have also entered into exclusive license agreements for certain composition of matter, method of use and method of making patents and patent applications for certain of our development compounds. These license agreements encompass (i) 13 U.S. patents, one pending U.S. non-provisional patent application, five European, or EP, patents, one pending EP patent application, 20 non-EP foreign patents and four pending non-EP foreign patent applications relating to varespladib and A-001; (ii) more than 30 U.S. patents, one pending U.S. non-provisional patent application, six EP patents, one pending EP patent application, 13 issued non-EP foreign patents and two pending non-EP foreign patent applications relating to other sPLA<sub>2</sub> inhibiting compounds including A-003; and (iii) two U.S. patents, one pending U.S. non-provisional patent application, one EP patent, two pending EP patent applications, ten non-EP foreign patents and 14 non-EP foreign patent applications relating to A-623. Our commercial success will depend in part on our and our licensors ability to obtain additional patents and protect our existing patent positions, particularly those patents for which we have secured exclusive rights, as well as our ability to maintain adequate protection of other intellectual property for our technologies, product candidates and any future products in the United States and other countries. If we or our licensors do not adequately protect our intellectual property, competitors may be able to use our technologies and erode or negate any competitive advantage we may have, which could materially harm our business, negatively affect our position in the marketplace, limit our ability to commercialize our product candidates and delay or render impossible our achievement of profitability. The laws of some foreign countries do not protect our proprietary rights to the same extent as the laws of the United States, and we may encounter significant problems in protecting our proprietary rights in these countries.

The patent positions of biotechnology and pharmaceutical companies, including our patent position, involve complex legal and factual questions, and, therefore, validity and enforceability cannot be predicted with certainty. Patents may be challenged, deemed unenforceable, invalidated or circumvented. We and our licensors will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies, product candidates and any future products are covered by valid and enforceable patents or are effectively maintained as trade secrets.

The degree of future protection for our proprietary rights is uncertain, and we cannot ensure that:

we or our licensors were the first to make the inventions covered by each of our pending patent applications;

we or our licensors were the first to file patent applications for these inventions;

others will not independently develop similar or alternative technologies or duplicate any of our technologies;

any of our or our licensors pending patent applications will result in issued patents;



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any of our or our licensors' patents will be valid or enforceable;

any patents issued to us or our licensors and collaborators will provide a basis for commercially viable products, will provide us with any competitive advantages or will not be challenged by third parties;

we will develop additional proprietary technologies or product candidates that are patentable; or

the patents of others will not have an adverse effect on our business.

***We may be unable to adequately prevent disclosure of trade secrets and other proprietary information.***

We rely on trade secrets to protect our proprietary know-how and technological advances, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. We rely in part on confidentiality agreements with our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to protect our trade secrets and other proprietary information. These agreements may not effectively prevent disclosure of confidential information and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. In addition, others may independently discover our trade secrets and proprietary information. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights. Failure to obtain or maintain trade secret protection could enable competitors to use our proprietary information to develop products that compete with our products or cause additional, material adverse effects upon our competitive business position.

***We license patent rights from third-party owners. If we, or such owners, do not properly maintain or enforce the patents underlying such licenses, our competitive position and business prospects will be harmed.***

We have obtained exclusive, worldwide licenses, except for Japan, of the composition of matter, methods of making and methods of use for certain sPLA<sub>2</sub> compounds from Eli Lilly and Shionogi & Co., Ltd. In addition, we are party to a license agreement with Amgen that provides exclusive and worldwide rights to develop and commercialize A-623, a novel BAFF inhibitor, as well as non-exclusive rights to certain technology relating to peptibody compositions and formulations. We may enter into additional licenses to third-party intellectual property in the future.

We depend in part on our licensors to protect the proprietary rights covering our in-licensed sPLA<sub>2</sub> compounds and A-623, respectively. Our licensors are responsible for maintaining certain issued patents and prosecuting certain patent applications. We have limited, if any, control over the amount or timing of resources that our licensors devote on our behalf or the priority they place on maintaining these patent rights and prosecuting these patent applications to our advantage. Our licensors may also be notified of alleged infringement and be sued for infringement of third-party patents or other proprietary rights. We may have limited, if any, control or involvement over the defense of these claims, and our licensors could be subject to injunctions and temporary or permanent exclusionary orders in the United States or other countries. Our licensors are not obligated to defend or assist in our defense against third-party claims of infringement. We have limited, if any, control over the amount or timing of resources, if any, that our licensors devote on our behalf or the priority they place on defense of such third-party claims of infringement.

Our success will depend in part on the ability of us or our licensors to obtain, maintain and enforce patent protection for their intellectual property, in particular, those patents to which we have secured exclusive rights. We or our licensors may not successfully prosecute the patent applications which we

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have licensed. Even if patents issue in respect of these patent applications, we or our licensors may fail to maintain these patents, may determine not to pursue litigation against other companies that are infringing these patents or may pursue such litigation less aggressively than we would. Without protection for the intellectual property we license, other companies might be able to offer substantially identical products for sale, which could adversely affect our competitive business position and harm our business prospects.

***If we do not obtain protection under the Hatch-Waxman Act and similar foreign legislation to extend our licensed patent terms and to obtain market exclusivity for our product candidates, our business will be materially harmed.***

The United States Drug Price Competition and Patent Term Restoration Act of 1984, more commonly known as the Hatch-Waxman Act, provides for an extension of patent term for drug compounds for a period of up to five years to compensate for time spent in the regulatory approval process. Assuming we gain a five-year patent term extension for each of our current product candidates in clinical development, and that we continue to have rights under our license agreements with respect to these product candidates, we would have exclusive rights to varespladib's U.S. new chemical entity patent (the primary patent covering the compound as a new composition of matter) until 2019 and to A-623's U.S. new chemical entity patent until 2027. In Europe, similar legislative enactments allow patent terms in the European Union to be extended for up to five years through the grant of a Supplementary Protection Certificate. Assuming we gain such a five-year extension for each of our current product candidates in clinical development, and that we continue to have rights under our license agreements with respect to these product candidates, we would have exclusive rights to varespladib's European new chemical entity patents until 2020 and to A-623's European new chemical entity patents until 2027. In addition, since varespladib has not been previously approved in the United States, varespladib could be eligible for up to five years of New Chemical Entity, or NCE, exclusivity from the FDA. NCE exclusivity would prevent the FDA from approving any generic competitor following NDA approval independent of the patent status of varespladib. Further, since A-623 has not been previously approved, A-623 could be eligible for 12 years of data exclusivity from the FDA. During the data exclusivity period, competitors are barred from relying on the innovator biologic's safety and efficacy data to gain approval. Similarly, the European Union provides that companies who receive regulatory approval for a new small molecule compound or biologic will have a 10-year period of data exclusivity for that compound or biologic (with the possibility of a further one-year extension) in most EU countries, beginning on the date of such European regulatory approval, regardless of when the European new chemical entity patent covering such compound expires. A generic version of the approved drug may not be marketed or sold during such market exclusivity period. However, there is no assurance that we will receive the extensions of our patents or other exclusive rights available under the Hatch-Waxman Act or similar foreign legislation. If we fail to receive such Hatch-Waxman extensions or marketing exclusivity rights or if we receive extensions that are materially shorter than expected, our ability to prevent competitors from manufacturing, marketing and selling generic versions of our products will be materially harmed.

***Our current patent positions and license portfolio may not include all patent rights needed for the full development and commercialization of our product candidates. We cannot be sure that patent rights we may need in the future will be available for license to us on commercially reasonable terms, or at all.***

We typically develop our product candidates using compounds for which we have in-licensed and original composition of matter patents and patents that claim the activities and methods for such compounds' production and use to the extent known at that time. As we learn more about the mechanisms of action and new methods of manufacture and use of these product candidates, we may file additional patent applications for these new inventions or we may need to ask our licensors to file

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them. We may also need to license additional patent rights or other rights on compounds, treatment methods or manufacturing processes because we learn that we need such rights during the continuing development of our product candidates.

Although our in-licensed and original patents may prevent others from making, using or selling similar products, they do not ensure that we will not infringe the patent rights of third parties. We may not be aware of all patents or patent applications that may impact our ability to make, use or sell any of our product candidates or proposed product candidates. For example, because we sometimes identify the mechanism of action or molecular target of a given product candidate after identifying its composition of matter and therapeutic use, we may not be aware until the mechanism or target is further elucidated that a third party has an issued or pending patent claiming biological activities or targets that may cover our product candidate. U.S. patent applications filed after November 29, 2000 are confidential in the U.S. Patent and Trademark Office for the first 18 months after such applications' earliest priority date, and patent offices in non-U.S. countries often publish patent applications for the first time six months or more after filing. Furthermore, we may not be aware of published or granted conflicting patent rights. Any conflicts resulting from patent applications and patents of others could significantly reduce the coverage of our patents and limit our ability to obtain meaningful patent protection. If others obtain patents with conflicting claims, we may need to obtain licenses to these patents or to develop or obtain alternative technology.

We may not be able to obtain any licenses or other rights to patents, technology or know-how from third parties necessary to conduct our business as described in this prospectus and such licenses, if available at all, may not be available on commercially reasonable terms. Any failure to obtain such licenses could delay or prevent us from developing or commercializing our drug candidates or proposed product candidates, which would harm our business. Litigation or patent interference proceedings may be necessarily brought against third parties, as discussed below, to enforce any of our patents or other proprietary rights or to determine the scope and validity or enforceability of the proprietary rights of such third parties.

***Litigation regarding patents, patent applications and other proprietary rights may be expensive and time consuming. If we are involved in such litigation, it could cause delays in bringing product candidates to market and harm our ability to operate.***

Our commercial success will depend in part on our ability to manufacture, use, sell and offer to sell our product candidates and proposed product candidates without infringing patents or other proprietary rights of third parties. Although we are not currently aware of any litigation or other proceedings or third-party claims of intellectual property infringement related to our product candidates, the pharmaceutical industry is characterized by extensive litigation regarding patents and other intellectual property rights. Other parties may obtain patents in the future and allege that the use of our technologies infringes these patent claims or that we are employing their proprietary technology without authorization. Likewise, third parties may challenge or infringe upon our or our licensors' existing or future patents.

Proceedings involving our patents or patent applications or those of others could result in adverse decisions regarding the patentability of our inventions relating to our product candidates or the enforceability, validity or scope of protection offered by our patents relating to our product candidates.

Even if we are successful in these proceedings, we may incur substantial costs and divert management time and attention in pursuing these proceedings. If we are unable to avoid infringing the patent rights of others, we may be required to seek a license, defend an infringement action or challenge the validity of the patents in court. Patent litigation is costly and time-consuming. We may not have sufficient resources to bring these actions to a successful conclusion. In addition, if we do not obtain a license,



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develop or obtain non-infringing technology, fail to defend an infringement action successfully or have infringed patents declared invalid, we may incur substantial monetary damages; encounter significant delays in bringing our product candidates to market; or be precluded from participating in the manufacture, use or sale of our product candidates or methods of treatment requiring licenses.

**Risks Related to the Securities Markets and Investment in Our Common Stock**

***Market volatility may affect our stock price and the value of your investment.***

The market price for our common stock has been, and is likely to continue to be, volatile. In addition, the market price of our common stock may fluctuate significantly in response to a number of factors, most of which we cannot predict or control, including:

plans for, progress in and results from clinical studies for varespladib, A-623, A-001 and our other product candidates;

announcements of new products, services or technologies, commercial relationships, acquisitions or other events by us or our competitors;

developments concerning proprietary rights, including those pertaining to patents held by Eli Lilly and Shionogi & Co., Ltd. concerning our sPLA<sub>2</sub> inhibitors and Amgen concerning A-623;

failure of any of our product candidates, if approved, to achieve commercial success;

fluctuations in stock market prices and trading volumes of securities of similar companies;

general market conditions and overall fluctuations in U.S. equity markets;

variations in our operating results, or the operating results of our competitors;

changes in our financial guidance or securities analysts' estimates of our financial performance;

changes in accounting principles;

sales of large blocks of our common stock, including sales by our executive officers, directors and significant stockholders;

additions or departures of any of our key personnel;

announcements related to litigation;

changing legal or regulatory developments in the United States and other countries; and

discussion of us or our stock price by the financial press and in online investor communities.

In addition, the stock market in general, and The NASDAQ Global Market in particular, have experienced substantial price and volume volatility that is often seemingly unrelated to the operating performance of particular companies. These broad market fluctuations may cause the trading price of



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our common stock to decline. In the past, securities class action litigation has often been brought against a company after a period of volatility in the market price of its common stock. We may become involved in this type of litigation in the future. Any securities litigation claims brought against us could result in substantial expenses and the diversion of our management's attention from our business.

***Because a small number of our existing stockholders own a majority of our voting stock, your ability to influence corporate matters will be limited.***

Our executive officers, directors and greater than 5% stockholders, in the aggregate, own approximately 79% of our outstanding common stock. As a result, such persons, acting together, will have the ability to control our management and affairs and substantially all matters submitted to our stockholders for approval, including the election and removal of directors and approval of any significant transaction. These persons will also have the ability to control our management and business affairs. This concentration of ownership may have the effect of delaying, deferring or preventing a change in control, impeding a merger, consolidation, takeover or other business combination involving us, or discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of our business, even if such a transaction would benefit other stockholders.

***Future sales of our common stock may cause our stock price to decline.***

As of September 30, 2010, there were 32,835,437 shares of our common stock outstanding. Of these, 6,547,797 shares of common stock and 193,936 shares of common stock underlying certain warrants are being sold in this offering by the selling stockholders and will be freely tradable immediately after this offering (assuming exercise of the warrants and except for shares purchased by affiliates) and 1,897,728 of the 32,835,437 shares may be sold upon the expiration of certain lock-up agreements on December 4, 2010 (subject in some cases to volume limitations). In addition, as of September 30, 2010, we had outstanding options to purchase 1,307,066 shares of common stock that, if exercised, will result in these additional shares becoming available for sale. A large portion of these shares and options are held by a small number of persons and investment funds. Sales by these stockholders or optionholders of a substantial number of shares after this offering could significantly reduce the market price of our common stock. Moreover, certain holders of shares of common stock will have rights, subject to some conditions, to require us to file registration statements covering the shares they currently hold, or to include these shares in registration statements that we may file for ourselves or other stockholders.

We have registered all common stock that we may issue under our Amended and Restated 2010 Stock Option and Incentive Plan, or the 2010 Plan, and our Employee Stock Purchase Plan, or the ESPP. An aggregate of 433,644 shares of our common stock has been reserved for future issuance under the 2010 Plan, plus any shares reserved and unissued under our 2005 Equity Incentive Plan, and an aggregate of 100,000 shares has been reserved for future issuance under our ESPP. These shares can be freely sold in the public market upon issuance, subject to the lock-up agreements referred to above. If a large number of these shares are sold in the public market, the sales could reduce the trading price of our common stock. See the section entitled "Shares Eligible for Future Sale" on page 156 for a more detailed description of sales that may occur in the future.

***We may need to raise additional capital to fund our operations, which may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights.***

We may seek additional capital through a combination of private and public equity offerings, debt financings and collaboration, strategic and licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing, if available, may involve agreements that include covenants limiting or



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restricting our ability to take specific actions such as incurring debt, making capital expenditures or declaring dividends. If we raise additional funds through collaboration, strategic alliance and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or product candidates or grant licenses on terms that are not favorable to us.

### ***Being a public company increases our expenses and administrative burden.***

As a public company, we incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, our administrative staff will be required to perform additional tasks. For example, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, as well as rules subsequently implemented by the Securities and Exchange Commission, or SEC, and The NASDAQ Global Market, impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. We must also bear all of the internal and external costs of preparing and distributing periodic public reports in compliance with our obligations under the securities laws.

In particular, the Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. Commencing in 2011, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management and our independent registered public accounting firm to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. Our compliance with Section 404 will require that we incur substantial accounting expense and expend significant management time on compliance-related issues. Moreover, if we are not able to comply with the requirements of Section 404 in a timely manner, our stock price could decline, and we could face sanctions, delisting or investigations by The NASDAQ Global Market, or other material adverse effects on our business, reputation, results of operations, financial condition or liquidity.

### ***We do not intend to pay dividends on our common stock so any returns will be limited to the value of our stock.***

We have never declared or paid any cash dividend on our common stock. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the value of their stock.

### ***Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.***

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws may delay or prevent an acquisition of us or a change in our management. These provisions include:

- a classified and staggered board of directors whose members can only be dismissed for cause;
- the prohibition on actions by written consent of our stockholders;
- the limitation on who may call a special meeting of stockholders;
- the establishment of advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon at stockholder meetings;



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the ability of our board of directors to issue preferred stock without stockholder approval, which would increase the number of outstanding shares and could thwart a takeover attempt; and

the requirement of at least 75% of the outstanding common stock to amend any of the foregoing provisions.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to merge or combine with us. Although we believe these provisions collectively provide for an opportunity to obtain greater value for stockholders by requiring potential acquirors to negotiate with our board of directors, they would apply even if an offer rejected by our board were considered beneficial by some stockholders. 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, which is responsible for appointing the members of our management.

***Our ability to use our net operating loss carryforwards may be subject to limitation and may result in increased future tax liability to us.***

Generally, a change of more than 50% in the ownership of a corporation's stock, by value, over a three-year period constitutes an ownership change for U.S. federal income tax purposes. An ownership change may limit a company's ability to use its net operating loss carryforwards attributable to the period prior to such change. We have not performed a detailed analysis to determine whether an ownership change under Section 382 of the Internal Revenue Code has occurred after each of our previous private placements of preferred stock and convertible debt, or our previous issuances of common stock, which if sufficient, taking into account prior or future shifts in our ownership over a three-year period, could cause us to undergo an ownership change. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards to offset U.S. federal taxable income may become subject to limitations, which could potentially result in increased future tax liability to us.

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**SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus contains forward-looking statements. Forward-looking statements relate to future events or our future financial performance. We generally identify forward-looking statements by terminology such as may, will, would, should, expects, plans, anticipates, could, intends, target, projects, contemplates, believes, estimate, intend, potential, continue or other similar words or the negative of these terms. These statements are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors described in Risk Factors and elsewhere in this prospectus. Accordingly, you should not place undue reliance upon these forward-looking statements. We cannot assure you that the events and circumstances reflected in the forward-looking statements will be achieved or occur, the timing of events and circumstances and actual results could differ materially from those projected in the forward looking statements. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- our expectations related to the use of proceeds, if any, from this offering;
- the progress of, timing of and amount of expenses associated with our research, development and commercialization activities;
- the timing, conduct and success of our clinical studies for our product candidates;
- our ability to obtain U.S. and foreign regulatory approval for our product candidates and the ability of our product candidates to meet existing or future regulatory standards;
- our expectations regarding federal, state and foreign regulatory requirements;
- the therapeutic benefits and effectiveness of our product candidates;
- the accuracy of our estimates of the size and characteristics of the markets that may be addressed by our product candidates;
- our ability to manufacture sufficient amounts of our product candidates for clinical studies and products for commercialization activities;
- our intention to seek to establish strategic collaborations or partnerships for the development or sale of our product candidates;
- our expectations as to future financial performance, expense levels and liquidity sources;
- the timing of commercializing our product candidates;
- our ability to compete with other companies that are or may be developing or selling products that are competitive with our product candidates;
- anticipated trends and challenges in our potential markets;

our ability to attract and retain key personnel; and  
other factors discussed elsewhere in this prospectus.

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The forward-looking statements made in this prospectus relate only to events as of the date on which the statements are made. We have included important factors in the cautionary statements included in this prospectus, particularly in the section entitled "Risk Factors" that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make. Except as required by law, we do not assume any intent to update any forward-looking statements after the date on which the statement is made, whether as a result of new information, future events or circumstances or otherwise.

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**USE OF PROCEEDS**

The proceeds from the resale of the shares of common stock under this prospectus are solely for the account of the selling stockholders identified in this prospectus. We may indirectly receive proceeds of up to an aggregate of \$1,357,552 to the extent that any selling stockholders exercise warrants to purchase shares of common stock for cash, which shares may then be resold under this prospectus; however, we will not directly receive any proceeds from the sale of shares under this prospectus. We intend to use the net proceeds generated by warrant exercises, if any, for general corporate purposes. We cannot estimate how many, if any, of the warrants will be exercised as a result of this offering.

**Table of Contents****PRICE RANGE OF COMMON STOCK**

Our common stock has been listed on The NASDAQ Global Market under the symbol ANTH since our initial public offering. Prior to that offering, there was no public market for our common stock. The following table sets forth, for the periods indicated, the high and low intraday sales prices of our common stock as reported by The NASDAQ Global Market:

	<b>High</b>	<b>Low</b>
First Quarter 2010 (beginning March 2, 2010)	\$ 7.19	\$ 6.88
Second Quarter 2010	\$ 8.55	\$ 5.07
Third Quarter 2010	\$ 5.99	\$ 2.82
Fourth Quarter 2010 (through November 18, 2010)	\$ 6.90	\$ 4.12

On November 18 2010, the closing price as reported on The NASDAQ Global Market of our common stock was \$5.61. As of October 15, 2010, we had approximately 750 holders of record and beneficial holders of our common stock.

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**DIVIDEND POLICY**

We have never declared or paid any cash dividends on our common stock. We currently intend to retain any future earnings to finance the growth and development of our business. Therefore, we do not anticipate declaring or paying any cash dividends in the foreseeable future. Any 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 financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

**Table of Contents****CAPITALIZATION**

The following table sets forth our capitalization as of September 30, 2010.

You should read the following table in conjunction with our financial statements and related notes, Selected Financial Data and Management's Discussion and Analysis of Financial Condition and Results of Operations appearing elsewhere in this prospectus.

	<b>As of September 30, 2010</b>
Cash, cash equivalents and short-term investments	\$ 73,087,610
Common stock, \$0.001 par value, 95,000,000 shares authorized; 32,796,690 shares issued and outstanding	32,796
Preferred stock, \$0.001 par value, 5,000,000 shares authorized; 0 shares issued and outstanding	
Additional paid-in capital	162,494,362
Accumulated comprehensive income	161,987
Deficit accumulated during the development stage	(92,603,647)
Total stockholders' equity	70,085,498
Total capitalization	\$ 70,085,498

**Table of Contents****SELECTED FINANCIAL DATA**

The following selected financial data should be read together with our financial statements and the related notes and Management's Discussion and Analysis of Financial Condition and Results of Operations appearing elsewhere in this prospectus. The selected financial data in this section is not intended to replace our financial statements and the related notes. Our historical results are not necessarily indicative of the results to be expected for any future period.

We were incorporated on September 9, 2004. The following statement of operations data, including share data, for the years ended December 31, 2007, 2008 and 2009 and for the cumulative period from September 9, 2004 to December 31, 2009, and the balance sheet data as of December 31, 2008 and 2009 have been derived from our audited financial statements and related notes appearing elsewhere in this prospectus. The statement of operations data for the years ended December 31, 2005 and 2006 and the balance sheet data as of December 31, 2005, 2006 and 2007 have been derived from our audited financial statements not included in this prospectus. The statement of operations data, including share data, for the nine months ended September 30, 2009 and 2010, and the period from September 9, 2004 (date of inception) through September 30, 2010, and the balance sheet data as of September 30, 2010 have been derived from our unaudited interim financial statements appearing elsewhere in this prospectus. The unaudited interim financial statements have been prepared on the same basis as the audited financial statements and reflect all adjustments necessary to fairly state our financial position as of September 30, 2010 and the results of operations for the nine months ended September 30, 2009 and 2010, and for the cumulative period from September 9, 2004 to September 30, 2010. The operating results for any period are not necessarily indicative of financial results that may be expected for any future period.

The pro forma basic and diluted net loss per share and pro forma weighted-average number of shares gives effect to the conversion of all our outstanding preferred stock into shares of common stock as if the conversion occurred on the date of issuance.

	Year Ended December 31,					Nine Months Ended		
	2005	2006	2007	2008	2009	2010	2009	
Operating expenses	\$ 345,208	\$ 7,759,106	\$ 23,921,932	\$ 10,882,322	\$ 8,415,414	\$ 18,565,088	\$ 7,727,129	\$
Depreciation and amortization	205,527	822,732	2,468,607	2,980,170	3,425,690	4,244,000	2,730,482	
Research and development	(550,735)	(8,581,838)	(26,390,539)	(13,862,492)	(11,841,104)	(22,809,088)	(10,457,611)	

Other	11,148	109,987	696,962	178,129	23,534	76,562	21,559
Other		(17,395)		(296,303)	(385,922)	(4,641,169)	(289,776)
Signature		(190,000)		(4,118,544)			
Income	11,148	(97,408)	696,962	(4,236,718)	(362,388)	(4,564,607)	(268,217)
	\$ (539,587)	\$ (8,679,246)	\$ (25,693,577)	\$ (18,099,210)	\$ (12,203,492)	\$ (27,373,695)	\$ (10,725,828)
Share based <sup>(1)</sup>	\$ (1.38)	\$ (13.82)	\$ (28.15)	\$ (13.47)	\$ (8.06)	\$ (1.40)	\$ (7.16)
Average shares outstanding basic	390,279	627,904	912,668	1,343,420	1,513,598	19,567,058	1,498,108
Net loss per share basic and diluted					\$ (1.24)		
Average shares outstanding basic					9,854,380		

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- (1) Diluted earnings per share, or EPS, is identical to basic EPS since common equivalent shares are excluded from the calculation, as their effect is anti-dilutive.
- (2) For accounting purposes only, the number of issued and outstanding shares for the years ended December 31, 2005, 2006, 2007, 2008 and 2009 and the nine months ended September 30, 2009 and 2010 do not include weighted-average shares of unvested stock of 478,799, 297,596, 261,649, 230,028, 110,079, 121,542 and 52,612, respectively. These shares are subject to a risk of repurchase by us until such shares are vested. See Note 2 to our financial statements for more information.

	2005	2006	As of December 31, 2007	2008	2009	As of September 30, 2010 (unaudited)
<b>Balance Sheet Data:</b>						
Cash and cash equivalents	\$ 381,964	\$ 20,781,916	\$ 152,744	\$ 7,895,113	\$ 3,803,384	\$ 51,208,720
Short-term investments			5,825,000			21,878,890
Working capital	232,136	19,629,639	(2,907,995)	(495,836)	(14,344,436)	70,063,385
Total assets	404,091	20,856,892	6,193,213	8,034,154	5,888,789	74,923,205
Indebtedness	150,790	1,174,621	12,058,184	8,494,417	18,167,645	4,837,707
Convertible preferred stock	804,951	28,892,004	28,892,004	52,123,859	52,123,859	
Deficit accumulated during the development stage	(554,427)	(9,233,673)	(34,927,250)	(53,026,460)	(65,229,952)	(92,603,647)
Total stockholders (deficit) equity	253,301	19,682,271	(5,864,971)	(460,263)	(12,278,856)	70,085,498

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**SELLING SECURITY HOLDERS**

This prospectus covers the resale of 6,547,797 shares of common stock and 193,936 shares of common stock issuable upon outstanding warrants held by existing stockholders who have registration rights, and their trustees, pledges, donors or successors. Such shares were issued to the selling stockholders in various transactions as described below. The following discussion reflects a 1-to-1.712 reverse split of our common stock effected on February 22, 2010, and the conversion of our preferred stock into shares of common stock in connection with our initial public offering on March 4, 2010.

198,598 shares of common stock registered for resale under this prospectus were originally issued to certain of the selling stockholders in a private placement transaction that closed on January 15, 2005 and April 1, 2005. An aggregate of 552,530 shares of our Series A convertible preferred stock, which was subsequently reclassified as Series A-1 convertible preferred stock, were issued in such transaction at a purchase price of \$1.47 per share.

776,903 shares of common stock registered for resale under this prospectus were originally issued to certain of the selling stockholders in a private placement transaction that closed on August 4, 2006. We sold an aggregate of 1,620,669 shares of our Series A-2 convertible preferred stock for cash consideration, consideration received upon the conversion of certain outstanding promissory notes and in exchange for licensed technology. 224,248 shares of our Series A-2 convertible preferred stock were issued upon the conversion of such promissory notes, 257,744 shares were issued in exchange for licensed technology and the remaining 1,138,677 shares were sold in such transaction at a price of \$5.14 per share.

1,162,699 shares of common stock registered for resale under this prospectus were originally issued to certain of the selling stockholders in a private placement transaction that closed on December 15, 2006. 2,619,568 shares of our Series B convertible preferred stock, which was subsequently reclassified as Series B-1 convertible preferred stock, were sold at a per share price of \$7.28 and 127,297 shares were issued in exchange for licensed technology in such transaction.

1,585,241 shares of common stock registered for resale under this prospectus were originally issued to certain of the selling stockholders in a private placement transaction that closed on August 12, 2008. We issued an aggregate of 3,226,244 shares of our Series B-2 convertible preferred stock, 2,264,178 shares of which were issued upon the conversion of certain outstanding promissory notes and the remaining 962,066 shares of which were sold at a price of \$7.28 per share. In addition, we issued warrants to purchase 240,516 shares of our common stock at an exercise price of \$1.34 per share in such transaction to certain of the selling stockholders. Such warrants were exercised on a cashless basis in connection with our initial public offering, resulting in 194,474 shares of common stock, 97,237 shares of which are registered for resale under this prospectus.

908,625 shares of common stock and 193,936 shares of common stock issuable upon outstanding warrants registered for resale under this prospectus were originally issued to certain of the selling stockholders in a private placement transaction that closed on July 17, 2009 and September 9, 2009. We sold convertible promissory notes and warrants to purchase shares of our equity securities for an aggregate purchase price of \$10.0 million. In connection with our initial public offering, the notes converted into an aggregate of 1,985,575 shares of our common stock and the warrants became exercisable for an aggregate of 357,136 shares of our common stock at an exercise price of \$7.00 per share.

1,445,889 shares of common stock registered for resale under this prospectus were originally issued to certain of the selling stockholders in a private placement transaction that closed in connection with our initial public offering on March 4, 2010. Concurrently with the closing of our initial public offering, we



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sold an aggregate of 2,598,780 shares of common stock at a purchase price of \$6.58 per share in such transaction.

285,438 shares of common stock registered for resale under this prospectus were originally issued to certain of the selling stockholders in a private placement transaction that closed on December 11, 2009. We sold convertible promissory notes for an aggregate purchase price of \$3.4 million in such transaction. In connection with our initial public offering, the notes converted into an aggregate of 526,660 shares of our common stock.

87,167 shares of common stock registered for resale under this prospectus were originally issued to certain of the selling stockholders pursuant to the exercise of stock options.

The following table sets forth certain information regarding the selling stockholders and the shares of common stock beneficially owned by them and issuable to the selling stockholders upon a cash exercise of the warrants, which information is available to us as of November 4, 2010. The selling stockholders may offer the shares under this prospectus from time to time and may elect to sell some, all or none of the shares set forth next to their name. As a result, we cannot estimate the number of shares of common stock that a selling stockholder will beneficially own after termination of sales under this prospectus. However, for the purposes of the table below, we have assumed that, after completion of the offering, none of the shares covered by this prospectus will be held by the selling stockholders. In addition, a selling stockholder may have sold, transferred or otherwise disposed of all or a portion of that holder's shares of common stock since the date on which they provided information for this table. We have not made independent inquiries about this. We are relying on written commitments from the selling stockholders to notify us of any changes in their beneficial ownership after the date they originally provided this information. See section entitled Plan of Distribution beginning on page 46.

<b>Selling Stockholder</b>	<b># of Shares Beneficially Owned Before Offering<sup>(1)</sup></b>	<b># of Shares Offered</b>	<b># of Shares Underlying Warrants Offered</b>	<b># of Shares Beneficially Owned After Offering<sup>(1)</sup></b>	<b>% of Shares Beneficially Owned After Offering<sup>(1)</sup></b>
Sofinnova Venture Partners VI, L.P. and affiliated entities <sup>(2)</sup>	4,177,621	3,563,064	105,418	509,139	1.55%
HBM BioCapital, L.P. and affiliated entities <sup>(3)</sup>	1,988,517	260,396	30,505	1,697,616	5.14%
A.M. Pappas Life Sciences Ventures III, L.P. and affiliated entities <sup>(4)</sup>	1,813,140	930,332	27,507	855,301	2.59%
Caxton Advantage Life Sciences Fund, L.P. <sup>(5)</sup>	1,560,509	1,008,271	30,506	521,732	1.58%
Eli Lilly and Company	602,323	336,366		265,957	*
The Sears Trust U/A dtd 03/11/1991 <sup>(6)</sup>	394,799	324,706		70,093	*
Shionogi & Co., Ltd.	390,619	124,662		265,957	*
<b>Total</b>	<b>10,927,528</b>	<b>6,547,797</b>	<b>193,936</b>	<b>4,185,795</b>	<b>12.51%</b>

\* Less than 1%.

<sup>(1)</sup> Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the shares indicated in the table. Percentage ownership calculations are based on

32,835,437 shares outstanding as of September 30, 2010.

- (2) Includes (i) 3,360,574 shares of common stock (2,940,408 shares of which are registered for resale under this prospectus) and 86,996 shares of common stock issuable upon exercise of warrants (all of which are registered for resale under this prospectus), all owned of record by Sofinnova Venture Partners VI, L.P.; (ii) 665,820 shares of common stock (582,574 shares of which are registered for resale under this prospectus) and 17,237 shares of common stock issuable upon exercise of warrants (all of which

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are registered for resale under this prospectus), all owned of record by Sofinnova Venture Partners VI GmbH & Co. KG; and (iii) 45,809 shares of common stock (40,082 shares of which are registered for resale under this prospectus) and 1,185 shares of common stock issuable upon exercise of warrants (all of which are registered for resale under this prospectus), all owned of record by Sofinnova Venture Affiliates VI, L.P. Alain Azan, Eric Buatois, Michael Powell and Dr. James I. Healy are the managing members of the general partner of the limited partnership, that directly hold such shares, and as such, may be deemed to share voting and investment power with respect to such shares. Dr. Healy is a director of Anthera. Messrs. Azan, Buatois and Powell and Dr. Healy disclaim beneficial ownership, except to the extent of their proportionate pecuniary interest in Sofinnova.

- (3) Includes (i) 1,550,978 shares of common stock (221,337 shares of which are registered for resale under this prospectus) and 139,263 shares of common stock issuable upon exercise of warrants (25,930 shares of which are registered for resale under this prospectus), all owned of record by HBM BioCapital (EUR) L.P. and (ii) 273,701 shares of common stock (39,059 shares of which are registered for resale under this prospectus) and 24,575 shares of common stock issuable upon exercise of warrants (4,575 shares of which are registered for resale under this prospectus), all owned of record by HBM BioCapital (USD) L.P., collectively, the HBM BioCapital Funds. The board of directors of HBM BioCapital Ltd., the general partner of the HBM BioCapital Funds, has sole voting and dispositive power with respect to such shares. The board of directors of HBM BioCapital Ltd. consists of John Arnold, Sophia Harris, Richard Coles, Dr. Andreas Wicki and John Urquhart, none of whom has individual voting or investment power with respect to the shares.
- (4) Includes (i) 1,505,394 shares of common stock (875,890 shares of which are registered for resale under this prospectus) and 201,638 shares of common stock issuable upon exercise of warrants (25,897 shares of which are registered for resale under this prospectus), all owned of record by A. M. Pappas Life Science Ventures III, L.P. and (ii) 93,572 shares of common stock (54,442 shares of which are registered for resale under this prospectus) and 12,536 shares of common stock issuable upon exercise of warrants (1,610 shares of which are registered for resale under this prospectus), all owned of record by PV III CEO Fund, L.P. Arthur M. Pappas, in his role as chairman of the investment committee of AMP&A Management III, LLC, the general partner of A.M. Pappas Life Science Ventures III, L.P. and PV III CEO Fund, L.P., has voting and investment authority over these shares. Mr. Pappas disclaims beneficial ownership of these shares except to the extent of his pecuniary interest arising therein.
- (5) Includes (i) 1,423,896 shares of common stock (1,008,271 shares of which are registered for resale under this prospectus) and 130,506 shares of common stock issuable upon exercise of warrants (30,506 shares of which are registered for resale under this prospectus), all owned of record by Caxton Advantage Life Sciences Fund, L.P. and (ii) options to purchase an additional 6,107 shares of common stock that are exercisable within 60 days of September 30, 2010 that are owned of record by Dr. A. Rachel Leheny over which Caxton Advantage Life Sciences Fund, L.P. may be deemed to hold voting power. Caxton Advantage Venture Partners, L.P. has voting and investment power with respect to such shares. Decisions by Caxton Advantage Venture Partners, L.P. with respect to such shares are made by Advantage Life Sciences Partners, LLC, the Managing General Partner of Caxton Advantage Venture Partners, L.P., together with the investment committee of Caxton Advantage Venture Partners, L.P. Dr. Leheny and Eric Roberts have authority to take action on behalf of Advantage Life Sciences Partners, LLC as members of Advantage Life Sciences Partners, LLC. The investment committee of Caxton Advantage Venture Partners, L.P. as of the date hereof is comprised of (i) Mr. Roberts, (ii) Dr. Leheny, (iii) Bruce Kovner and (iv) Peter D Angelo and the consent of four members is required with respect to any decision by the Investment Committee. Dr. Leheny is a director of Anthera, is (i) a Managing Director of Caxton Advantage Venture Partners, L.P., which is the General Partner of Caxton Advantage Life Sciences Fund, L.P., a life-sciences venture capital fund that she co-founded in 2006 and is (ii) a member of Advantage Life Sciences Partners LLC. Mr. Roberts and Dr. Leheny and the members of the Caxton Advantage Venture Partners, L.P. investment committee disclaim beneficial ownership, except to the extent of their proportionate pecuniary interests, either directly, or indirectly through Caxton Advantage Venture Partners, L.P. (or through any other entity which is a limited partner in Caxton Advantage Life Sciences Fund, L.P.), in Caxton Advantage Life Sciences Fund, L.P.
- (6) Lowell E. Sears serves as trustee and may be deemed to have voting and investment power with respect to such shares.



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**PLAN OF DISTRIBUTION**

We are registering an aggregate of 6,741,733 shares of common stock issued to the selling stockholders and issuable upon exercise of certain warrants issued to the selling stockholders to permit the resale of such shares of common stock by the holders thereof from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The selling stockholders may sell all or a portion of the shares of common stock beneficially owned by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the selling stockholders will be responsible for underwriting discounts or commissions or agent's commissions. The shares of common stock may be sold on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale, in the over-the-counter market or in transactions otherwise than on these exchanges or systems or in the over-the-counter market and in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions. The selling stockholders may use any one or more of the following methods when selling shares:

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

block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

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

an exchange distribution in accordance with the rules of the applicable exchange;

privately negotiated transactions;

settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;

broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;

through the writing or settlement of options or other hedging transactions, whether such options are listed on an options exchange or otherwise;

a combination of any such methods of sale; and

any other method permitted pursuant to applicable law.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, as permitted by that rule, or Section 4(1) under the Securities Act, if available, rather than under this prospectus, provided that they meet the criteria and conform to the requirements of those provisions.



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Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. If the selling stockholders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal. Such commissions will be in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction will not be in excess of a customary brokerage commission in compliance with the Financial Industry Regulatory Authority or FINRA, Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with sales of the shares of common stock or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The selling stockholders may also sell shares of common stock short and if such short sale shall take place after the date that this registration statement is declared effective by the SEC, the selling stockholders may deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling stockholders may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares, to the extent permitted by applicable law. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). Notwithstanding the foregoing, the selling stockholders have been advised that they may not use shares registered on this registration statement to cover short sales of our common stock made prior to the date the registration statement, of which this prospectus forms a part, has been declared effective by the SEC.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the warrants or shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act, amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer and donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders and any broker-dealer or agents participating in the distribution of the shares of common stock may be deemed to be underwriters within the meaning of Section 2(11) of the Securities Act in connection with such sales. In such event, any commissions paid, or any discounts or concessions allowed to, any such broker-dealer or agent and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. selling stockholders who are underwriters within the meaning of Section 2(11) of the Securities Act will be subject to the applicable prospectus delivery requirements of the Securities Act including Rule 172 thereunder and may be subject to certain statutory liabilities of, including but not limited to, Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Securities Exchange Act of 1934, as amended, or the Exchange Act.

Each selling stockholder has informed the Company that it is not a registered broker-dealer and does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the common stock. Upon the Company being notified in writing by a selling stockholder that



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any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, a supplement to this prospectus will be filed, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such selling stockholder and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which such the shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In no event shall any broker-dealer receive fees, commissions and markups, which, in the aggregate, would exceed eight percent (8.0%).

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that any selling stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

Each selling stockholder and any other person participating in such distribution will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including, without limitation, to the extent applicable, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the selling stockholder and any other participating person. To the extent applicable, Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

We will pay all expenses of the registration of the shares of common stock pursuant to the registration rights agreement, including, without limitation, SEC filing fees and expenses of compliance with state securities or blue sky laws; *provided, however*, that each selling stockholder will pay all underwriting discounts and selling commissions, if any and any related legal expenses incurred by it. We will indemnify the selling stockholders against certain liabilities, including some liabilities under the Securities Act, in accordance with the registration rights agreement, or the selling stockholders will be entitled to contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act, that may arise from any written information furnished to us by the selling stockholders specifically for use in this prospectus, in accordance with the related registration rights agreements, or we may be entitled to contribution.

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

*The following discussion and analysis should be read together with our financial statements and the related notes appearing elsewhere in this prospectus. This discussion contains forward-looking statements reflecting our current expectations that involve risks and uncertainties. See Special Note Regarding Forward-Looking Statements for a discussion of the uncertainties, risks and assumptions associated with these statements. Actual results and the timing of events could differ materially from those discussed in our forward-looking statements as a result of many factors, including those set forth under Risk Factors and elsewhere in this prospectus.*

**Overview**

We are a biopharmaceutical company focused on developing and commercializing products to treat serious diseases associated with inflammation, including cardiovascular and autoimmune diseases. We currently have one Phase 3 clinical program, varespladib, and two Phase 2 clinical programs, A-623 and A-001. Two of our product candidates, varespladib and A-001, are designed to inhibit a novel enzyme target known as secretory phospholipase A<sub>2</sub>, or sPLA<sub>2</sub>. Elevated levels of sPLA<sub>2</sub> have been implicated in a variety of acute inflammatory conditions, including acute coronary syndrome and acute chest syndrome associated with sickle cell disease, as well as in chronic diseases, including stable coronary artery disease. In addition, our Phase 2 product candidate, A-623, targets elevated levels of B-cell activating factor, or BAFF, which has been associated with a variety of B-cell mediated autoimmune diseases, including systemic lupus erythematosus, or lupus, lupus nephritis, rheumatoid arthritis, multiple sclerosis, Sjögren's Syndrome, Graves' Disease and others.

We were incorporated and commenced operations in September 2004. Since our inception, we have generated significant losses. As of September 30, 2010, we had an accumulated deficit of approximately \$92.6 million. As of the date of this prospectus, we have never generated any revenue and have generated only interest income from cash and cash equivalents and short-term investments. We expect to incur substantial and increasing losses for at least the next several years as we pursue the development and commercialization of our product candidates. In their report on our financial statements for the year ended December 31, 2009, our independent auditors included an explanatory paragraph regarding concerns about our ability to continue as a going concern. Our financial statements contain additional note disclosures describing the circumstances that led to this disclosure.

To date, we have funded our operations through equity offerings and private placements of convertible debt, raising an aggregate of approximately \$146.0 million. We will need substantial additional financing to continue to develop our product candidates, obtain regulatory approvals and to fund operating expenses, which we will seek to raise through public or private equity or debt financings, collaborative or other arrangements with third parties or through other sources of financing. We cannot assure you that such funds will be available on terms favorable to us, if at all. In addition to the normal risks associated with development-stage companies, we may never successfully complete development of any of our product candidates, obtain adequate patent protection for our technology, obtain necessary government regulatory approval for our product candidates or achieve commercial viability for any approved product candidates. In addition, we may not be profitable even if we succeed in commercializing any of our product candidates.

**Revenue**

To date, we have not generated any revenue. We do not expect to generate revenue unless or until we obtain regulatory approval of, and commercialize, our product candidates or in-license additional products that generate

revenue. We intend to seek to generate revenue from a combination of product sales, up-front fees and milestone payments in connection with collaborative or strategic relationships

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and royalties resulting from the licensing of the commercial rights to our intellectual property. We expect that any revenue we generate will fluctuate from quarter to quarter as a result of the nature, timing and amount of milestone payments we may receive upon the sale of our products, to the extent any are successfully commercialized, as well as any revenue we may receive from our collaborative or strategic relationships.

**Research and Development Expenses**

Since our inception, we have focused our activities on our product candidate development programs. We expense research and development costs as they are incurred. Research and development expenses consist of personnel costs, including salaries, benefits and stock-based compensation, clinical studies performed by contract research organizations, or CROs, materials and supplies, licenses and fees and overhead allocations consisting of various administrative and facilities-related costs. Research and development activities are also separated into three main categories: licensing, clinical development and pharmaceutical development. Licensing costs consist primarily of fees paid pursuant to license agreements. Historically, our clinical development costs have included costs for preclinical and clinical studies. We expect to incur substantial clinical development costs for our Phase 3 clinical study named VISTA- 16 for varespladib and for our Phase 2b clinical study named PEARL-SC for A-623, as well as for the development of our other product candidates. Pharmaceutical development costs consist of expenses incurred relating to clinical studies and product formulation and manufacturing.

We expense both internal and external research and development costs as incurred. We are developing our product candidates in parallel, and we typically use our employee and infrastructure resources across several projects. Thus, some of our research and development costs are not attributable to an individually named project, but rather are allocated across our clinical stage programs. These unallocated costs include salaries, stock-based compensation charges and related fringe benefit costs for our employees, consulting fees and travel.

The following table shows our total research and development expenses for the years ended December 31, 2007, 2008 and 2009, the nine months ended September 30, 2009 and 2010, and for the period from September 9, 2004 (Date of Inception) through September 30, 2010:

	Year Ended December 31,			Nine Months Ended		For the
	2007	2008	2009	September 30, 2010	September 30, 2009	Period September 9, 2004 (Date of Inception) to September 30, 2010
Allocated costs:						
A-001	\$ 2,302,454	\$ 456,633	\$ 192,979	\$ 125,954	\$ 148,220	\$ 6,646,000
Varespladib	12,053,943	7,370,850	5,535,529	11,885,724 <sup>(2)</sup>	5,503,466	39,746,369 <sup>(3)</sup>
A-623	6,004,667 <sup>(1)</sup>	100,851	34,179	3,643,827	15,699	9,787,244 <sup>(1)</sup>
Unallocated costs	3,560,868	2,953,988	2,652,727	2,909,583	2,059,744	13,709,456
Total development	\$ 23,921,932	\$ 10,882,322	\$ 8,415,414	\$ 18,565,088	\$ 7,727,129	\$ 69,889,069

<sup>(1)</sup> Includes a one-time license initiation fee of \$6.0 million pursuant to a license agreement with Amgen.

- (2) Includes milestone payments of \$3.5 million pursuant to amendments to the license agreements with each of Eli Lilly and Shionogi & Co. Ltd., which were paid in the form of shares of common stock.
- (3) Includes a one-time license fee initiation of \$4.0 million pursuant to a license agreement with each of Eli Lilly and Shionogi & Co. Ltd., which were paid in the form of shares of preferred stock.

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We expect our research and development expenses to increase significantly as we continue to develop our product candidates. We began enrollment of patients in the VISTA-16 study of varespladib for the treatment of patients experiencing acute coronary syndrome in June 2010. We also initiated the PEARL-SC study of A-623 in July 2010. We intend to fund our clinical studies with existing cash and future offerings.

We expect that a large percentage of our research and development expenses in the future will be incurred in support of our current and future clinical development programs. These expenditures are subject to numerous uncertainties in timing and cost to completion. As we obtain results from clinical studies, we may elect to discontinue or delay clinical studies for certain product candidates or programs in order to focus our resources on more promising product candidates or programs. Completion of clinical studies may take several years or more, but the length of time generally varies according to the type, complexity, novelty and intended use of a product candidate. The cost of clinical studies may vary significantly over the life of a program as a result of differences arising during clinical development, including:

- the number of sites included in the studies;
- the length of time required to enroll suitable patient subjects;
- the number of patients that participate in the studies;
- the number of doses that patients receive;
- the drop-out or discontinuation rates of patients; and
- the duration of patient follow-up.

Our expenses related to clinical studies are based on 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 are subject to negotiation and vary from contract to contract and may result in uneven payment flows. Generally, these agreements set forth the scope of work to be performed at a fixed fee or unit price. Payments under the contracts depend on factors such as the successful enrollment of patients or the completion of clinical study milestones. Expenses related to clinical studies generally are accrued based on contracted amounts and the achievement of milestones such as number of patients enrolled. If timelines or contracts are modified based upon changes to the clinical study design or scope of work to be performed, we modify our estimates of accrued expenses accordingly on a prospective basis.

None of our product candidates has received U.S. Food and Drug Administration, or FDA, or foreign regulatory marketing approval. In order to grant marketing approval, the FDA or foreign regulatory agencies must conclude that clinical data establishes the safety and efficacy of our product candidates and that the manufacturing facilities, processes and controls are adequate. Despite our efforts, our product candidates may not offer therapeutic or other improvement over existing, comparable drugs, be proven safe and effective in clinical studies, or meet applicable regulatory standards.

As a result of the uncertainties discussed above, we are unable to determine the duration and completion costs of our development projects or when and to what extent we will receive cash inflows from the commercialization and sale of an approved product candidate, if ever.



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### ***General and Administrative Expenses***

General and administrative expenses consist primarily of compensation for employees in executive and operational functions, including clinical, chemical manufacturing, regulatory, finance and business development. Other significant costs include professional fees for legal services, including legal services associated with obtaining and maintaining patents. We will continue to incur significant general and administrative expenses as a public company, including costs for insurance, costs related to the hiring of additional personnel, payment to outside consultants, lawyers and accountants and complying with the corporate governance, internal controls and similar requirements applicable to public companies.

### **Critical Accounting Policies 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 accounting principles generally accepted in the United States, or GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses. On an ongoing basis, we evaluate these estimates and judgments, including those described below. We base our estimates on our historical experience and on various other assumptions that we believe to be reasonable under the circumstances. These estimates and assumptions form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results and experiences may differ materially from these estimates.

While our significant accounting policies are more fully described in Note 2 to our financial statements included at the end of this prospectus, we believe that the following accounting policies are the most critical to aid you in fully understanding and evaluating our reported financial results and affect the more significant judgments and estimates that we use in the preparation of our financial statements.

### ***Accrued Clinical Expenses***

As part of the process of preparing our financial statements, we are required to estimate our accrued expenses. This process involves reviewing open contracts and purchase orders, communicating with our applicable personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost. The majority of our service providers invoice us monthly in arrears for services performed. We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on facts and circumstances known to us at that time. We periodically confirm the accuracy of our estimates with the service providers and make adjustments if necessary. Examples of estimated accrued clinical expenses include:

fees paid to CROs in connection with clinical studies;

fees paid to investigative sites in connection with clinical studies;

fees paid to contract manufacturers in connection with the production of clinical study materials; and

fees paid to vendors in connection with the preclinical development activities.

We base our expenses related to clinical studies on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and CROs that conduct and manage clinical studies on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the successful

enrollment of patients and the completion of clinical

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study milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual accordingly. 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.

### ***Stock-Based Compensation***

Effective January 1, 2006, we adopted the provisions of FASB ASC 718, *Compensation - Stock Compensation*, using the modified prospective method. Compensation costs related to all equity instruments granted after January 1, 2006 are recognized at the grant-date fair value of the awards. Additionally, we are required to include an estimate of the number of awards that will be forfeited in calculating compensation costs, which are recognized over the requisite service period of the awards on a straight-line basis. We estimate the fair value of our share-based payment awards on the date of grant using an option-pricing model.

We recognized employee stock-based compensation expense of approximately \$75,000 in 2007, \$143,000 in 2008, \$254,000 in 2009, and \$344,000 for the nine months ended September 30, 2010. As of September 30, 2010, we had \$2.2 million in total unrecognized compensation cost related to non-vested employee stock-based compensation arrangements. The intrinsic value of all outstanding vested and non-vested stock-based compensation arrangements, based on \$4.19 per share, which is the closing sale price of our common stock as reported on The NASDAQ Global Market on September 30, 2010, is \$3.9 million, based on 1,307,066 shares of our common stock issuable upon exercise of stock options at a weighted-average exercise price of \$1.27 per share and 333,000 shares of unvested restricted stock units at a weighted-average purchase price of \$5.15 per share.

We calculate the fair value of stock-based compensation awards using the Black-Scholes option-pricing model. For the years ended December 31, 2007, 2008 and 2009, and the nine months ended September 30, 2010, the weighted-average assumptions used in the Black-Scholes model were 6.25 years for the expected terms, 81%, 81%, 74% and 74% for the expected volatility, 4.54%, 3.08%, 2.10% and 2.10% for the risk free rate and 0.0% for dividend yield, respectively. Expense amounts for future awards for any particular quarterly or annual period could be affected by changes in our assumptions. The weighted-average expected option terms for 2007, 2008, 2009 and the nine months ended September 30, 2010 reflect the application of the simplified method set out in FASB ASC 718-10. The simplified method defines the life as the average of the contractual term of the stock-based compensation award and the weighted-average vesting period for all tranches. Estimated volatility for fiscal 2007, 2008, 2009 and nine months ended September 30, 2010 also reflects the application of interpretive guidance provided in FASB ASC 718-10 and, accordingly, incorporates historical volatility of similar public entities.

The exercise price of options to purchase our common stock granted to our employees, directors and consultants was the fair value of our common stock on the date of grant. Prior to our initial public offering in March 2010, the fair value of our common stock was determined by our board of directors as there was no public market for our common stock at that time. Our board of directors determined the fair value of our common stock based on several factors, including:

the rights, preferences and privileges of our preferred stock (which was then outstanding) relative to our common stock;

our performance and stage of development;

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the likelihood of achieving a liquidity event for the shares of our common stock underlying these stock options, such as an initial public offering or sale of our company, given prevailing market conditions;

the trading value of common stock of public companies comparable to our company;

the sale prices of comparable acquisition transactions of public companies comparable to ours; and

the available data resulting from our clinical studies and development to date.

In considering the rights, preferences and privileges of our preferred stock relative to our common stock, our board of directors considered the following rights, preferences and privileges of our Series B-1 and Series B-2 preferred stock:

a senior liquidation preference of \$7.28 per share in the event of any sale of our company or similar liquidity event;

a right to participate alongside our common stock in the event of any sale or similar liquidity event with a 3.5x cap on such participation;

a senior non-cumulative dividend of 7.0% of the original issue price;

protection against dilutive issuances of new shares;

a right to convert each share of preferred stock into common stock;

a right to receive quarterly unaudited and annual audited financial statements, to inspect our books and records and to meet with our management team;

a right to vote with other holders of preferred and common stock to elect members of our board of directors; and

a right to vote separately on issues such as changes in capital structure, interested party transactions, mergers, sales and acquisitions.

Specifically, with respect to liquidation preference and participation features, each share of our Series B-1 and Series B-2 preferred stock had a liquidation preference equal to the price per share at which such share was sold, and in addition, would have participated with the common stock on proceeds available for distribution in a buy-out or sale of our company until such preferred shares received three-and-one-half times the original price per share. As a result of these participation rights and preferences, the preferred shareholders would have received substantially more of our company's value in the event of the dissolution or liquidation of our company, such as in a buy-out or sale of our company, or on the payment of the dividends. For example, on a buy-out or sale of our company, the Series B-1 and B-2 shareholders were each entitled to receive liquidation preferences of \$7.28 per share, before then participating equally with the common shareholders in the remaining value of our company until they have received \$25.46 per share.

In addition, we obtained the reports of independent valuation firms with respect to their estimates of the fair values of our common stock. We obtained reports of the fair value of our common stock as of October 31, 2006 on December 4, 2006, as of December 31, 2007 on February 12, 2008, and as of October 15, 2008 on October 24, 2008. In estimating the fair value of our common stock, the



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independent firms used the income approach. The income approach is an estimate of the present value of the future monetary benefits expected to flow to the owners of a business. It requires a projection of the cash flows that the business expected to generate over a forecast period and an estimate of the present value of cash flows beyond that period, which is referred to as residual value. These cash flows are converted to present value by means of discounting, using a rate of return that accounts for the time value of money and the appropriate degree of risks inherent in the business. After calculation of the company's enterprise value using this approach, the value of a share of common stock is then discounted for lack of marketability, or the inability to readily sell shares, which increases the owner's exposure to changing market conditions and increases the risk of ownership.

In its report as of December 31, 2007, the independent valuation firm estimated our enterprise value using discounted cash flows, a terminal value based on comparable publicly traded company revenue multiples and a risk-adjusted discount rate of 39.1%. Our enterprise value was estimated to be approximately \$34.0 million. This enterprise value was then allocated among the various classes of our securities, including preferred stock, common stock and options to purchase common stock using the Black-Scholes option-pricing model, which yielded an estimated value per share of our common stock of \$1.76, which was in turn reduced by a discount for lack of marketability of 24.0% using a protective put analysis and an estimated time to liquidity of two years, which resulted in an estimated value per share of \$1.34.

In its report as of October 15, 2008, the independent valuation firm estimated our enterprise value using discounted cash flows, a terminal value based on comparable publicly traded company revenue multiples and a risk-adjusted discount rate of 32.6%. Our enterprise value was estimated to be approximately \$60.6 million. This enterprise value was then allocated among the various classes of our securities, including preferred stock, common stock and options to purchase common stock using the Black-Scholes option-pricing model, which yielded an estimated value per share of our common stock of \$2.02, which was in turn reduced by a discount for lack of marketability of 25.0% using a protective put analysis and an estimated time to liquidity of two years, which resulted in an estimated value per share of \$1.51.

On October 13, 2009, our board of directors determined an estimated fair value per share of \$7.70 for our common stock. Our board of directors examined the enterprise values of 10 peer companies in the life sciences industry and used the mean enterprise value to approximate our anticipated enterprise value upon completion of a public offering. Our board of directors used the mean enterprise value, rather than a multiple of earnings or revenue, since we have no earnings or revenue, nor do any of the companies in the peer group. We selected the peer group based on the following criteria: publicly traded drug development companies that have one or more pharmaceutical compounds targeted at patient markets of approximately the same size as the target market for our compounds in Phase 2 or Phase 3 clinical studies and no compounds yet approved for general use. To estimate our enterprise value, our board of directors discounted the enterprise value by 15% to reflect a lack of marketability. Our board of directors then further discounted the estimated enterprise value by an additional 25% to reflect the time our board of directors estimated would be necessary to complete our initial public offering as well as the risk that such offering would not be completed. 100% of this enterprise value was then allocated to our common stock, assuming the conversion of all shares of preferred stock outstanding and the exercise of all outstanding options and warrants, which yielded an estimated fair value of our common stock of \$7.70 per share. In determining the valuation of our common stock, our board of directors did not take into account (i) the expected timing of commercialization of our varespladib product candidate, other than 2012 being the earliest possible time of commercialization, which is already reflected in the discount for lack of marketability and liquidity, or (ii) any future revenues and operating profits expected to be generated from sales of varespladib.

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Based on the factors listed above, our board of directors determined the fair value of our common stock for option grants made in October 2009 to be \$7.70 per share, for option grants made in February and April 2009 to be \$1.51 per share, and for option grants made in 2008 to be \$1.34 per share. The following table summarizes by grant date the number of shares of common stock subject to options granted in 2008 and 2009 through the date of our initial public offering and the associated per-share exercise price. The exercise prices were set by our board of directors at prices believed to equal the fair value of our common stock at each of the grant dates.

<b>Grant Date</b>	<b>Number of Options</b>	<b>Per Share Exercise Price</b>
2/21/2008	287,086	\$ 1.34
6/26/2008	40,887	\$ 1.34
2/18/2009	367,395	\$ 1.51
4/15/2009	26,281	\$ 1.51
10/13/2009	11,682	\$ 7.70

The estimated fair value common stock from June 2008 to February 2009 increased from \$1.34 per share to \$1.51 per share. The change in estimated fair value was primarily the result of an increase in the estimated enterprise value of the company from \$34.0 million to \$60.6 million, and reflected the following positive factors:

successful completion of enrollment of our Phase 2b FRANCIS study; and

the conclusion in February 2009 of a DSMB evaluation that our IMPACTS study was well-tolerated and should continue.

The positive factors set forth above were partially offset by:

a sharp deterioration in financial markets with accompanying decrease in market capitalization of companies comparable to ours;

increased difficulty in raising equity financing with accompanying financing uncertainty; and

increased risk of failure to achieve an initial public offering, sale of the company or other similar liquidity event.

While no single factor listed above was specifically quantified or weighted greater than another in estimating the company's enterprise value, each was taken into account in calculating the discount rate for the discounted cash flow analysis, estimating the time to liquidity and the expense that would be required to achieve liquidity.

The estimated fair value of our common stock from April 2009 to October 2009 increased from \$1.51 per share to \$7.70 per share. The change in estimated fair value primarily reflected the following factors:

we successfully achieved the primary endpoint of our Phase 2b FRANCIS study in July 2009;

an analysis of secondary endpoints from FRANCIS revealed generally favorable efficacy trends in August 2009;

a successful initial public offering of a company in our industry; and

progress towards our initial public offering.

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While no single factor listed above was specifically quantified or weighted greater than another in estimating the company's enterprise value, each was taken into account in estimating the time to liquidity and the expense that would be required to achieve liquidity.

The initial public offering price of our common stock was \$7.00 per share. The difference between the estimated fair value of our common stock of \$7.70 per share in October 2009 and the initial public offering price took into account several factors considered by our board of directors and the underwriters:

an analysis of the typical valuation ranges seen in initial public offerings for companies in our industry with similar market capitalization for the last five years;

a review of then current market conditions and the results of operations, competitive position and the stock performance of our competitors; and

consideration of our history as a private company and previous valuation reports received by independent valuation firms.

As of September 30, 2010, 1,307,066 shares of our common stock were issuable upon exercise of stock options.

## **Results of Operations**

### ***Comparison of the Nine Months Ended September 30, 2010 and 2009***

*Research and Development Expenses.* Research and development expenses were \$18.6 million for the nine months ended September 30, 2010, compared with \$7.7 million for the nine months ended September 30, 2009. The \$10.9 million increase in our research and development expenses was primarily attributable to the recognition of a \$3.5 million non-cash charge related to milestone payments recorded in connection with the initiation of our Phase 3 clinical study of varespladib, which was paid through the issuance of 531,914 shares of common stock; and increased CRO and manufacturing cost related to the launch of our Phase 3 clinical study of varespladib and Phase 2 clinical study of A-623, as well as increased headcount to support these clinical studies.

*General and Administrative Expenses.* General and administrative expenses were \$4.2 million for the nine months ended September 30, 2010, compared with \$2.7 million for the nine months ended September 30, 2009. The \$1.5 million increase was primarily attributable to increased headcount and professional services incurred in connection with our financial audit and other costs associated with operating as a public company.

*Interest and Other Income.* Interest and other income was \$76,562 for the nine months ended September 30, 2010, compared with \$21,559 for the nine months ended September 30, 2009. The increase in interest and other income was due to higher cash and investment balances in the current year due to proceeds received from the IPO and the September private placement offering as compared to the prior year.

*Interest and Other Expense.* Interest and other expense was \$4.6 million for the nine months ended September 30, 2010, compared with \$0.3 million for the nine months ended September 30, 2009. Interest and other expense recorded during the nine months ended September 30, 2010 included a \$4.5 million non-cash charge recorded as part of interest and other expense related to the amortization of discounts on the Company's convertible promissory notes and the mark-to-market adjustment relating to warrants and embedded derivative connected to the Company's convertible promissory notes.



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Interest and other expense recorded during the comparable period in 2009 consisted of interest accrued on past due license fee obligations.

***Comparison of the Years Ended December 31, 2009 and 2008***

***Research and Development Expenses.*** Research and development expenses were \$8.4 million for the year ended December 31, 2009, compared with \$10.9 million for the year ended December 31, 2008. The \$2.5 million decrease in our research and development expenses was due to the decreased activity in our Phase 2 clinical study designed to examine the impact of varespladib when administered to patients within 96 hours of an acute coronary syndrome event in the third quarter of 2009 as the study progressed toward completion.

***General and Administrative Expenses.*** General and administrative expenses were \$3.4 million for the year ended December 31, 2009, compared with \$3.0 million for the year ended December 31, 2008. The \$0.4 million increase was primarily attributable to expenses relating to the expansion of our intellectual property portfolio.

***Interest and Other Income.*** Interest and other income was \$24,000 for the year ended December 31, 2009, compared with \$178,000 for the year ended December 31, 2008. The decrease in interest and other income was due to lower average cash balances.

***Interest and Other Expense.*** Interest and other expense was \$386,000 for the year ended December 31, 2009, compared with \$296,000 for the year ended December 31, 2008. Interest and other expense recorded in 2009 consisted of interest accrued for convertible promissory notes and amortization of note discount and debt issuance cost. Interest and other expense recorded in 2008 consisted of interest accrued on past due license fee obligations.

***Beneficial Conversion Feature.*** In connection with the issuance of convertible promissory notes in 2008, we recorded expense related to the beneficial conversion feature of the notes in the amount of \$4.1 million for the year ended December 31, 2008. The expense was amortized from the issuance date of the notes to the date of their conversion into shares of Series B-2 convertible preferred stock in August 2008. The convertible promissory notes issued in 2009 included a beneficial conversion feature that would be measured and recorded upon a triggering event as defined in the agreement.

***Comparison of the Years Ended December 31, 2008 and December 31, 2007***

***Research and Development Expenses.*** Research and development expenses were \$10.9 million for the year ended December 31, 2008, compared with \$23.9 million for the year ended December 31, 2007. The \$13.0 million decrease in our research and development expenses reflects a one-time license initiation fee of \$6.0 million recognized in 2007 in connection with a worldwide, exclusive license agreement we entered into with Amgen (see Note 5 to our financial statements for further details). The remaining decrease of \$7.0 million was primarily attributable to reduced clinical costs associated with our Phase 2 clinical studies for the development of varespladib. In 2007, we initiated and completed two Phase 2 clinical studies for varespladib, while in 2008, we initiated a single Phase 2b clinical study for varespladib.

***General and Administrative Expenses.*** General and administrative expenses were \$3.0 million for the year ended December 31, 2008, compared with \$2.5 million for the year ended December 31, 2007. The \$0.5 million increase was primarily attributable to our implementation of our vacation policy, professional fees relating to the expansion of our intellectual property portfolio and travel relating to business development activities primarily consisting of scientific and industry conferences and symposiums.



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**Interest and Other Income.** Interest and other income was \$178,000 for the year ended December 31, 2008, compared with \$697,000 for the year ended December 31, 2007. The decrease in interest and other income of approximately \$519,000 was primarily attributable to lower average cash balances and lower average interest rates during 2008.

**Interest Expense.** Interest expense was \$296,000 for the year ended December 31, 2008, compared with no interest expense for the year ended December 31, 2007. The interest expense during the year ended December 31, 2008 was due to interest recognized in connection with issuance of convertible promissory notes in February and May 2008, which were converted into shares of our Series B-2 convertible preferred stock in connection with our Series B-2 financing consummated in August 2008 and interest accrued in connection with a license fee payable due to Amgen.

**Beneficial Conversion Features.** For the year ended December 31, 2008, we recorded \$4.1 million in expense related to the beneficial conversion features of our convertible promissory notes, which were convertible into shares of our Series B-2 convertible preferred stock at a discount of 25% from the original issue price of our Series B-2 convertible preferred stock. There were no outstanding notes with similar terms during 2007.

## **Liquidity and Capital Resources**

To date, we have funded our operations primarily through private placements of preferred stock, common stock and convertible debt and our initial public offering. As of September 30, 2010, we had received net proceeds of approximately \$119.7 million from the sale of equity securities and net proceeds of approximately \$26.3 million from the issuance of convertible promissory notes. As of September 30, 2010, we had cash, cash equivalents and short-term investments of approximately \$73.1 million.

### **Cash Flows**

#### *Nine Months Ended September 30, 2010*

For the nine months ended September 30, 2010, we incurred a net loss of approximately \$27.4 million.

Net cash used in operating activities was approximately \$18.6 million. The net loss is higher than cash used in operating activities by \$8.8 million. The primary drivers for the difference are adjustments for non-cash charges such as stock-based compensation of approximately \$352,866, amortization of note discount and debt issuance cost of approximately \$769,000, issuance of \$3.5 million worth of common stock in lieu of cash milestone payments due to Eli Lilly and Shionogi & Co., Ltd., the conversion of approximately \$300,000 of accrued interest into shares of common stock upon conversion of certain convertible promissory notes, mark to market adjustments relating to warrant and derivative liability of \$3.8 million, and increase in operating assets and liabilities of approximately \$195,000.

Net cash used by investing activities was \$21.7 million and was primarily driven by the purchase of short-term investments during the period.

Net cash provided by financing activities was approximately \$87.7 million and consisted of proceeds of \$61.2 million received from the issuance of common stock at our IPO, the exercise of the overallotment option by our underwriters in connection with our IPO, the release of funds held in an escrow account concurrent with the closing of our IPO, and proceeds of \$29.6 million received from the issuance of common stock and warrants in connection with the private placement offering, offset by approximately \$2.9 million of issuance cost paid during the period.



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*Nine Months Ended September 30, 2009*

For the nine months ended September 30, 2009, we incurred a net loss of approximately \$10.7 million.

Net cash used in operating activities was approximately \$10.3 million. The net loss is higher than cash used in operating activities by \$0.4 million. The primary drivers for the difference are adjustments for non-cash charges such as depreciation and amortization of approximately \$15,000, stock-based compensation of \$206,000 due to increased headcount and corresponding equity grants made to new and existing employees, and increase in current liabilities of approximately \$613,000 due to increased expense relating to our Phase 2 clinical study activity and a decrease in license fee payable by \$500,000, partially offset by decrease in current assets of approximately \$30,000.

Net cash provided by financing activities was approximately \$10.0 million and consisted of proceeds received from the issuance of convertible promissory notes.

*Year Ended December 31, 2009*

For the year ended December 31, 2009, we incurred a net loss of approximately \$12.2 million.

Net cash used in operating activities was approximately \$17.2 million. The net loss is higher than cash used in operating activities by \$5.0 million. The primary drivers for the difference are adjustments for non-cash charges such as depreciation of \$18,000, stock-based compensation of approximately \$342,000 and amortization of note discount and debt issuance cost of approximately \$216,000, a decrease in current liabilities of approximately \$598,000 primarily due to payments made to CROs for the achievement of clinical milestones and a \$5.0 million license fee payment made to Amgen.

Net cash provided by financing activities was approximately \$13.0 million and consisted of net proceeds of \$13.3 million received from the issuance of convertible promissory notes and escrow notes, partially offset by approximately \$274,000 in expense paid in connection with our initial public offering.

*Year Ended December 31, 2008*

For the year ended December 31, 2008, we incurred a net loss of \$18.1 million.

Net cash used in operating activities was approximately \$17.1 million. The net loss is higher than cash used in operating activities by \$1.0 million. The primary drivers for the difference are adjustments for non-cash charges such as depreciation and amortization of \$22,000 and stock-based compensation of \$195,000 due to increased headcount and corresponding equity grants made to new and existing employees, issuance of convertible preferred stock in lieu of interest payments of \$156,000, beneficial conversion feature of \$4.1 million and a decrease in current assets of \$31,000, offset by a decrease in current liabilities of \$2.6 million due to payments made to vendors for Phase 2 clinical study activities previously completed and a decrease in license fee payable of \$1.0 million due to payments made.

Net cash provided by investing activities was approximately \$5.8 million and consisted of proceeds received from the sale or maturity of short-term investments.

Net cash provided by financing activities was approximately \$19.0 million and consisted primarily of private placements of our convertible preferred stock, through which we received net proceeds of \$6.8 million, and issuance of convertible promissory notes for \$12.2 million, which were converted into Series B-2 convertible preferred stock

during 2008.

*Year Ended December 31, 2007*

For the year ended December 31, 2007, we incurred a net loss of \$25.7 million.

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Net cash used in operating activities was approximately \$15.0 million. The net loss is higher than cash used in operating activities by \$10.7 million. The primary drivers for the difference are adjustments for non-cash charges such as depreciation and amortization of \$19,000, amortization of discount on short-term investments of \$130,000 and stock-based compensation of \$87,000, offset by an increase in current liabilities of \$4.8 million as a result of increased Phase 2 clinical study expenses, an increase of license fee payable of \$6.0 million due the completion of a licensing agreement with Amgen to acquire the rights to A-623 and an increase in current assets of \$62,000.

Net cash used in investing activities was approximately \$5.8 million, consisting primarily of purchases of short-term investments of \$14.8 million, offset by proceeds from the sale or maturity of these investments totaling \$9.1 million.

Net cash provided by financing activities was approximately \$119,000, which consisted of cash proceeds from the exercise of stock options.

**Selected Quarterly Financial Data (Unaudited)**

	<b>March 31</b>	<b>Quarter Ended</b>		<b>December 31</b>
		<b>June 30</b>	<b>September 30</b>	
<b>2008</b>				
<b>OPERATING EXPENSES:</b>				
Research and development	\$ 2,996,942	\$ 2,366,494	\$ 2,111,817	\$ 3,407,069
General and administrative	849,251	742,992	713,367	674,560
<b>LOSS FROM OPERATIONS</b>	<b>(3,846,193)</b>	<b>(3,109,486)</b>	<b>(2,825,184)</b>	<b>(4,081,629)</b>
Interest income and other expense (net)	37,938	(49,312)	(108,521)	1,721
Beneficial conversion features		(1,392,601)	(2,725,943)	
<b>NET LOSS</b>	<b>\$ (3,808,255)</b>	<b>\$ (4,551,399)</b>	<b>\$ (5,659,648)</b>	<b>\$ (4,079,908)</b>
Net loss per share basic and diluted	\$ (3.15)	\$ (3.45)	\$ (4.05)	\$ (2.83)
Shares used in computing basic and diluted net loss per share	1,210,757	1,317,862	1,398,120	1,443,843

	<b>March 31</b>	<b>Quarter Ended</b>		<b>December 31</b>
		<b>June 30</b>	<b>September 30</b>	
<b>2009</b>				
<b>OPERATING EXPENSES:</b>				
Research and development	\$ 2,914,766	\$ 2,286,415	\$ 2,525,948	\$ 688,285
General and administrative	846,243	999,331	884,908	695,208
<b>LOSS FROM OPERATIONS</b>	<b>(3,761,009)</b>	<b>(3,285,746)</b>	<b>(3,410,856)</b>	<b>(1,383,493)</b>
Interest income and other expense (net)	(24,351)	(50,310)	(193,556)	(94,171)

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NET LOSS	\$ (3,785,360)	\$ (3,336,056)	\$ (3,604,412)	\$ (1,477,664)
Net loss per share basic and diluted	\$ (2.57)	\$ (2.23)	\$ (2.37)	\$ (0.95)
Shares used in computing basic and diluted net loss per share	1,470,722	1,496,011	1,520,875	1,557,708

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	<b>March 31</b>	<b>Quarter Ended June 30</b>	<b>September 30</b>
<b>2010</b>			
<b>OPERATING EXPENSES:</b>			
Research and development	\$ 5,241,814	\$ 6,438,149	\$ 6,885,125
General and administrative	1,224,110	1,509,869	1,510,021
<b>LOSS FROM OPERATIONS</b>	<b>(6,465,924)</b>	<b>(7,948,018)</b>	<b>(8,395,146)</b>
Interest income and other expense (net)	(4,637,868)	11,655	61,606
<b>NET LOSS</b>	<b>\$ (11,103,792)</b>	<b>\$ (7,936,363)</b>	<b>(8,333,540)</b>
Net loss per share basic and diluted	\$ (0.83)	\$ (0.36)	\$ (0.36)
Shares used in computing basic and diluted net loss per share	13,344,231	22,223,941	22,964,279

**Contractual Obligations and Commitments**

The following table summarizes our long-term contractual obligations and commitments as of September 30, 2010:

	<b>Total</b>	<b>Payments Due by Period</b>		
		<b>Less Than 1 Year</b>	<b>1-3 Years</b>	<b>4-5 Years After 5 Years</b>
Operating lease obligations <sup>(1)</sup>	\$ 40,536	\$ 34,296	\$ 6,240	\$

<sup>(1)</sup> Operating lease obligations reflect our obligation to make payments in connection with a sublease that commenced in October 2008 and will expire on January 31, 2011 for approximately 7,800 square feet of office space and office equipment leases that commenced in October 2007 and will expire in June 2013.

The above amounts exclude potential payments to be made under our license agreements to our licensors that are based on the progress of our product candidates in development, as these payments are not determinable. Under our license agreement with Eli Lilly and Shionogi & Co., Ltd. to develop and commercialize certain sPLA<sub>2</sub> inhibitors, we are obligated to make additional milestone payments upon the achievement of certain development, regulatory, and commercial objectives. We are also obligated to pay royalties on future net sales of products that are developed and approved as defined by this collaboration. Our obligation to pay royalties with respect to each licensed product in each country will expire upon the later of (a) 10 years following the date of the first commercial sale of such licensed product in such country, and (b) the first date on which generic version(s) of the applicable licensed product achieve a total market share, in the aggregate, of 25% or more of the total unit sales of wholesalers to pharmacies of licensed product and all generic versions combined in the applicable country.

Also excluded from the table above are potential milestone payments on the development of A-623. Under our license agreement with Amgen to develop and commercialize A-623, we are obligated to make additional milestone payments

upon the achievement of certain development, regulatory, and commercial objectives. We are also obligated to pay royalties on future net sales of products that are developed and approved as defined by this collaboration. Our royalty obligations as to a particular licensed product will be payable, on a country-by-country and licensed product-by-licensed product basis, for the longer of (a) the date of expiration of the last to expire valid claim within the licensed patents that covers the manufacture, use or sale, offer to sell, or import of such licensed product by us

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or a sublicensee in such country, or (b) 10 years after the first commercial sale of the applicable licensed product in the applicable country.

***Funding Requirements***

We expect to incur substantial expenses and generate significant operating losses as we continue to advance our product candidates into preclinical studies and clinical studies and as we:

continue clinical development of the Phase 3 VISTA-16 study for varespladib;

continue clinical development of the Phase 2b PEARL-SC study for A-623;

hire additional clinical, scientific and management personnel; and

implement new operational, financial and management information systems.

Our future capital uses and requirements depend on numerous forward-looking factors. These factors include the following:

the progress of preclinical development and clinical studies of our product candidates;

the time and costs involved in obtaining regulatory approvals;

delays that may be caused by evolving requirements of regulatory agencies;

the costs involved in filing and prosecuting patent applications and enforcing or defending patent claims;

our ability to establish, enforce and maintain selected strategic alliances; and

the acquisition of technologies, product candidates and other business opportunities that require financial commitments.

To date, we have not generated any revenue. We do not expect to generate revenue unless or until we obtain regulatory approval of, and commercialize, our product candidates. We expect our continuing operating losses to result in increases in cash used in operations over the next several years. Our future capital requirements will depend on a number of factors including the progress and results of our clinical studies, the costs, timing and outcome of regulatory review of our product candidates, our revenue, if any, from successful development and commercialization of our product candidates, the costs of commercialization activities, the scope, progress, results and costs of preclinical development, laboratory testing and clinical studies for other product candidates, the emergence of competing therapies and other market developments, the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property rights, the extent to which we acquire or invest in other product candidates and technologies, and our ability to establish collaborations and obtain milestone, royalty or other payments from any collaborators.

We expect our existing resources as of the date of this prospectus, to be sufficient to fund our planned operations, including our continued product candidate development, for at least the next 12 months. However, we may require significant additional funds earlier than we currently expect to conduct additional or extended clinical studies and seek regulatory approval of our product candidates. Because of the numerous risks and uncertainties associated with the development and commercialization of our



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product candidates, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated clinical studies.

Additional funding may not be available to us on acceptable terms or at all. In addition, the terms of any financing may adversely affect the holdings or the rights of our stockholders. For example, if we raise additional funds by issuing equity securities or by selling debt securities, if convertible, further dilution to our existing stockholders may result. To the extent our capital resources are insufficient to meet our future capital requirements, we will need to finance our future cash needs through public or private equity offerings, collaboration agreements, debt financings or licensing arrangements.

If adequate funds are not available, we may be required to terminate, significantly modify or delay our development programs, reduce our planned commercialization efforts, or obtain funds through collaborators that may require us to relinquish rights to our technologies or product candidates that we might otherwise seek to develop or commercialize independently. We may elect to raise additional funds even before we need them if the conditions for raising capital are favorable.

## **Off-Balance Sheet Arrangements**

We do not currently have, nor have we ever had, any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. In addition, we do not engage in trading activities involving non-exchange traded contracts.

## **Quantitative and Qualitative Disclosure About Market Risk**

Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. However, since a majority of our investments are in short-term certificates of deposit, FDIC-insured corporate bonds and money market funds, we do not believe we are subject to any material market risk exposure. We do not have any material derivative financial instruments.

## **Recent Accounting Pronouncements**

In June 2009, the FASB issued FASB ASC 105, *Generally Accepted Accounting Principles*, that establishes the FASB Accounting Standards Codification as the sole source of Generally Accepted Accounting Principles, or GAAP. Pursuant to the provisions of FASB ASC 105, we have updated references to GAAP in our financial statements issued for the period ending December 31, 2009 and thereafter. The adoption of FASB ASC 105 had no impact on our financial position or results of operations.

In June 2008, the FASB issued FASB ASC 815-40, *Derivatives and Hedging*. FASB ASC 815-40 provides guidance on how to determine if certain instruments (or embedded features) are considered indexed to a company's own stock, including instruments similar to warrants to purchase the company's stock. FASB ASC 815-40 requires companies to use a two-step approach to evaluate an instrument's contingent exercise provisions and settlement provisions in determining whether the instrument is considered to be indexed to its own stock and therefore exempt from the application of FASB ASC 815. Although FASB ASC 815-40 is effective for fiscal years beginning after December 15, 2008, any outstanding instrument at the date of adoption will require a retrospective application of the accounting through a cumulative effect adjustment to retained earnings upon adoption. We do not expect the adoption of FASB ASC 815-40 to have a material impact on either our financial position or results of operations.



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**BUSINESS**

**Overview**

We are a biopharmaceutical company focused on developing and commercializing products to treat serious diseases associated with inflammation, including cardiovascular and autoimmune diseases. We currently have one Phase 3 clinical program, varespladib, and two Phase 2 clinical programs, A-623 and A-001. Two of our product candidates, varespladib and A-001, are designed to inhibit a novel enzyme target known as secretory phospholipase A<sub>2</sub>, or sPLA<sub>2</sub>. Elevated levels of sPLA<sub>2</sub> have been implicated in a variety of acute inflammatory conditions, including acute coronary syndrome and acute chest syndrome associated with sickle cell disease, as well as in chronic diseases, including stable coronary artery disease, or CAD. In addition, our Phase 2 product candidate, A-623, targets elevated levels of B-lymphocyte stimulator, or BLyS, also known as B-cell Activating Factor, or BAFF, which has been associated with a variety of B-cell mediated autoimmune diseases, including systemic lupus erythematosus, or lupus, lupus nephritis, or LN, rheumatoid arthritis, multiple sclerosis, Sjögren's Syndrome, Graves' Disease and others.

**Product Development Programs**

We have worldwide rights to develop and commercialize our products in all indications and markets, with the exception of Japan where Shionogi & Co., Ltd. retains commercial rights to our sPLA<sub>2</sub> product candidates. Our current development plans are focused on acute treatment and orphan indications that may provide an accelerated and cost-efficient path to regulatory approval and commercialization. We believe that certain of these markets can be commercialized through a limited specialty sales force. In addition, we believe that our product candidates can also address market opportunities in chronic indications and we may seek development and commercialization partners to address chronic, non-specialty and international markets.

**Inflammation and Diseases**

The inflammatory process is a powerful and essential early line of defense for protection against injury and to repair body tissue. As a result, it is tightly regulated by the body to ensure appropriate activation and prompt resolution. However, under certain circumstances, the normal process can malfunction, leading to acute or chronic inflammation or inappropriate activation directed against the body's own tissues. All of these circumstances can cause significant damage to cells and tissues, leading to a range of inflammatory disorders, such as cardiovascular and autoimmune diseases.

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### ***Our sPLA<sub>2</sub> Inhibition Portfolio***

Building upon our knowledge of the regulation of inflammatory pathways and the growing body of evidence that links inflammation to multiple disease states, we believe that we have developed a leadership position in the field of sPLA<sub>2</sub> inhibition. Our sPLA<sub>2</sub> inhibitors have been studied in a number of inflammatory disorders in multiple therapeutic areas. The effect of our sPLA<sub>2</sub> inhibitors on sPLA<sub>2</sub> concentration and activity have been implicated in acute coronary syndrome and acute chest syndrome associated with sickle cell disease. We currently have the two most advanced sPLA<sub>2</sub> inhibitors in clinical development.

Our lead product candidate, varespladib (an oral prodrug of A-001), is a broad-spectrum inhibitor of sPLA<sub>2</sub> enzymes and is being evaluated in a Phase 3 clinical study for short-term (16-week) treatment of patients who have experienced an acute coronary syndrome. The American Heart Association defines acute coronary syndrome as any group of clinical symptoms related to acute myocardial ischemia, including unstable angina, or UA. Varespladib, when combined with Lipitor (atorvastatin), is one of only a few therapeutics in development with the potential to offer a unique and synergistic treatment approach targeting inflammation, elevated lipid levels and atherosclerosis as part of physician-directed standard of care. Through its novel mechanism of action, varespladib may have applications in a broad range of acute and chronic cardiovascular diseases. Based on the successful results of our recently completed Phase 2b clinical study, we initiated a Phase 3 clinical study, VISTA-16, in patients with acute coronary syndrome in June 2010.

Our second product candidate, varespladib sodium, A-001, is an intravenously administered inhibitor of sPLA<sub>2</sub>, which is in a Phase 2 clinical study for the prevention of acute chest syndrome associated with sickle cell disease. Acute chest syndrome is a form of inflammation-induced lung failure and is the most common cause of death in patients with sickle cell disease. Given that there are currently no approved drugs for the prevention of acute chest syndrome associated with sickle cell disease, we have received orphan drug designation and fast track status from the FDA for A-001.

We also have a broad series of additional sPLA<sub>2</sub> inhibitors designed with distinct chemical scaffolds in preclinical development. These product candidates are intended to provide new sPLA<sub>2</sub> inhibitors for our existing target indications as well as new candidates for other therapeutic areas. Our lead candidate within the series, A-003, is chemically distinct from A-001 and varespladib and has shown increased potency against the target enzymes and higher drug exposure after dosing in preclinical studies. As a result, A-003 may confer beneficial pharmacodynamic effects in patients and can be formulated for oral or intravenously administered use. We plan to file an investigational new drug application, or IND, for A-003 in the future and we may continue to assess additional new compounds.

We have explored the use of our varespladib and A-001 sPLA<sub>2</sub> inhibitors as both topical and inhalation therapies in animal models for the treatment of atopic dermatitis and asthma, respectively. Results from a standard mouse model of edema demonstrated that topically administered varespladib was equivalent to the marketed immunosuppressant Elidel in resolving inflammation. In a sheep model of allergen-induced asthma, inhaled A-001 demonstrated an improvement in lung function similar to inhaled steroids.

### ***sPLA<sub>2</sub> Biology***

sPLA<sub>2</sub> is a family of enzymes directly involved in the acute and chronic steps of an inflammatory response. sPLA<sub>2</sub> activity is highly elevated during the early stages of inflammation, and its acute effects serve to substantially amplify the inflammatory process. The sPLA<sub>2</sub> enzyme catalyzes the first step in the arachidonic acid pathway of inflammation, one of the main metabolic processes for the production of inflammatory mediators, which, when amplified, are responsible for causing damage to cells and tissue. Specifically, sPLA<sub>2</sub> breaks down phospholipids that result in the formation of fatty acids such as



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arachidonic acid. Arachidonic acid is subsequently metabolized to form several pro-inflammatory and thrombogenic molecules.

In cardiovascular diseases such as acute coronary syndrome, excess sPLA<sub>2</sub> activity has acute and chronic implications on disease progression and patient outcomes. In published studies and our own clinical studies, significant elevations in sPLA<sub>2</sub> activity and mass have been seen from 24 hours to two weeks following an acute coronary syndrome and can persist for up to an additional 12 weeks thereafter. Shortly after a heart attack, sPLA<sub>2</sub> is dramatically elevated, amplifying inflammation that is associated with more frequent and secondary cardiovascular events. This resulting elevated level of inflammation is problematic for acute coronary syndrome patients who are already at higher risk of complications during the weeks following their initial event. For example, increased inflammation can destabilize vulnerable vascular lesions or atherosclerotic plaque, destroy damaged but viable cardiac cells and adversely modify lipids, any of which may lead to the recurrence of a major adverse cardiovascular event, or MACE.

Historical and recent clinical results have demonstrated circulating levels of sPLA<sub>2</sub> are significantly correlated with a well-established inflammatory marker, C-reactive protein, or CRP. These and other clinical studies have also demonstrated that sPLA<sub>2</sub> independently predicts coronary events in patients that have recently experienced an acute coronary syndrome and patients with stable CAD independent of other standard risk factors. In a stable cardiovascular patient, sPLA<sub>2</sub> not only sustains chronic vascular inflammation as discussed earlier, but it also adversely remodels lipoproteins such as low-density lipoprotein cholesterol, or LDL-C. sPLA<sub>2</sub> interacts with LDL-C in a series of reactions that result in smaller, more pro-atherogenic and pro-inflammatory LDL-C particles. Moreover, these modified lipoproteins have a reduced affinity for LDL-C receptors, which are responsible for removal of cholesterol from the body. As a result, LDL-C remains in circulation longer and has a greater tendency to deposit in the artery wall. This increased LDL-C deposition and sustained chronic vascular inflammation may contribute to the development of atherosclerosis.

The family of sPLA<sub>2</sub> enzymes includes at least three forms that play a role in inflammation and the development of cardiovascular disease or lung injury. While sPLA<sub>2</sub> enzymes are a member of the phospholipase family that includes a lipoprotein associated phospholipase A<sub>2</sub>, or Lp-PLA<sub>2</sub>, there are important distinctions. Although both are present in blood, Lp-PLA<sub>2</sub> is mostly bound to LDL-C and high-density lipoprotein, or HDL, while sPLA<sub>2</sub> enzymes are not. Based on our clinical studies, we believe that our sPLA<sub>2</sub> inhibitor, varespladib, can be distinguished from other PLA<sub>2</sub> enzyme inhibitors such as those targeted at inhibiting Lp-PLA<sub>2</sub> because varespladib treatment:

- is synergistic with HMG-CoA reductase inhibitors, or statins, including Lipitor (atorvastatin), in reducing LDL-C, total cholesterol and non-HDL cholesterol in patients with CAD;

- lowers circulating small, dense and pro-atherogenic, or plaque-building LDL-C particles, while Lp-PLA<sub>2</sub> inhibition has not demonstrated similar effects;

- has been shown to lower CRP, a well-established marker of inflammation in a statistically significant manner; and

- reduces plaque volume and aneurysms in standard rodent models of atherosclerosis and has demonstrated synergistic reductions of plaque volume in standard rodent models of atherosclerosis when used in combination with statins.

In diseases such as acute chest syndrome, a very serious form of lung injury associated with sickle cell disease, sPLA<sub>2</sub> acts acutely on a number of substrates that amplify the inflammatory disease process. Sickle cell disease is a genetic disorder which leads to the structural alteration, or sickling, of



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otherwise healthy red blood cells. Patients with sickle cell disease experience periods of intense pain known as vaso-occlusive crisis, or VOC, as structurally altered red blood cells bind together and occlude small blood vessels that supply blood and nutrients to vital tissue and bone. sPLA<sub>2</sub> levels are dramatically elevated in sickle cell patients during an episode of VOC as well as within 24 to 48 hours of the onset of acute chest syndrome. During VOC, microscopic fat emboli, or droplets of fat from the bone marrow, are prevalent and can break free and become lodged in the lung. These emboli are substrates for sPLA<sub>2</sub> enzymes and provide fuel for an already established inflammatory response, increasing lung injury. In addition, sPLA<sub>2</sub> has been demonstrated to degrade human lung surfactant, a component necessary in maintaining appropriate lung function, which further complicates lung injury.

We believe that early intervention with a drug designed to inhibit sPLA<sub>2</sub> activity may offer a unique opportunity to reduce the complications associated with certain inflammatory diseases such as acute coronary syndrome in cardiovascular patients and acute chest syndrome in patients with sickle cell disease.

### ***Our BAFF Antagonism Portfolio***

BAFF has been associated with a wide range of B-cell mediated autoimmune diseases including lupus, LN, rheumatoid arthritis, multiple sclerosis, Sjögren's Syndrome, Graves' Disease and others. The role of BAFF in lupus and rheumatoid arthritis has recently been validated in multiple clinical studies with other BAFF antagonists. We are advancing the development of our BAFF inhibitor molecule, A-623, a selective peptibody, to exploit its broad potential clinical utility in autoimmune diseases. A peptibody is a novel fusion protein that is distinct from an antibody. We have worldwide rights to A-623 in all potential indications. We have initiated PEARL-SC, the Phase 2b clinical study of A-623, for the treatment of Systemic Lupus Erythematosus (lupus). Lupus patients suffer from a chronic autoimmune disease, which often leads to severe skin rash, fatigue, joint pain, major organ complications and cardiovascular disease.

A-623 demonstrates anti-BAFF activity and has shown statistically significant reductions in B-cells in two Phase 1 clinical studies in patients with lupus. We believe A-623 may offer a number of potential differentiations over other BAFF antagonists, as well as other novel B-cell directed therapies including:

convenient, at-home, patient-administered subcutaneous dosing with a range of dosing frequencies including monthly and weekly;

the ability to bind to both membrane-bound and soluble BAFF;

selective modulation and reduction of relevant B-cell sub-types in lupus patients;

a novel molecular structure, which may confer differentiating pharmacokinetic and pharmacodynamic characteristics, potentially providing efficacy and dosing benefits, as well as manufacturing benefits and lower cost of goods based on a bacterial fermentation manufacturing process; and

multiple binding domains achieve highest reported affinity for inhibition of BAFF.

**Table of Contents****Product Development Programs**

We have focused our product development programs on anti-inflammatory therapeutics for cardiovascular diseases, lupus and other serious diseases for which we believe that current treatments are either inadequate or non-existent. Our current product development programs are listed in the table below.

<b>Product Candidate</b>	<b>Development Phase</b>	<b>Worldwide Product Rights</b>	<b>Description</b>	<b>Next Milestone(s)</b>
<b>Lead Development Programs</b>				
Varespladib with Lipitor (atorvastatin)	Phase 3	Anthera(1)	Orally administered sPLA <sub>2</sub> inhibitor  Indicated for the prevention of secondary MACE following an acute coronary syndrome (16-week treatment)	1000 patient biomarker futility analysis in the first quarter of 2011  Data Safety Monitoring Board, or DSMB, review of clinical data in the first quarter of 2011
A-623	Phase 2b	Anthera	Selective peptibody antagonist of BAFF cytokine being developed for the treatment of B-cell mediated autoimmune diseases	Selection of bulk drug contract manufacturer in the fourth quarter of 2010  Completion of technology transfer to contract manufacturer in the first quarter of 2011
			Indicated for systemic lupus erythematosus	Initiation of Phase 3 manufacturing campaign from cell bank in the second quarter of 2011
<b>Additional Programs</b>				
A-001-varespladib sodium	Phase 2	Anthera(1)	Intravenous sPLA <sub>2</sub> inhibitor with orphan drug and fast track status  Indicated for prevention of acute chest syndrome in	Publication of IMPACTS data  Submission of IMPACTS-2 protocol to FDA

			hospitalized patients with sickle cell disease	
Varespladib	Phase 2 investigator study	Anthera(1)	Orally administered sPLA <sub>2</sub> inhibitor to reduce inflammatory markers in patients undergoing interventional cardiovascular procedures	Enrollment complete. Data publication targeted in 2011

(1) Shionogi & Co., Ltd. retains product rights in Japan

**Varespladib**

Varespladib is an orally administered pro-drug of A-001, which is a broad-spectrum, once-daily inhibitor of the IIa, V and X iso-forms of the sPLA<sub>2</sub> enzyme that has demonstrated potent anti-inflammatory, lipid-lowering and lipid-modulating treatment effects in multiple clinical studies. We have commenced the Phase 3 VISTA-16 study to evaluate varespladib in combination with atorvastatin therapy, specifically Lipitor, for the short-term (16-week) treatment of acute coronary syndrome. We have an agreement with the FDA on an SPA for the VISTA-16 study. An SPA provides an opportunity for the clinical study sponsor to receive feedback from the FDA regarding the adequacy of a clinical study to meet regulatory and scientific requirements if conducted in accordance with the SPA agreement.

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An SPA is not a guarantee of an approval of a product candidate or any permissible claims about the product candidate.

To date, over 1,000 patients and healthy volunteers in at least 15 clinical studies have been exposed to varespladib. Varespladib was generally well-tolerated in studies where patients were exposed to a maximum of 48 weeks of therapy. Varespladib has been studied in combination with Lipitor (atorvastatin) in a Phase 2b clinical study in acute coronary syndrome patients and two earlier Phase 2 clinical studies in stable CAD patients, the majority of whom were on various statin therapies.

We currently have all worldwide product rights to varespladib, except in Japan where Shionogi & Co., Ltd. retains rights. We originally licensed our sPLA<sub>2</sub> inhibitor portfolio, including varespladib and A-001, from Eli Lilly & Company, or Eli Lilly, and Shionogi & Co., Ltd. in July 2006.

### ***Market Opportunity Acute Coronary Syndrome***

According to the American Heart Association, over 18 million people in the United States have experienced an acute coronary syndrome and an estimated 1.5 million Americans will have a new or recurrent heart attack. In addition, the American Heart Association estimates that worldwide, cardiovascular disease kills an estimated 17.5 million people each year. According to British Heart Foundation statistics, CAD, which often leads to acute coronary syndrome or heart attacks, accounts for 1.9 million deaths in Europe annually. According to the World Health Organization, or the WHO, cardiovascular disease is the most common cause of death in the western world and a major cause of hospital admissions. In addition, the American Heart Association provides that for people over the age of 40, 20% of them will die within one year following an initial heart attack, and over one-third of them will die within the first five years of an initial heart attack. These numbers are expected to increase given an aging population, as well as the rising epidemics of diabetes and obesity, two conditions known to increase the risk of acute coronary syndrome.

The American Heart Association defines acute coronary syndrome as any group of clinical signs and symptoms related to acute myocardial ischemia. Acute myocardial ischemia can often present as chest pain due to insufficient blood supply to the heart muscle that results from CAD. Acute coronary syndrome covers a spectrum of clinical conditions that include ST-elevated myocardial infarction, or STEMI, non-ST-elevated myocardial infarction, or NSTEMI, and UA. Both STEMI and NSTEMI are forms of a heart attack, where damage to the heart muscle occurs due to ischemia, which is lack of blood flow to tissues due to a blockage of a vessel. Typically, UA results in chest pain from ischemia, but does not cause permanent damage to the heart muscle.

Furthermore, for any patient who experiences an acute coronary syndrome, the risk of a secondary MACE is significantly increased immediately following the initial event. Large clinical outcome studies such as MIRACL and PROVE-IT have previously reported, and data from our own FRANCIS Phase 2b clinical study supports, the 16-week rate of secondary MACE in acute coronary syndrome patients to be between 6.1% and 14.8%.

Current treatments for CAD other than interventional procedures include a variety of medications such as aspirin, statins and anti-platelet and anti-coagulant therapeutics. These medications are used to offer both acute and chronic benefits to patients. For patients presenting with acute coronary syndrome, therapeutics are administered quickly to improve blood flow to the heart and limit the risk associated with continued ischemia and thrombosis, which is the formation of a blood clot inside a vessel, which obstructs blood flow. In addition, interventional procedures and other medications, such as statins that are initiated early primarily for lipid benefits, are continued in an attempt to provide chronic protection against secondary MACE through improvement in lipid profiles such as lowering LDL-C.

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### ***Inflammation in Cardiovascular Disease***

In patients experiencing an acute coronary syndrome, the relationship between higher levels of inflammation, as measured by CRP, sPLA<sub>2</sub> and interleukin-6, or IL-6, and increased risk for MACE has been demonstrated extensively. In numerous clinical studies with a variety of therapeutic interventions, reductions in CRP have been correlated with reductions in subsequent MACE. We believe, if our Phase 3 pivotal study is successful, that varespladib would represent the first anti-inflammatory therapeutic approved for prevention of MACE.

CRP is the most commonly used marker of inflammation. It has been independently and strongly correlated with adverse cardiovascular outcomes in multiple clinical studies. Although a causative role for CRP has not been established, inflammation is known to promote acute coronary syndrome and CRP may play a direct role in both vascular inflammation as well as plaque rupture.

Statins reduce the level of CRP and other markers of inflammation in patients with stable CAD. In April 2001, the Journal of the American Medical Association published results from the MIRACL study describing the effect of statins in acute coronary syndrome, where inflammation is greatly elevated. 3,086 were randomized within 96 hours of their index event to treatment with high-dose Lipitor (atorvastatin) or placebo. Lipitor (atorvastatin) significantly reduced secondary MACE after 16 weeks. A second paper from the same study, published in Circulation in 2003, described the rapid decline of inflammatory markers in patients on statin treatment that was associated with reduced MACE. After 16 weeks, Lipitor (atorvastatin) reduced CRP levels by 34%.

More recently, in 2005, the New England Journal of Medicine published data from the PROVE-IT study. A total of 3,745 patients were randomized to either intensive statin therapy with 80 mg Lipitor (atorvastatin) or moderate statin therapy with 40 mg pravastatin. Patients with low CRP or LDL-C had fewer MACE than those with higher levels of either CRP or LDL-C. Patients who had both LDL-C < 70 mg/dL and CRP < 1 mg/L had the fewest number of secondary events over all.

### ***LDL-C in Cardiovascular Disease***

The direct relationship between lower LDL-C levels and reduced risk for major cardiovascular events has been consistently demonstrated for over a decade in 18 outcome studies involving over 119,000 patients. Results from large clinical outcome studies demonstrate achieving incrementally lower LDL-C levels reduces the risk of future cardiovascular events and provides continued patient benefit. As a result, the lipid treatment guidelines have been revised to establish more aggressive LDL-C treatment goals over time. The most recent guidelines from the National Cholesterol Education Program's Adult Treatment Panel III, or NCEP ATP III, updated in 2004 advocate treatment goals for LDL-C below 100 mg/dL for high-risk patients and 70 mg/dL for very high-risk patients. Given the breadth of more recent clinical data available, we believe that future treatment guidelines from the NCEP will likely establish new LDL-C treatment goals that apply the 70 mg/dL standard or lower to a broader population of at risk patients. Patients enrolled in our FRANCIS Phase 2b clinical study and our planned Phase 3 acute coronary syndrome study represent high-risk patients as defined by the NCEP.

In order to achieve these more aggressive LDL-C targets, doctors prescribe other approved lipid-lowering therapies such as cholesterol absorption inhibitors, nicotinic acid and fish oils in combination with statins to further reduce LDL-C. Still, many acute coronary syndrome patients who represent the NCEP ATP III guideline categories of high-risk and very high-risk do not achieve these recommended lipid goals despite maximum lipid-lowering therapies. Moreover, substantial residual risk remains even among the group of patients that do achieve these aggressive LDL-C goals suggesting additional biological mechanisms, including inflammation, may be relevant.



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This is exemplified in a November 2008 publication in the New England Journal of Medicine that detailed the results from a 17,000 patient, multinational, primary prevention study named JUPITER. The study randomized patients with relatively normal levels of LDL-C, but elevated levels of inflammation based on CRP to statin or placebo therapy. The JUPITER study was stopped early because those patients randomized to statin therapy demonstrated a statistically significant reduction in CRP, which also translated to a statistically significant reduction in cardiovascular events versus those on placebo. The reduction in events was well in excess of that which would be predicted from historical data evaluating LDL-C reductions alone. While these results were generated in a primary prevention setting, we believe that the benefits of reducing inflammation may prove to be even more meaningful in settings where patients are in a hyper-inflammatory state, such as following an acute coronary syndrome. As a result of these studies, we believe that there is a substantial need for novel therapies that provide meaningful reductions in inflammation while also improving LDL-C levels in high-risk cardiovascular patients beyond the benefits of statin therapy. Therefore, it is our belief that targeting inflammation and elevated LDL-C with sPLA<sub>2</sub> inhibition during the early phase of an acute coronary syndrome will further improve patient outcomes.

We believe that varespladib is one of only a few novel drugs in development with the potential to offer a clinical benefit to high-risk cardiovascular patients. Varespladib's unique mechanism provides potent anti-inflammatory activity, as measured by reductions in sPLA<sub>2</sub>, CRP and IL-6; incremental lipid-lowering, as measured by LDL-C; and lipid-modulating activity beyond that achievable with statin therapy alone. Furthermore, because of their complementary mechanisms, we believe that the combination of statins and varespladib can provide synergistic anti-inflammatory and lipid-lowering benefits. We also have preliminary data to suggest that varespladib may be synergistic with other cardiovascular therapeutic regimens, such as niacin.

***Pivotal VISTA-16 Study - Acute Coronary Syndrome***

In February 2008, based on the results from Phase 2 stable CAD studies, as discussed below, we met with the FDA to discuss the next steps of clinical development of varespladib during our end of Phase 2 meeting. As a result of that meeting and the results from our Phase 2b acute coronary syndrome study, we submitted an SPA to the FDA for the Phase 3 VISTA-16 study of varespladib for the short-term (16-week) treatment of patients who have recently experienced an acute coronary syndrome. We reached agreement with the FDA on all aspects of the VISTA-16 study protocol, including patient inclusion/exclusion criteria, study size, statistical considerations, efficacy endpoints, study duration, randomization and lipid management strategies.

An independent DSMB will continually evaluate the performance of the VISTA-16 study over time to ensure patient safety. In addition, after a minimum of 1,000 patients have been enrolled in the VISTA-16 study, an independent committee not involved with the VISTA-16 study will complete a biomarker utility analysis to ensure patient levels of inflammation, as measured by sPLA<sub>2</sub>, CRP and IL-6, and lipid profiles, as measured by LDL-C, have met pre-specified reductions from baseline at various time-points. These markers of inflammation and lipid profiles are well-established in the clinical community and pharmaceutical industry as independent predictors of future cardiovascular risk and, if positive, will provide additional validation of our previous findings from the FRANCIS Phase 2b clinical study. At the

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same time, the independent DSMB will review all clinical data from the VISTA-16 study to ensure no emergent adverse safety signal.

In June 2010, we initiated enrollment in the VISTA-16 clinical study. Pursuant to our SPA agreement with the FDA, our multinational, randomized, double-blind, placebo-controlled Phase 3 acute coronary syndrome VISTA-16 study will enroll up to 6,500 patients in up to 15 countries and up to 500 centers. However, enrollment may be stopped anytime after a minimum of 385 adjudicated endpoint events as described in the protocol have occurred. This number of events will allow us to detect a treatment effect on the composite endpoint as low as 18.1% with a p-value of less than 0.05. We may increase the sample size if the adjudicated endpoint events occur at a lower rate than we expect. Patients will be randomized at entry to receive 16 weeks of either 500 mg once-daily of varespladib or placebo in addition to a 20, 40 or 80 milligram dose of Lipitor (atorvastatin). The dose of Lipitor (atorvastatin) may be adjusted after eight weeks if the patient's LDL-C level remains above 100mg/dL. Survival status will be obtained for patients six months after the completion of dosing. The clinical study will recruit a similar population of high-risk cardiovascular patients with acute coronary syndrome to those enrolled in the FRANCIS study. As in FRANCIS, randomization must occur within 96 hours of hospitalization for the acute coronary syndrome event, or if already hospitalized, within 96 hours of event diagnosis. Patient blood chemistry will be evaluated at baseline, 24 hours and weeks one, two, four, eight and 16. Randomization is being stratified by the presence or absence of lipid-lowering therapy prior to the index event as well as the type of acute coronary syndrome event, such as UA, NSTEMI or STEMI. The number of subjects who undergo percutaneous coronary intervention following the index event and prior to randomization will be limited to no more than 55% of the total patient population.

The primary endpoint of the VISTA-16 study is to determine whether 16 weeks of once-daily treatment with varespladib plus a dose of Lipitor (atorvastatin) is superior to placebo plus Lipitor (atorvastatin) in

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the time to the first occurrence of the combined endpoint of cardiovascular death, non-fatal myocardial infarction, non-fatal stroke or documented UA with objective evidence of ischemia requiring hospitalization as defined by recent FDA draft guidance.

On July 22, 2009 the Center for Drug Education and Research division of the FDA issued draft recommendations for standardized definitions for cardiovascular outcomes trials. The VISTA-16 clinical study endpoint definitions conform to these guidelines.

### ***Components of VISTA-16 Primary Endpoint***

Cardiovascular Death

Non-Fatal Myocardial Infarction

Non-Fatal Stroke

Documented UA with Objective Evidence of Ischemia Requiring Hospitalization

A secondary endpoint for the VISTA-16 study is to determine whether varespladib plus a dose of Lipitor (atorvastatin) is superior to placebo plus Lipitor (atorvastatin) in the time to the first occurrence of the combined endpoint of all cause mortality, non-fatal myocardial infarction, non-fatal stroke or documented UA with objective evidence of ischemia requiring hospitalization. A comparison between treatment groups will also be made for each component of the primary efficacy endpoint. Additionally, the time to multiple occurrences of any non-fatal component of the composite primary endpoint will also be explored. The biomarkers CRP, IL-6, LDL-C and sPLA<sub>2</sub>, will also be evaluated at each time point of the clinical study.

### ***Historical Clinical Studies***

#### ***Phase 2b Acute Coronary Syndrome Study – FRANCIS (Fewer Recurrent Acute coronary events with Near-term Cardiovascular Inflammation Suppression)***

In July 2008, we initiated a randomized, double-blind, placebo-controlled Phase 2b clinical study that enrolled 625 acute coronary syndrome patients across 35 centers in three countries. Given the drug's combined anti-inflammatory, lipid-lowering and lipid-modulating effects, we evaluated the effects of varespladib in acute coronary syndrome patients with high levels of inflammation and dislipidemia. The clinical study was designed to evaluate the safety and efficacy of varespladib when co-administered with the highest dose (80 mg) of Lipitor (atorvastatin). The clinical study randomized all patients to a minimum of 24 weeks of treatment with either 500 mg once-daily of varespladib or placebo in combination with 80 mg Lipitor (atorvastatin) and physician-directed standard of care.

Patients were eligible for enrollment if they had a diagnosis of UA, NSTEMI or STEMI. In addition, they must have had one of the following risk factors: diabetes, body mass index (BMI)  $\geq 25$  kg/m<sup>2</sup>, CRP  $\geq 2$  mg/L (NSTEMI/STEMI) or CRP  $\geq 3$  mg/L (UA) and presence of three (pre-defined) characteristics of metabolic syndrome. Subjects must have been randomized within  $\leq 96$  hours of hospital admission for the index event, or, if already hospitalized, within  $\leq 96$  hours of index event diagnosis. Any percutaneous revascularization was required to occur prior to randomization. In addition, because we wanted to assess the effects of varespladib with the highest available dose of Lipitor (atorvastatin), patients were not allowed to use any other lipid-lowering therapies during the clinical study. Follow-up visits for evaluation occurred post-randomization at weeks two, four, eight, 12, 16, 20, 24 and then monthly thereafter until clinical study completion. All enrolled subjects remained on treatment until all subjects had been treated for a minimum of 24 weeks or until the occurrence of MACE. Patients randomized into the FRANCIS

study had baseline characteristics such as LDL-C

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indexed-event risk factors and demographics similar to other studies of this type. All patients who completed the clinical study received a final evaluation.

The primary efficacy endpoint evaluated the change in LDL-C after 500 patients completed eight weeks of treatment. LDL-C is the most widely recognized surrogate for predicting cardiovascular risk where percentage reductions in LDL-C have been highly correlated with reductions in future cardiovascular risk. Secondary endpoints included:

changes in established markers of inflammation such as sPLA<sub>2</sub>, CRP and IL-6; and

the occurrence of secondary MACE (for purposes of this clinical study, all-cause mortality, non-fatal myocardial infarction, documented UA requiring urgent hospitalization, revascularization occurring <sup>3</sup> 60 days post the index event or non-fatal stroke).

Results of the primary endpoint demonstrated a statistically significant incremental LDL-C reduction of 5.7% (p = 0.0023) in varespladib treated patients versus those treated with 80 mg Lipitor (atorvastatin) alone after eight weeks of therapy. A p-value is a probability with a value ranging from 0 to 1, which indicates the likelihood that a clinical study is different between treatment and control groups. P-values below 0.05 are typically referred to as statistically significant. A statistically significant difference was observed in LDL-C reduction from baseline as early as two weeks after treatment. The treatment effect was maintained throughout the observation period.

Figure 1: Mean Percentage Change in LDL-C from Baseline

Secondary endpoints measured effects of varespladib on sPLA<sub>2</sub>, CRP and IL-6 levels, which are well-established markers of inflammation. While the FRANCIS study was not designed to demonstrate statistically significant changes in CRP and IL-6, the results were consistent with previous studies, which demonstrated improvement across these biomarkers and achieved statistical significance at some time points.

sPLA<sub>2</sub> concentration was statistically significantly reduced from the earliest time point of two weeks through the 16-week time point (p < 0.0001) as compared to high-dose statin (80 mg Lipitor (atorvastatin)) therapy alone. While our first sPLA<sub>2</sub> measurement in this clinical study occurred at two

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weeks, data from previous clinical studies utilizing varespladib or A-001 demonstrated reductions in sPLA<sub>2</sub> as early as two days following treatment.

Figure 2: Median Percentage Change in sPLA<sub>2</sub> Concentration from Baseline

In addition, treatment-related reductions in CRP and IL-6 levels were also greater in varespladib treated patients compared to those treated with placebo at all time points in the clinical study. The percent decrease in CRP at week two was nearly two-fold greater among varespladib and 80 mg Lipitor (atorvastatin) treated patients than those treated with placebo and 80 mg Lipitor (atorvastatin) alone (-39% versus -20%,  $p = 0.183$ ), and at week 16, the difference between treatment groups was statistically significant (-82% versus -73%,  $p = 0.0067$ ). At weeks two, four, eight and 16, varespladib treated patients had numerically reduced levels of CRP versus patients treated with placebo.

Figure 3: Median Percentage Change in CRP Concentration from Baseline

The percent decrease in IL-6 in patients on varespladib at week two was more than three times the reduction in IL-6 in patients on placebo (-18% versus -5.1%,  $p = 0.18$ ).

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Figure 4: Median Percentage Change in IL-6 Concentration from Baseline

Treatment with varespladib resulted in more subjects with LDL-C levels lower than 70 mg/dL and lower than 50 mg/dL than those on placebo (80 mg Lipitor (atorvastatin) and physician-directed standard of care) alone at eight, 16 and 24 weeks of treatment. As discussed above, the NCEP ATP III guidelines have established an LDL-C of 70 mg/dL as an optional target for very high-risk patients. As indicated in the table below, the data suggests varespladib treatment helps patients achieve their LDL-C target levels more quickly and maintain them longer than with high-dose statin (80 mg Lipitor (atorvastatin)) therapy alone.

Finally, given the importance of reducing inflammation as well as LDL-C following an acute coronary syndrome event, we examined the proportion of patients in the clinical study that were able to achieve both LDL-C levels less than 70 mg/dL and CRP levels below 1 mg/L. As indicated in the figure below, significantly more patients at week four and week 16 ( $p = 0.02$  and  $p = 0.01$ ) reached this combined target when treated with varespladib and 80 mg Lipitor (atorvastatin) than with placebo and 80 mg Lipitor (atorvastatin) alone. (The actual proportion of subjects in the varespladib group was 25% and 16% in the placebo group). Additionally, in the PROVE-IT study a comparable proportion (16%) of patients treated with 80 mg Lipitor (atorvastatin) achieved these goals.

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Figure 5: Percentage of Patients with LDL-C < 70 mg/dL, < 50mg/dL and Achieving Combined Targets of CRP < 1.0 mg/L and LDL-C < 70 mg/dL

We also conducted an exploratory analysis of MACE in the clinical study. At 16 weeks, there were 14 (4.2%) MACE in the varespladib treated group as compared to 19 (6.1%) in the placebo group. At the completion of the clinical study, all patients had received at least six months of therapy and there were 23 (7.4%) MACE in the varespladib treated group as compared to 24 (7.7%) MACE in the placebo group. While the MACE analysis was not designed to demonstrate any statistical differences between the two treatment groups, we believe that the results are encouraging and will help us to design our VISTA-16 study.

Overall, varespladib was generally well-tolerated in this clinical study and no imbalance was seen in dropouts due to drug effects. After completing patient treatment, overall exposure to varespladib was a mean of 30 weeks and median of 34 weeks. In total, 485 total patients completed six months of treatment, with 167 subjects completing 40 weeks and 70 completing 44 weeks. There was no imbalance of overall adverse events between the treatment arms. During the clinical study, at week four and week eight, occasional mild and transient elevations in liver enzymes, defined as elevations three times the upper limit of normal, were seen among more patients taking varespladib, but the frequency and magnitude of the elevations were not meaningfully different between the active and control groups at the end of the clinical study. The frequency of the elevations was also similar to that reported for Lipitor (atorvastatin) and other currently approved lipid-lowering agents. Furthermore, there were no effects on blood pressure or the QT interval, an electro-cardiographic safety endpoint.

Summary data from FRANCIS was presented at the American College of Cardiology meeting in 2010 and we anticipate publishing detailed results from the study in 2010 in a scientific journal.

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### **Phase 2 Stable Coronary Artery Disease Study PLASMA (Phospholipase Levels and Serological Markers of Atherosclerosis): Varespladib Twice-Daily Versus Placebo**

Our Phase 2 PLASMA study was designed to confirm the safety and effect of varespladib on sPLA<sub>2</sub> concentration, other inflammatory biomarkers and lipids in patients with stable CAD. In October 2007, we completed a randomized, double-blind, placebo-controlled study evaluating four doses of varespladib administered twice-daily versus placebo among 396 patients with stable CAD from 38 centers in two countries. The clinical study enrolled patients more than 12 weeks after a myocardial infarction or six weeks after an episode of UA. The varespladib doses tested were 50 mg, 100 mg, 250 mg and 500 mg administered twice per day. Following randomization, patients were treated for eight weeks and safety and efficacy evaluations were conducted at weeks two, four and eight. Physician-directed standard of care therapies were permitted during the clinical study, including 259 patients who were on background statin therapy.

The primary endpoint of the clinical study was the change in sPLA<sub>2</sub> concentration from baseline to week eight in varespladib, across all doses, versus placebo patients. Secondary endpoints in the clinical study included the change in lipids, including LDL-C, lipoprotein subclasses and certain inflammatory biomarkers, from baseline to each of weeks two, four and eight.

Our Phase 2 PLASMA results were selected for a late-breaking presentation at the American Cardiology Conference and published in the Lancet journal in February 2009. Results from the clinical study demonstrated that treatment with varespladib led to statistically significant reductions in sPLA<sub>2</sub>, LDL-C and various plaque-building and pro-inflammatory forms of LDL-C. In patients receiving varespladib, there were incremental reductions in CRP versus placebo (-55.6% versus -24.8%,  $p = 0.47$ ) from baseline to eight weeks.

Among all patients treated with varespladib, median sPLA<sub>2</sub> concentration decreased by 86.7% from baseline to week eight, as compared to 4.8% in the placebo group ( $p < 0.0001$ ). Median sPLA<sub>2</sub> concentration decreased among the varespladib groups in a dose-dependent manner.

At week eight, across all dosage groups, LDL-C was reduced by 9.7% versus placebo ( $p = 0.0035$ ). In a subgroup of patients taking statins with LDL-C  $> 70$  mg/dL, LDL-C was reduced by 12.0% ( $p = 0.0065$ ) versus placebo at the eight week time point. Notably, the reductions in LDL-C appear to be driven primarily by a shift in the distribution of LDL-C particles with fewer pro-atherogenic, pro-inflammatory small LDL-C particles present in the circulation. In addition, statistically significant reductions from baseline to week eight were seen in total cholesterol and non-HDL cholesterol in the overall clinical study population treated with varespladib.

Varespladib was generally well-tolerated among all patients treated. In general, adverse effects were mild or moderate with no imbalance of adverse events in the varespladib groups as compared to placebo. The most common adverse effects seen in the varespladib groups were headache (6.4%) and nausea (5.4%). There were mild and transient elevations of liver function tests, defined as elevations three times the upper limit of normal, in patients taking varespladib.

### **Phase 2 Stable Coronary Artery Disease Study PLASMA-2 (Phospholipase Levels and Serological Markers of Atherosclerosis -2): Once-Daily of Varespladib Versus Placebo**

Based on data from our first PLASMA study, we initiated a second Phase 2 clinical study (PLASMA-2) to evaluate the effect of once-daily varespladib treatment on inflammatory and lipid biomarkers. In December 2007, we completed a randomized, double-blind, placebo-controlled Phase 2 clinical study evaluating two doses of varespladib versus placebo amongst 138 patients with stable CAD. The clinical study, conducted in the United States, involved 13 clinical sites. Following randomization to one of two



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doses of varespladib or placebo, patients were treated for eight weeks with safety and efficacy evaluations at weeks two, four and eight. Physician-directed standard of care therapies were permitted during the clinical study, including 123 patients (89.1%) who were on background statin therapy.

The primary endpoint of the clinical study was a comparison between once-daily doses of varespladib and placebo in changes in sPLA<sub>2</sub> concentration at week eight. Secondary endpoints in the clinical study included measurements of lipids including LDL-C and certain other inflammatory biomarkers from baseline to each of weeks two, four and eight.

Results of the primary endpoint, sPLA<sub>2</sub>, were statistically significant and consistent with those generated from the first PLASMA study described above. Patients on varespladib demonstrated a 77.8% reduction in sPLA<sub>2</sub> concentration as compared to an increase of 8.3% in placebo treated patients ( $p < 0.0001$ ). Pharmacokinetic data indicated that once-daily dosing with varespladib would be sufficient to achieve over 90% inhibition of sPLA<sub>2</sub> mass and activity over a 24-hour period.

The anti-inflammatory, lipid-lowering and lipid-modulating effects of varespladib treatment were consistent with those seen in the first PLASMA study: LDL-C was decreased by 8.3% compared to 0.7% in placebo ( $p = 0.014$ ). Due to the small size of this clinical study, and the low baseline inflammation present in these patients, no meaningful changes with CRP could be detected between the active and control groups. As was observed in the first clinical study, there were statistically significant reductions from baseline to week eight in total cholesterol and non-HDL cholesterol in the overall clinical study population treated with varespladib.

The adverse effect profile for varespladib was consistent with earlier studies and there was no imbalance of adverse events among the varespladib groups and placebo. Varespladib was generally well-tolerated. The most common effects seen in the varespladib groups were diarrhea (6.7%), nausea (5.6%), any increase in alanine aminotransferase (5.6%), which is an enzyme that indicates liver cell injury, and any increase in aspartate aminotransferase (5.6%), which is another enzyme that indicates liver cell injury. However, mild and transient elevations of these liver enzymes, defined as elevations three times the upper limit of normal, were infrequent in patients taking varespladib.

Table 6: Placebo-corrected Percent Decrease from Baseline to Week Eight in Biomarkers

	sPLA <sub>2</sub>	LDL Cholesterol	Total Cholesterol	Non-HDL Cholesterol	Oxidized LDL-C
PLASMA (All doses varespladib)	81.9% ( $p < 0.0001$ )	9.7% ( $p = 0.0035$ )	4.9% ( $p = 0.0069$ )	7.2% ( $p = 0.0009$ )	5.4% ( $p = 0.0065$ )
PLASMA-2 (500 mg varespladib)*	86.1% ( $p < 0.0001$ )	13.9% ( $p = 0.0007$ )	9.2% ( $p = 0.0006$ )	14.2% ( $p = 0.0001$ )	7.3% (pNS)

\* Dose selected for Phase 3  
Probability not significant

*Investigator-Sponsored Phase 2 Percutaneous Intervention Study – SPIDER-PCI (sPLA<sub>2</sub>) Inhibition to Decrease Enzyme Release After PCI: Varespladib Once-Daily Versus Placebo for up to 10 Days.*

In May 2007, Dr. Vladimir Dzavik at University Health Network Hospital in Toronto, Ontario, Canada initiated an investigator sponsored study with varespladib in patients undergoing a percutaneous intervention, or PCI. The primary endpoint of this study was to determine if inhibition of sPLA<sub>2</sub> with varespladib will result in a decrease in peri-PCI

myocardial necrosis, or heart muscle damage, as measured by elevations of myocardial enzyme markers creatine kinase-MB, or CK-MB, or troponin I. The study was to enroll a maximum of 164 patients who are scheduled to undergo PCI. Elevated levels of troponin I following PCI are associated with an increase in in-hospital complications and, in one

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study, were an independent predictor of major cardiac events. After PCI, circulating levels of sPLA<sub>2</sub> increase and patients with higher levels have an increased risk of events after a two-year follow-up. This study explores the notion that sPLA<sub>2</sub> inhibition may reduce myocardial damage after PCI and improve patient outcomes.

As of August 2009, enrollment and dosing in the SPIDER-PCI investigator study were completed with 144 patients evaluated for purposes of assessing the primary endpoint. On December 11, 2009, we received a statistical analysis of the patient evaluations, which showed that the primary endpoint of the study, a reduction in the elevation of CK-MB or troponin I above the upper limit of normal at six to eight hours or 18 to 24 hours, was not met (varespladib patients 57% versus placebo patients 51%,  $p = 0.55$ ). However, the results showed statistically significant reductions of sPLA<sub>2</sub> as early as 18 hours post-PCI procedure, which persisted throughout the five days of dosing (-93.0%,  $p < 0.001$ ). Consistent with results from other clinical studies with varespladib, there were numerical reductions in CRP from baseline versus placebo at three to five days (-82.1%,  $p = 0.23$ ).

### ***Previous Experience at Eli Lilly and Shionogi & Co., Ltd.***

Eli Lilly and Shionogi & Co., Ltd. previously conducted a series of clinical studies evaluating varespladib and A-001 in various inflammatory conditions. In total, at least 17 Phase 1 and Phase 2 clinical studies evaluated varespladib and A-001 as a treatment in sepsis, rheumatoid arthritis, asthma and ulcerative colitis, an inflammatory bowel disease. Results from these studies provide a large body of safety data for varespladib and A-001 with more than 1,000 healthy volunteers and subjects receiving treatment.

Throughout these studies, varespladib was generally well-tolerated.

### ***Non-Clinical Studies with Varespladib and A-001***

Approximately 150 preclinical pharmacology and toxicology studies have been completed with varespladib and A-001, including two-year rat and mouse carcinogenicity studies, one-year primate study and three-month rat study in combination with Lipitor (atorvastatin).

### **A-623**

A-623 is a peptibody antagonist of the BAFF cytokine that is initially being developed as a treatment for lupus. BLyS, also known as B-cell activating factor, or BAFF, is a tumor necrosis family member and is critical to the development, maintenance and survival of B-cells. It is primarily expressed by macrophages, monocytes and dendritic cells and interacts with three different receptors on B-cells including BAFF receptor, or BAFF-R, B-cell maturation, or BCMA, and transmembrane activator and cyclophilin ligand interactor, or TACI. The BAFF-R receptor is expressed primarily on peripheral B-cells.

Two randomized, dose-ranging, placebo-controlled Phase 1 clinical studies A-623 in 104 lupus patients have already been completed. Results from these studies demonstrated A-623 generated anti-BAFF activity and showed statistically significant reductions in B-cells of 50-70% ( $p < 0.001$ ) in lupus patients across multiple subcutaneous and intravenous formulations.

After successfully reactivating our Investigational New Drug Application, or IND, we initiated a Phase 2b clinical study with A623 for the treatment of lupus in July 2010 called PEARL-SC. We may also study A-623 in other B-cell mediated autoimmune diseases such as Sjögren's Syndrome or orphan indications such as myasthenia gravis and pemphigus. We are actively pursuing a partnership with major pharmaceutical companies to develop and commercialize A-623.



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We intend to advance the development of our BAFF targeting molecule, A-623, a selective peptibody, to exploit its broad clinical utility in autoimmune diseases. A-623, as a peptibody directed against BAFF, was developed as an alternative to antibodies and is produced in *escherichia coli* versus antibodies that are produced in mammalian cells. In addition, A-623 offers a number of potential differentiations over other anti-BAFF compounds, as well as other novel B-cell directed therapies, including:

convenient, at-home, patient-administered subcutaneous dosing with a range of dosing frequencies including monthly and weekly;

ability to bind to both membrane-bound and soluble BAFF, which may confer differentiating pharmacodynamic characteristics;

non-glycosylated protein that is produced in a bacterial fermentation manufacturing process, which may reduce the potential to be immunogenic, and may provide manufacturing benefits and lower cost of goods; and

multiple binding domains achieve highest reported affinity for inhibition of BAFF.

## ***Market Opportunity***

Lupus is an autoimmune disorder that involves inflammation that causes swelling, pain and tissue damage throughout the body. Lupus can affect any part of the body, but especially the skin, heart, brain, lungs, joints and the kidneys. The course of the disease is unpredictable, with periods of illness, called flares alternating with remission. The Lupus Foundation estimates that approximately 1.5 million people in the United States and five million worldwide suffer from lupus. Although lupus may affect people of either sex, women are 10 times more likely to suffer from the disease than men, according to the Lupus Foundation.

Patients with active lupus may have a broad range of symptoms related to the inflammation. Inflammation of the brain may cause seizures and other neurologic abnormalities. Inflammation of the heart may cause heart failure or sudden death. Lung inflammation causes shortness of breath. Lupus may also cause swollen joints and severe rash. In addition, LN may lead to kidney dialysis or transplantation.

Although the cause of lupus is still not completely understood, B-cell activation and autoantibody production are known to be central to the process. Evidence has emerged that over-expression of BAFF plays an important role in this disease process. In preclinical studies, transgenic mice created to over-express BAFF begin to exhibit symptoms similar to lupus. In addition, treatment of these same mice with BAFF antagonists appears to ameliorate the disease.

## ***PEARL-SC Phase 2b Clinical Study in Patients with Lupus***

Based on positive results among 104 patients in our Phase 1a and 1b clinical studies, we initiated a Phase 2b clinical study in lupus patients called PEARL-SC. PEARL-SC is a randomized, placebo-controlled, phase 2b clinical study which may enroll up to 600 patients in approximately 60 centers worldwide. Subjects will be randomized into three active subcutaneous treatment arms and one placebo treatment arm for a minimum of 24 weeks. The primary endpoint of the PEARL-SC study will be clinical improvement at 24 weeks in responder rates of a composite systemic lupus erythematosus responder index, or SRI, in the pooled treatment arms versus placebo. The primary SRI endpoint is a composite score based upon changes in SELENA and SLEDAI disease activity scale, Physician's Global Assessment scores and British Isles Lupus Assessment Group scores, which are clinical standards for the measurement of disease severity in lupus patients. Secondary endpoints will include safety, improvement in other clinical assessment scores, clinical response in patients with various baseline disease severities, resolution of fatigue, steroid utilization and time

to flare. An interim biomarker analysis to establish the appropriate drug effect on total B-cells is included early in the study. Initially we intend to randomize

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only 480 patients. This total number of patients will allow us to detect a treatment effect of 14% with a p-value of 0.05 between the pooled active arms and the placebo arm.

The following table represents our current PEARL-SC study as well as a the option to further extend the study for collection of long-term safety collection.

On November 16, 2010, we placed a voluntary hold on the PEARL-SC study due to problems found with product vials. Patient enrollment in the study has been temporarily suspended and patients currently enrolled in the study will discontinue dosing while we conduct a complete analysis of the problem. There have been no reports of patient-related side effects or problems with drug administration that could be attributed to this problem.

***Future Development of A-623***

***A-623 Manufacturing Strategy***

In May 2010, we successfully completed a manufacturing campaign for a high concentration A-623 injection formulation for subcutaneous administration. Manufacturing was conducted per current good manufacturing practices, or cGMP, and the product was released to clinical sites in July 2010. Our active and placebo inventory is sufficient to complete dosing of 120 patients for up to 16 weeks of therapy. In August 2010, we manufactured a second batch of vials of the high-concentration A-623 injection formulation from 34 liters of Amgen manufactured bulk drug substance and, upon appropriate quality inspection and testing, plan to release this batch for clinical use by November 2010. Upon successful release of this batch, we believe we will have sufficient clinical material, both placebo and A-623, to dose up to 480 patients for a minimum of six months in the PEARL-SC study.

We are currently evaluating proposals from a number of contract manufacturers, or CMOs, with large-scale GMP manufacturing capabilities for the production of A-623. In the fourth quarter of 2010, we

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expect to announce the selection of a CMO and to begin the technical transfer of the full manufacturing process to a large scale contract manufacturer. As a result, in early 2011, we plan to initiate manufacturing of GMP bulk product for eventual pivotal clinical studies and an optional expansion and/or extension of the PEARL-SC study.

The following chart outlines the basic manufacturing steps required for the production of A-623.

### ***A-623 Regulatory Strategy***

In July 2010, we received clearance from the FDA to begin recruitment of lupus patients into the PEARL-SC clinical study. The approved protocol allows for enrollment of up to 600 patients treated for a maximum of 12 months. Patients enrolled in this study will be randomized into three active treatment arms and one placebo arm. Subsequent to this approval the FDA requested additional information regarding characterization and qualification of the manufactured vials of A-623. In addition the FDA requested minor changes to aspects of PEARL-SC study including collection of ECG testing at the end of dosing and a recommendation for a corticosteroid tapering strategy. Neither of these changes are considered material to the conduct of the PEARL-SC study. The FDA also recommended we submit to the IND analytical and comparability data from our recently completed manufacturing lot of A-623 vials and a comparability proposal for purposes of soliciting their input prior to implementation. We submitted a response to the FDA in October 2010.

It is our intent to continuously submit results of comparability testing from all of our manufacturing campaigns to the FDA. We also intend to discuss with the FDA a comparability proposal that would ensure future batches of material manufactured by our eventual CMO would meet the FDA's standards for equivalence. If these batches meet specification and the FDA agrees A-623 product manufactured by our CMO meets comparability requirements, we believe these batches could be used to further extend and expand the PEARL-SC study and/or initiate identical Phase 3 clinical studies for purposes of registration.

### ***Historical Clinical Studies***

Prior to our in-licensing of A-623, Amgen completed two Phase 1 clinical studies of A-623 in lupus patients to evaluate the safety and pharmacokinetics of single and multiple doses of drug using intravenous and subcutaneous formulations. Prior to conducting Phase 1 clinical studies in lupus patients, Amgen conducted a pre-Phase 1 clinical study in lupus patients. In Amgen's pre-Phase 1 clinical study, individual B-cell subsets, such as mature naïve B-cells, activated B-cells and memory B-cells, all therapeutic targets for A-623, were quantified in order to characterize the specific B-cell subset abnormalities associated with lupus.

The randomized, placebo-controlled, dose-escalation Phase 1a clinical study evaluated A-623 as a single intravenous or subcutaneous therapy among 56 lupus patients. Intravenous doses included 1, 3 and 6 mg/kg, and subcutaneous doses included 0.1, 0.3, 1 and 3 mg/kg. The primary endpoint was to assess the safety and tolerability of single dose administrations of A-623. Secondary endpoints were designed to assess the plasma pharmacokinetic profile and immunogenicity of A-623. Results from this clinical study indicated the safety and tolerability of A-623 administered as single dose of intravenous or subcutaneous was comparable to placebo. Single doses of A-623 exhibited linear pharmacokinetics after both intravenous and subcutaneous administration. There were comparable adverse events between the A-623 and placebo groups with no deaths reported. In addition, no neutralization antibodies were seen

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across all doses. The most common adverse events were nausea (15%), headache (10%), upper respiratory tract infection (10%) and diarrhea (8%).

A-623 was evaluated in a randomized, placebo-controlled, multi-dose Phase 1b clinical study as an intravenous or subcutaneous therapy among 63 lupus patients. The intravenous dose was 6 mg/kg, and subcutaneous doses included 0.3, 1 and 3 mg/kg. Patients received their doses of A-623 or placebo once-weekly for four weeks. The primary endpoint was to assess the safety and tolerability of multiple dose administrations of A-623. Secondary endpoints were designed to assess the plasma pharmacokinetic profile and immunogenicity of A-623 after multiple doses. Results showed that multiple doses of A-623 exhibited dose-proportional pharmacokinetics after both intravenous and subcutaneous administration. Further, results demonstrated a dose-dependent decrease in total B-cells as early as 15 days of treatment, and total B-cell reduction (up to approximately 60-70% of baseline) reached its nadir after about 160 days of therapy. By six months after treatment, the B-cell populations had returned to baseline levels.

Figure 7: Total B-cell Depletion

An experimental analysis was also conducted to assess B-cell subsets in patients following multiple doses. Results demonstrated that A-623 selectively modulate certain B-cell subsets and induced trends toward normalizing the B-cell abnormalities that were observed in lupus patients in the pre-Phase 1 clinical study.

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Results indicated that the tolerability of A-623 administered as multiple doses of intravenous or subcutaneous administration was generally comparable to placebo. There were no deaths reported between the A-623 and placebo. Few neutralization antibodies were seen, and all resolved in subsequent visits. Based on these results and published data from competitor studies, we initiated a Phase 2b clinical study evaluating A-623 in lupus patients during the second half of 2010.

### **A-001**

A-001 is an intravenously administered, potent, broad-spectrum inhibitor of sPLA<sub>2</sub>, including forms IIa, V and X. A-001 is currently being evaluated in a Phase 2 clinical study for the prevention of acute chest syndrome associated with sickle cell disease in at-risk patients. Substantial scientific evidence implicates sPLA<sub>2</sub> activity in the development of acute chest syndrome associated with sickle cell disease, as well as other forms of acute lung injury. The FDA granted orphan drug and fast-track designation for A-001 for the prevention of acute chest syndrome in at-risk patients. We currently retain all worldwide product rights, except in Japan where Shionogi & Co., Ltd. retains rights. We also licensed A-001 from Eli Lilly and Shionogi & Co., Ltd. in July 2006.

sPLA<sub>2</sub> levels increase in advance of acute chest syndrome episodes and can be used alongside the presence of fever to strongly predict an impending episode. There is a strong correlation between levels of CRP and sPLA<sub>2</sub> in this patient population. Patients with acute chest syndrome associated with sickle cell disease can exhibit levels of sPLA<sub>2</sub> that can be 100 times greater than normal. We believe that early intervention with A-001 to inhibit sPLA<sub>2</sub> activity may offer a novel preventative therapy to improve outcome among sickle cell disease patients presenting with a high risk of acute chest syndrome.

### ***Market Opportunity***

Sickle cell disease is a lifelong genetic, blood disorder typically diagnosed during early childhood. According to the Sickle Cell Information Center, in the United States, over 70,000 people currently suffer from the disease and approximately 1,000 children are born with the disease annually. According to Medtech Insight, in Europe, there are over 200,000 people suffering from the disease, and the numbers increase dramatically in Africa, where, according to the WHO, 200,000 children alone are born with sickle cell disease each year. Life expectancy for these patients is significantly shortened, with most expected to live only until their mid-40s.

The disease is characterized by structurally altered red blood cells that assume an abnormal shape, similar to a sickle, and produce an altered form of hemoglobin. These altered red blood cells have a shortened life-cycle, become stiff and have difficulty passing through the body's small blood vessels. At times, these abnormal cells may obstruct or block blood flow through small blood vessels, leading to significant damage in tissue and bone. This damage is more commonly labeled as VOC. During VOC, blockage occurs within the circulation of the long bones, causing microscopic bone damage. Fragments of bone or bone fat may break free and embolize to the lungs, causing lung injury.

VOC is a common trigger for the more serious complication of acute chest syndrome associated with sickle cell disease. Acute chest syndrome exhibits symptoms and characteristics similar to acute lung injury. There are an estimated 10,000 episodes of acute chest syndrome associated with sickle cell disease per year in the United States. It represents the most common cause of death in sickle cell patients and the second most common cause of hospitalization among such patients. A majority of sickle cell patients will experience at least one episode of acute chest syndrome and repeated episodes can result in progressive lung disease. The disorder is most common in the two- to four- year age group and gradually declines in incidence with age.

There are no marketed therapies targeting acute chest syndrome associated with sickle cell disease. The most common treatment regimen includes heavy doses of corticosteroids, opiates, transfusion and

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antibiotics while the patient suffers through the attack. In addition, hydroxyurea, a chemotherapy, was found to reduce the frequency of VOC and the need for blood transfusions in adult patients with sickle cell disease. However, all of these therapeutics are associated with significant adverse effects while only offering limited patient benefit.

Our planned multinational, randomized, double-blind, placebo-controlled Phase 3 clinical study will enroll up to 200 patients with sickle cell disease who are at an elevated risk of developing acute chest syndrome as a result of fever, vaso-occlusive crisis, and CRP 5.0 mg/l<sup>3</sup> at the time of hospitalization. Patients will be randomized to receive a continuous infusion of A-001 or placebo for 48 hours after randomization. The primary endpoint of this study will be freedom from acute chest syndrome as determined by physician assessment and independent review of chest X-rays. This study represents a unique treatment approach for a small, orphan designated indication. As a result the appropriateness of the design and endpoints of this study for purposes of registration will only be known at the conclusion of the study and upon submission to the FDA.

### ***Historical Clinical Studies***

#### ***Phase 2 Acute Chest Syndrome in Hospitalized Patients with Sickle Cell Disease Study – Investigation of the Modulation of Phospholipase in Acute Chest Syndrome, or IMPACTS.***

In January 2007, we initiated a randomized, double-blind, placebo-controlled Phase 2 clinical study to assess the safety and tolerability of escalating doses of A-001 therapy when administered as a 48-hour continuous infusion. The clinical study was designed to enroll up to 75 patients across approximately 30 sites in the United States. This clinical study enrolls hospitalized sickle cell disease patients, at risk for acute chest syndrome on the basis of VOC, fever and serum sPLA<sub>2</sub> concentration level greater than 50 mg/mL. The primary endpoint for the clinical study was designed to assess safety and tolerability. Secondary endpoints included the absence of acute chest syndrome, suppression of sPLA<sub>2</sub>, reduced need for blood transfusions and assessment of pharmacokinetics.

The first group of patients was randomized 2:1 to receive low dose A-001 or placebo as a 48-hour continuous infusion. A pre-specified interim analysis was conducted in February 2009 after the 30th patient completed treatment to examine safety and adjust dosing schedules. The interim data was

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balanced between two dosing arms of 30 mug/kg/hr (n = 11) and 55 mug/kg/hr (n = 6). Interim results indicated serum levels of A-001 when dosed at 55 mug/kg/hr reduced sPLA<sub>2</sub> activity levels by more than 80% from baseline within 48 hours. Furthermore, the prevention of acute chest syndrome associated with sickle cell disease appeared to be related to the level of sPLA<sub>2</sub> activity. The DSMB recommended the clinical study continue based on safety and tolerability. In addition, given the safety profile, the DSMB approved the addition of a higher dose group of 110 mug/kg/hr via continuous infusion during the second half of the clinical study. We believe that the data suggest A-001 can suppress sPLA<sub>2</sub> at levels that may prevent the complication of acute chest syndrome associated with sickle cell disease.

Table 8: Reductions of sPLA<sub>2</sub> activity from baseline and incidence of acute chest syndrome (including placebo patients and patients receiving A-001). Exploratory analysis to determine correlation between degree of sPLA<sub>2</sub> suppression and incidence of acute chest syndrome.

48-Hour sPLA <sub>2</sub> Activity as a Percentage of Baseline	0.0% <	25% < 50%	50% < 75%	75% >
	25.0%	325% < 50%	350% < 75%	3 75%
Number of Subjects	7	7	3	12
Number of Subjects Developing Acute Chest Syndrome(%)	0(0)	2(28)	1(33)	4(25)

**Our Strategy**

Our objective is to develop and commercialize our product candidates to treat serious diseases associated with inflammation, including cardiovascular and autoimmune diseases. To achieve these objectives, we intend to initially focus on:

***Advancing Varespladib Through Phase 3.***

Inflammatory processes and lipid abnormalities are central to the onset of acute coronary syndrome and the development of CAD. varespladib operates through a novel mechanism of action to offer both targeted anti-inflammatory activity and incremental lipid reductions, including LDL-C, when used in combination with statins. Despite the benefits of statin therapy, many acute coronary syndrome patients still remain at substantial risk of a coronary event, suggesting additional biological mechanisms may be relevant, including inflammation. We believe that combination therapy with varespladib and statins will provide acute coronary syndrome patients with a unique, short-term therapeutic option unavailable with existing agents today. In addition, we believe that an opportunity exists in the future to evaluate varespladib in chronic indications such as CAD.

***Advancing Clinical Development of A-623.***

We are advancing the development of A-623 to exploit the broad potential clinical utility of BAFF antagonism. We have initiated the Phase 2b clinical study known as PEARL-SC in lupus patients. We may opportunistically enter into collaborations with third parties for development of this compound in lupus or in other B-cell mediated diseases, such as multiple sclerosis, rheumatoid arthritis or Sjögren's Syndrome, that may benefit from BAFF antagonism, including securing corporate partners whose capabilities complement ours.

We are also actively pursuing a partnership with major pharmaceutical companies to develop and commercialize A-623. We believe that a partnership could enable us to obtain funding for development of A-623 and to accelerate its

clinical, manufacturing and commercial development with collaborators whose capabilities complement ours.

We are seeking to structure a partnership that allows us to retain significant control over the development and commercialization of A-623 in the United States, and to retain economic interests in regions outside of the United States. Given the recent positive results of a BAFF-specific antagonist in multiple large, late-stage clinical studies, we believe that A-623 could be an attractive product candidate

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for pharmaceutical companies interested in exploiting opportunities in autoimmune diseases directed at lupus, as well as to other B-cell related autoimmune diseases.

In the future, if additional funds are available, we may develop A-001, an intravenous sPLA<sub>2</sub> inhibitor for prevention of acute chest syndrome associated with sickle cell disease, because we identified that elevations in sPLA<sub>2</sub> activity are known to precede and predict disease progression. Given that there are currently no approved drugs for the prevention of acute chest syndrome associated with sickle cell disease, we have received orphan drug designation and fast track status from the FDA for A-001.

### ***Leveraging Our sPLA<sub>2</sub> Expertise to Develop Products for Additional Disease Indications.***

We believe that we have developed a leadership position in the field of sPLA<sub>2</sub> inhibition. Beyond our acute coronary syndrome and acute chest syndrome program, we believe that sPLA<sub>2</sub> inhibition may have applications in other acute disease settings where early intervention may have an impact and reduce anti-inflammatory activity, such as acute lung injury. Additionally, we believe that we can apply our sPLA<sub>2</sub> expertise to develop novel therapeutics for a number of chronic diseases. For example, sPLA<sub>2</sub> has been shown to be involved in the development of such chronic inflammatory diseases as atherosclerosis and dermatitis. We plan to pursue these indications opportunistically and potentially in collaboration with third parties.

We are also developing new and unique sPLA<sub>2</sub> inhibitor compounds for additional therapeutic areas. A-003 is our second generation lead candidate. We plan to continue preclinical development of A-003 for an IND filing and we will continue to assess additional new compounds.

### ***Developing Commercial Strategies Designed to Maximize Our Product Candidates Market Potential.***

Our primary product candidates are focused on either the acute care setting in the hospital or highly-specialized physician segments, such as rheumatologists. We believe that we can build a small, focused sales force capable of marketing our products effectively in acute care and orphan indications such as acute coronary syndrome and acute chest syndrome associated with sickle cell disease. In other chronic indications such as CAD, we intend to seek commercial collaborations with companies that have a large, dedicated sales force focused on general practitioners and cardiologists and we plan to seek commercialization partners for products in non-specialty and international markets.

## **Competition**

Our industry is highly competitive and subject to rapid and significant technological change. Our potential competitors include large pharmaceutical and biotechnology companies, specialty pharmaceutical and generic drug companies, academic institutions, government agencies and research institutions. We believe that key competitive factors that will affect the development and commercial success of our product candidates are efficacy, safety and tolerability profile, reliability, convenience of dosing, price and reimbursement.

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

market and

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advanced technologies become available. Finally, the development of new treatment methods for the diseases we are targeting could render our drugs non-competitive or obsolete.

The sPLA<sub>2</sub> product candidates we are currently developing, if approved, will face intense competition, either as monotherapies or in combination therapies. Although there are no sPLA<sub>2</sub> inhibitors currently approved by the FDA, we are aware of other pharmaceutical companies, as described below, that are developing product candidates in this area for separate indications.

***sPLA<sub>2</sub> in Acute Coronary Syndrome***

Our lead product candidate, varespladib, for the short-term (16-week) treatment of acute coronary syndrome has a dual mechanism of action that we believe confers anti-inflammatory and lipid-lowering and lipid-modulating benefits. The market for cardiovascular therapeutics and acute coronary syndrome, specifically, is especially large and competitive. A wide range of medications are typically administered to patients suffering an acute coronary syndrome event in order to reduce ischemia and thrombosis and improve blood flow. We expect that varespladib for the treatment of acute coronary syndrome patients, if approved, may compete with the following anti-inflammatory therapeutics in development.

<b>Compound</b>	<b>Stage</b>	<b>Company</b>	<b>Indications</b>	<b>Notes</b>
Darapladib	Phase 3	GlaxoSmithKline plc	Acute coronary syndrome	Lp-PLA <sub>2</sub> Inhibitor Collaboration with Human Genome Sciences, Inc. Various back-up compounds
VIA-2291	Phase 2	Via Pharmaceuticals, Inc.	Acute coronary syndrome or atherosclerosis	5-lipoxygenase inhibitor Discussions on-going with FDA
E-5555	Phase 2	Eisai Inc.	Acute coronary syndrome or atherosclerosis	600 patient study completed October 2009 Thrombin receptor antagonist Evaluating biomarkers and events

***Other Agents Under Development***

Additionally, we are aware of other products in development that are being tested for anti-inflammatory benefits in patients with acute coronary syndrome such as Via Pharmaceuticals, Inc. and its 5-lipoxygenase, or 5-LO, inhibitor, which has been evaluated in Phase 2 clinical studies, GlaxoSmithKline plc and its product candidate, darapladib, which is an Lp-PLA<sub>2</sub> inhibitor currently being evaluated in Phase 3 clinical studies. If approved, these products or others in development may compete directly with varespladib.

***Approved Categories of Drugs***

**Statins** Treatment with varespladib is designed to offer anti-inflammatory benefits for acute coronary syndrome patients that are additive to treatment with statins. However, statin therapy is thought to confer some element of

anti-inflammatory benefit as monotherapy. In certain circumstances, it is possible the anti-inflammatory benefits of statin monotherapy with products such as Lipitor (atorvastatin), which is marketed by Pfizer Inc., Crestor (rosuvastatin), which is marketed by AstraZeneca UK Limited and Zocor (simvastatin), which is marketed by Merck & Co., Inc. may be viewed as competitive to that offered by varespladib.

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***Other Lipid-Lowering Therapies*** Increasingly, additional lipid-lowering agents are being administered either in combination with statins or as monotherapy to help acute coronary syndrome patients reduce levels of LDL-C. varespladib has demonstrated LDL-C lowering benefits when tested as monotherapy and in combination with statin therapy. To the extent acute coronary syndrome patients need additional LDL-C lowering, varespladib may compete for use with other approved agents such as Vytorin, which is a fixed dose combination therapy combining ezetimibe and Zocor, Tricor (fenofibrate tablets) and Niaspan (niacin), both of which are marketed by Abbott Laboratories, Zetia (ezetimibe) and fish oils (omega-3).

***Lupus***

No new therapies have been approved for lupus in the last 50 years. Current therapies such as non-steroidal anti-inflammatory drugs, or NSAIDs, corticosteroids and immunosuppressants generally act to hold back broadly the proliferation of many types of cells, including white blood cells. However, use of these agents is associated with significant adverse events and broad immune suppression.

Recently, several new biological agents under development have targeted BAFF (or BLYS) and other B-cell related pathways for the treatment of lupus. These product candidates include Benlysta (belimumab) from Human Genome Sciences, Inc., LY2127399 from Eli Lilly and Company, atacicept, or TACI-Ig, from ZymoGenetics Inc. and what we believe to be more non-specific B-cell depleting agents such as Rituxan from Genentech, Inc. and epratuzumab from Immunomedics, Inc. We believe that A-623 may offer potential differentiation from these agents, including: demonstrated dosing flexibility with both subcutaneous and intravenous delivery; selective modulation and reduction of relevant B-cell types in lupus patients; the ability to bind to both membrane-bound and soluble BAFF; its smaller size as compared to a full antibody, which may confer differentiating pharmacokinetic and pharmacodynamic characteristics; and distinct patent protection based on a novel and proprietary technology developed and commercialized by Amgen, which may also confer potential manufacturing advantages with lower cost of goods based on a bacterial fermentation manufacturing process.

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<b>Compound</b>	<b>Stage</b>	<b>Company</b>	<b>Indications</b>	<b>Notes</b>
Benlysta (intravenous and subcutaneous)	BLA submission	Human Genome Sciences, Inc./GlaxoSmithKline plc	Lupus	Monoclonal antibody against BAFF, an agent that demonstrated partial reduction in B-cells Inhibits soluble BAFF only Positive results reported in two Phase 3 clinical studies Fusion protein against BAFF and APRIL; Phase 3 clinical study in LN stopped due to safety issues Phase 3 clinical study in lupus on-going
Atacept (intravenous)	Phase 3	ZymoGenetics Inc./Merck Serono S.A.	Lupus, LN	Humanized antibody against CD-22, an agent that specifically targets B-cells and leads to partial depletion of peripheral B-cells Positive Phase 2b clinical study results reported
Epratuzumab (intravenous)	Phase 2b	Immunomedics, Inc./UCB S.A.	Lupus, Non-Hodgkin s Lymphoma	Monoclonal antibody against BAFF inhibits soluble and membrane-bound BAFF Recent positive results in RA study
LY2127399 (subcutaneous)	Phase 2	Eli Lilly and Company	Rheumatoid Arthritis Multiple Myelomas	Monoclonal antibody against CD-20 that leads to rapid and profound depletion of circulating B-cells Phase 3 clinical study in lupus halted
Ocrelizumab (intravenous)	Phase 3	F. Hoffman - La Roche Ltd./Biogen Idec Inc.	LN	Modulates CD4 T cells Positive Phase 2b clinical study results reported
Lupuzor (subcutaneous)	Phase 2b	Cephalon, Inc./ImmuPharma PLC	Lupus	

***sPLA<sub>2</sub> for Acute Chest Syndrome Associated with Sickle Cell Disease***

There are no currently approved agents for treatment or prophylaxis of acute chest syndrome associated with sickle cell disease. Droxia (hydroxyurea) is approved for prevention of VOC in sickle cell disease and thus could reduce the pool of patients with VOC at risk for acute chest syndrome. In addition, there is evidence in the literature that blood transfusions may prevent the occurrence of acute chest syndrome associated with sickle cell disease, and a randomized clinical study is underway by the National Heart, Lung and Blood Institute to explore this possibility.

## **Intellectual Property**

Our policy is to pursue, maintain and defend patent rights, developed internally and licensed from third parties, to protect the technology, inventions and improvements that are commercially important to the development of our business. We also rely on trade secrets that may be important to the development of our business.

Our success will depend significantly on our ability to:

obtain and maintain patent and other proprietary protection for the technology, inventions and improvements we consider important to our business;

defend our patents;

preserve the confidentiality of our trade secrets; and

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operate our business without infringing the patents and proprietary rights of third parties.

***Varespladib and A-001***

As of the date of this prospectus, our licensed varespladib and A-001 patent portfolio includes:

13 U.S. patents;

One pending U.S. non-provisional patent application;

Five European, or EP, patents, each validated in one or more of Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Liechtenstein, Luxembourg, the Netherlands, Portugal, Spain, Sweden, Switzerland and the United Kingdom;

One pending EP patent application;

20 non-EP foreign patents in Argentina, Australia, Brazil, Canada, China, Finland, India, Malaysia, Mexico, the Philippines, South Korea, Taiwan and Turkey; and

Four pending non-EP foreign patent applications in Brazil, Japan and Thailand.

We hold exclusive worldwide licenses from Eli Lilly and Shionogi & Co., Ltd. to all of these patents and patent applications with the exception of licensing rights in Japan, which Shionogi & Co., Ltd. retains. These licenses are described below under Licenses. The patents and applications described above contain claims directed to varespladib and A-001 compositions of matter and to various methods of making and using varespladib and A-001, including methods of treating various inflammatory conditions. The issued U.S. patents are currently scheduled to expire between 2014 and 2021.

As of the date of this prospectus, our internally developed varespladib and A-001 patent portfolio includes:

Four pending U.S. non-provisional patent applications;

Two pending U.S. provisional patent applications;

Two pending Patent Cooperation Treaty, or PCT, patent applications; and

National phase applications in the European Patent Office, the Eurasian Patent Organization and 17 other countries (Australia, Brazil, Canada, China, Hong Kong, India, Indonesia, Israel, Japan, Malaysia, Mexico, New Zealand, The Philippines, Singapore, South Africa, South Korea and Vietnam).

We own, and therefore hold all worldwide rights in and to, these patent applications, which contain claims directed to varespladib and A-001 compositions of matter and methods of treating various cardiovascular indications.

***A-003***

As of the date of this prospectus, our licensed A-003 patent portfolio includes:

Two U.S. patents;



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One licensed pending U.S. non-provisional patent application (also listed above as covering varespladib and A-001);

Five EP patents (two also listed above as covering varespladib and A-001), each validated in one or more of Albania, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, the Netherlands, Portugal, Romania, Slovenia, Spain, Sweden, Switzerland and the United Kingdom;

15 non-EP foreign patents (six also listed above as covering varespladib and A-001) in Argentina, Australia, Canada, China, India, Mexico, South Korea and Taiwan; and

One pending non-EP foreign patent application in Brazil (also listed above as covering varespladib and A-001).

We hold exclusive worldwide licenses from Eli Lilly and Shionogi & Co., Ltd. to these patents and patent applications with the exception of licensing rights in Japan, which Shionogi & Co., Ltd. retains. These licenses are described below under Licenses. The patents and applications listed above contain claims directed to A-003 compositions of matter and to various methods of making and using A-003, including methods of treating various inflammatory indications. The issued U.S. patents are currently scheduled to expire between 2017 and 2018.

As of the date of this prospectus, our internally developed A-003 patent portfolio includes:

Three U.S. non-provisional patent applications (all also listed above as covering varespladib and A-001);

Two pending U.S. provisional patent applications (both also listed above as covering varespladib and A-001);

Two pending PCT patent applications (both also listed above as covering varespladib and A-001); and

National phase applications in the European Patent Office, the Eurasian Patent Organization and 17 other countries (Australia, Brazil, Canada, China, Hong Kong, India, Indonesia, Israel, Japan, Malaysia, Mexico, New Zealand, The Philippines, Singapore, South Africa, South Korea and Vietnam).

We own, and therefore hold all worldwide rights in and to, these patent applications, which contain claims directed to A-003 compositions of matter and methods of treating various cardiovascular indications.

***New sPLA<sub>2</sub> Compounds***

As of the date of this prospectus, our new sPLA<sub>2</sub> compound patent portfolio includes over 30 licensed U.S. patents, one pending U.S. nonprovisional patent application, three EP patents, one pending EP patent application, four non-EP foreign patents, and one pending non-EP foreign patent application not listed above as covering A-001, varespladib or A-003. We hold exclusive worldwide licenses from Eli Lilly and Shionogi & Co., Ltd. to these patents and patent applications with the exception of licensing rights in Japan, which Shionogi & Co., Ltd. retains. These licenses are described below under Licenses. The patents and applications listed above contain claims directed to various sPLA<sub>2</sub> second generation compounds, as well as methods of making and using these new sPLA<sub>2</sub> compounds. The issued U.S. patents are currently scheduled to expire between 2013 and 2024.



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**A-623**

As of the date of this prospectus, our A-623 patent portfolio includes:

Two U.S. patents;

One pending U.S. non-provisional patent application;

One EP patent validated in Albania, Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, the Netherlands, Portugal, Romania, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom;

Two pending EP patent applications;

Ten non-EP foreign patents in Australia, China, Estonia, Eurasia (validated in all nine Eurasian countries), Japan, New Zealand, Singapore, South Korea and South Africa; and

14 pending non-EP foreign patent applications in Brazil, Bulgaria, Canada, China, the Czech Republic, Hong Kong, Hungary, Israel, Mexico, Norway, the Philippines, Poland, Serbia and Slovakia.

We hold exclusive worldwide licenses from Amgen to all of these patents and patent applications. In addition, we hold a non-exclusive worldwide license to one pending U.S. non-provisional patent application, one EP patent, one pending EP patent application, ten non-EP foreign patents, and over 30 pending non-EP foreign patent applications relating to general peptibody compositions and formulations.

The U.S. patent system permits the filing of provisional and non-provisional patent applications. A non-provisional patent application is examined by the U.S. Patent Office, or USPTO, and can mature into a patent once the USPTO determines that the claimed invention meets the standards for patentability. A provisional patent application is not examined, and automatically expires 12 months after its filing date. As a result, a provisional patent application cannot mature into a patent. The requirements for filing a provisional patent application are not as strict as those for filing a non-provisional patent application. Provisional applications are often used, among other things, to establish an early filing date for a subsequent non-provisional patent application.

The filing date of a non-provisional patent application is used by the USPTO to determine what information is prior art when it considers the patentability of a claimed invention. If certain requirements are satisfied, a non-provisional patent application can claim the benefit of the filing date of an earlier filed provisional patent application. As a result, the filing date accorded by the provisional patent application may remove information that otherwise could preclude the patentability of an invention.

Depending upon the timing, duration and specifics of FDA approval of varespladib, A-623, A-001, A-003 or one or more new sPLA<sub>2</sub> compounds, one or more of the U.S. patents listed above may be eligible for limited patent term restoration under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Act. See Regulatory Matters Patent Term Restoration and Marketing Exclusivity.

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### ***Licenses***

#### ***Eli Lilly and Shionogi & Co., Ltd.***

In July 2006, we entered into a license agreement with Eli Lilly and Shionogi & Co., Ltd., pursuant to which we obtained an exclusive license in all countries except for Japan to certain technology and compounds relating to sPLA<sub>2</sub> inhibitors. The licensed technology was largely developed under a research and development agreement between Eli Lilly and Shionogi & Co., Ltd., which was entered into between the two parties in August 1992 and terminated in December 2004.

Under the agreement, we obtained exclusive rights to (i) use licensed patent rights and know-how to identify and develop sPLA<sub>2</sub> inhibitors, (ii) develop, make, have made, use, import, offer for sale and sell licensed compounds and pharmaceutical formulations thereof, including varespladib, A-001, A-003 and other sPLA<sub>2</sub> inhibitors and (iii) grant sublicenses. The licensed patent rights include a specific set of previously filed U.S. and foreign patents and applications, as well as any applications filed after the execution date by Eli Lilly or Shionogi & Co., Ltd. that relate to licensed know-how. Certain patents and applications within the licensed patent rights are defined as core patents. Although the agreement does not allow us to sell or offer for sale licensed products in Japan, it does allow us to conduct preclinical and clinical studies in Japan in support of applications for marketing authorization outside of Japan, and to make and have made licensed products in Japan for use or sale outside of Japan. Eli Lilly and Shionogi & Co., Ltd. retain the right to use licensed products for research purposes only. Eli Lilly also retains the right to conduct studies of specific compounds in animals for research purposes, but only with our prior written approval. In addition, Shionogi & Co., Ltd. retains the non-exclusive right to make and have made licensed products for supply to us, as well as its rights to continue research, development and marketing of licensed technology in Japan.

Upon entering into the license agreement, we took over all prosecution and maintenance of core patents prosecuted and maintained by Eli Lilly prior to the agreement. All core patents prosecuted and maintained by Shionogi & Co., Ltd. prior to the agreement remained under the control of Shionogi & Co., Ltd. Licensed patent rights that were not classified as core remained under the control of Eli Lilly and Shionogi & Co., Ltd. However, control of certain of these patents and applications has since been transferred to us following the decision by Eli Lilly or Shionogi & Co., Ltd. to discontinue prosecution and maintenance.

Upon entering into the license agreement, we made one-time payments of cash in the amount of \$250,000 and issued shares of convertible preferred stock with a total aggregate value of \$2.3 million to Eli Lilly and Shionogi & Co., Ltd. In addition, we are required to make various milestone payments, including payment upon initiation of the first Phase 3 clinical study for a particular product. We amended the milestone payment terms with each of Eli Lilly and Shionogi & Co., Ltd. to no later than 12 months from the enrollment of the first patient in a Phase 3 clinical study for varespladib. In consideration for the extension, the milestone payments increased to \$1.75 million to each party. The \$1.75 million milestone payment to Eli Lilly was paid in the form of 265,957 shares of our common stock issued at the price per share at which shares were sold to the public in our initial public offering, minus any per-share underwriting discounts, commissions or fees. The \$1.75 million milestone payment to Shionogi & Co., Ltd. was paid in the form of 265,957 shares of our common stock issued at the price per share at which shares were sold to the public in our initial public offering, minus any per-share underwriting discounts, commissions or fees. We are also required to pay tiered royalty payments on net sales, which increase as a percentage as net sales increase. Both the milestone and royalty payment schedules vary depending on the specific formulation (e.g., oral versus intravenously administered). For varespladib, we are required to pay up to \$3.5 million (as discussed above) upon achievement of certain clinical development milestones and up to \$32.0 million upon achievement of certain approval and post-approval sales milestones. For A-001, we are required to pay up to \$3.0 million upon achievement of certain clinical development milestones and up to \$25.0 million upon



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achievement of certain approval and post-approval sales milestones. For other product formulations that we are not currently developing, we would be required to pay up to \$2.0 million upon achievement of certain clinical development milestones and up to \$35.5 million upon achievement of certain approval and post-approval sales milestones. Our royalty payments vary based upon type of formulation and annual net sales, but generally range from the mid-single digits to the low double digits. Our royalty payment obligations for a particular licensed product in a particular country begin on the date of the first commercial sale of the licensed product in that country, and end upon the later of 10 years from the date of first commercial sale in that country or the first date on which a generic version of the licensed product reaches a 25% total market share in that country.

The license agreement will remain in effect for the length of our royalty obligation on a product-by-product and country-by-country basis, unless we elect to terminate earlier or until termination by mutual agreement. Upon expiration of the agreement, our license will remain in effect and will convert to an irrevocable, perpetual royalty-free license. If we fail to meet our obligations under the agreement, Eli Lilly or Shionogi & Co., Ltd. can terminate the agreement, resulting in a loss of our exclusive rights to the licensed technology.

***Amgen***

In December 2007, we entered into a license agreement with Amgen, pursuant to which we obtained an exclusive worldwide license to certain technology and compounds relating to A-623, as well as a non-exclusive worldwide license to technology relating to certain peptibody compositions of matter and formulations.

Under the agreement, we obtained exclusive rights under the licensed patents and know-how to research, develop, make, have made, use, sell, offer for sale and import pharmaceutical products containing A-623, as well as the right to grant sublicenses. The licensed patents included a specific set of previously filed U.S. and foreign patents and applications, as well as any applications filed after the execution date by Amgen and covering licensed know-how. During the period of the agreement, we are responsible for the filing, prosecution, defense and maintenance of all exclusively licensed A-623 patents and applications. Amgen retains the right to review all documents relating to said filing, prosecution, defense and maintenance, and we are required to incorporate all reasonable comments or suggestions that Amgen makes with regard to these.

During the seven-year period after execution of the agreement, Amgen is prohibited from clinically developing or commercializing any BAFF peptibody. Similarly, we are prohibited during the term of the agreement from clinically developing or commercializing any molecule other than A-623 that modulates BAFF as the primary intended therapeutic mechanism of action.

The license agreement provided for a first installment fee of \$3.0 million and a second installment fee of \$3.0 million upon the earlier of our termination of the agreement or February 1, 2009. We have paid all of these up-front fees. In addition, we are required to make various milestone payments upon the achievement of certain development, regulatory and commercial objectives, including payment upon initiation of the first Phase 3 clinical study for any A-623 formulation. We are also required to pay up to \$10.0 million upon achievement of certain pre-approval clinical development milestones and up to \$23.0 million upon achievement of certain post-approval milestones. Furthermore, we are required to make tiered quarterly royalty payments on net sales, which increase as a percentage from the high single digits to the low double digits as net sales increase. Our royalty payment obligations for a particular product in a particular country begin on the date of the first commercial sale of the licensed product in that country, and end upon the later of 10 years from the date of first commercial sale in that country or the expiration date of the last valid claim of a licensed patent that covers the manufacture, use or sale, offer to sell or import of the product.

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The license agreement will remain in effect until we elect to terminate, or until termination for material breach by either party or insolvency on our part. Under these terms, Amgen can terminate the agreement if we fail to meet our obligations, resulting in a loss of our exclusive rights to the licensed technology.

On October 16, 2009, we executed an amendment to the license agreement to amend certain terms and conditions, including the terms and conditions on which technology transfer activities, support and assistance would be provided to us and forgiveness of accrued interest on an unpaid license fee, which has since been paid in full.

## **Manufacturing and Supply**

We currently rely on contract manufacturers to produce drug substances and drug products required for our clinical studies under cGMP with oversight by our internal managers. We plan to continue to rely upon contract manufacturers and, potentially, collaboration partners to manufacture commercial quantities of our product candidates if and when approved for marketing by the FDA. We currently rely on a single manufacturer for the preclinical and clinical supplies of each of our product candidates and do not currently have agreements in place for redundant supply or a second source for any of our product candidates. We believe that there are other manufacturers and alternate sources of supply that can satisfy our clinical study requirements without significant delay or material additional costs should our current manufacturer fail to meet our needs. However, should a supplier or a manufacturer on which we have relied to produce a product candidate provide us with a faulty product or such product is later recalled, we would likely experience significant delays and material additional costs.

## **Sales and Marketing**

Given our stage of development, we have not developed a commercial organization or distribution capabilities. We expect that we would develop these capabilities once we receive Phase 3 data in contemplation of FDA approval and the commercial launch of our product candidates. In order to commercialize any of our product candidates, we must develop these capabilities internally or through collaboration with third parties. In selected therapeutic areas where we feel that any approved products can be commercialized by a specialty sales force that calls on a limited and focused group of physicians, acute care and orphan indications such as acute coronary syndrome and acute chest syndrome associated with sickle cell disease, we may seek to commercialize these product candidates alone. In therapeutic areas that require a large sales force selling to a large and diverse prescribing population, such as chronic indications such as CAD, we currently plan to partner with third parties to commercialize our product candidates while retaining rights to co-promote our products to a select audience of high prescribing physicians in the United States only, thereby supplementing or enhancing the efforts of a commercial partner. We also plan to seek commercialization partners for products in non-specialty and international markets.

In North America and Western Europe, patients in the target markets for our product candidates are largely managed by medical specialists in the areas of cardiology and internal medicine. Historically, companies have experienced substantial commercial success through the deployment of specialized sales forces that can address a majority of key prescribers, particularly within the cardiovascular disease marketplace. Therefore, we expect to utilize a specialized sales force in North America for the sales and marketing of product candidates that we may successfully develop. Based upon sales models, we estimate that we could effectively promote (supplementing a commercial partner's sales efforts) the treatment of acute coronary syndrome to 3,000 cardiologists with approximately 300 sales representatives in North America and Western Europe. If we obtain additional label indications for varespladib or A-001, we may choose to increase our sales force size to promote these new uses. Due to their concentrated and focused nature, specialty target audiences may be reached with more focused and cost-effective marketing campaigns. Outside of North America, and in situations or markets where a more favorable return may be realized through licensing commercial rights to a third party, we may license a portion or all of our



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commercial rights in a territory to a third party in exchange for one or more of the following: up-front payments, research funding, development funding, milestone payments and royalties on drug sales.

We intend to build the commercial infrastructure necessary to bring varespladib, A-623 and A-001 to market alone or in collaboration with a co-development or co-promotion partner. In addition to a specialty sales force, sales management, internal sales support and an internal marketing group, we will need to establish capabilities to manage key accounts, such as managed care organizations, group-purchasing organizations, specialty pharmacies and government accounts. We may also choose to employ medical sales liaisons personnel to support the product.

## **Regulatory Matters**

### ***Government Regulation and Product Approval***

Government authorities in the United States at the federal, state and local level, and other countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, marketing, export and import of products such as those we are developing. Our product candidates must be approved by the FDA through the new drug application, or NDA, process, and our biological product candidate, A-623, must be approved by the FDA through the biologics license application, or BLA, process before they may legally be marketed in the United States.

### ***United States Drug Development Process***

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or FDCA, and implementing regulations and biological products under both the FDCA and the Public Health Service Act, or the PHSA, and implementing regulations. The process of obtaining regulatory approvals and compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process, or after approval, may subject an applicant to administrative or judicial sanctions. These sanctions could include the FDA's refusal to approve pending applications, withdrawal of an approval, a clinical hold, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement or civil or criminal penalties. The process required by the FDA before a drug or biological product may be marketed in the United States generally involves the following:

completion of preclinical laboratory tests, animal studies and formulation studies according to Good Laboratory Practices regulations;

submission to the FDA of an IND, which must become effective before human clinical studies may begin;

performance of adequate and well-controlled human clinical studies according to Good Clinical Practices, or GCP, to establish the safety and efficacy of the proposed drug or biological product for its intended use;

submission to the FDA of an NDA for a new drug or BLA for a biological product;

satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the drug or biological product is produced to assess compliance with cGMP; and

FDA review and approval of the NDA or BLA.

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The testing and approval process requires substantial time, effort and financial resources and we cannot be certain that any approvals for our product candidates will be granted on a timely basis, if at all.

Once a pharmaceutical or biological product candidate is identified for development, it enters the preclinical testing stage. Preclinical tests include laboratory evaluations of product chemistry, toxicity, formulation and stability, as well as animal studies to assess its potential safety and efficacy. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data and any available clinical data or literature, to the FDA as part of the IND. The sponsor will also include a protocol detailing, among other things, the objectives of the initial clinical study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated if the initial clinical study lends itself to an efficacy evaluation. Some preclinical testing may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA places the clinical study on a clinical hold within that 30-day time period. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical study can begin. Clinical holds also may be imposed by the FDA at any time before or during studies due to safety concerns or non-compliance.

All clinical studies must be conducted under the supervision of one or more qualified investigators in accordance with GCP regulations. These regulations include the requirement that all research subjects provide informed consent. Further, an institutional review board, or IRB, must review and approve the plan for any clinical study before it commences at any institution. An IRB considers, among other things, whether the risks to individuals participating in the studies are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the information regarding the clinical study and the consent form that must be provided to each clinical study subject or his or her legal representative and must monitor the clinical study until completed.

Each new clinical protocol and any amendments to the protocol must be submitted to the IND for FDA review, and to the IRBs for approval. Protocols detail, among other things, the objectives of the clinical study, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety.

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

**Phase 1.** The product is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.

**Phase 2.** Involves studies in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage and schedule.

**Phase 3.** Clinical studies are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical study sites. These studies are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for product labeling.

Progress reports detailing the results of the clinical studies must be submitted at least annually to the FDA and safety reports must be submitted to the FDA and the investigators for serious and unexpected adverse events. Phase 1, Phase 2 and Phase 3 testing may not be completed successfully within any

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specified period, if at all. The FDA or the sponsor may suspend or terminate a clinical study at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical study at its institution if the clinical study is not being conducted in accordance with the IRB's requirements or if the drug or biological product has been associated with unexpected serious harm to patients.

Concurrent with clinical studies, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the product and 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 manufacturer must 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 demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

### ***U.S. Review and Approval Processes***

The results of product development, preclinical studies and clinical studies, along with descriptions of the manufacturing process, analytical tests conducted on the drug or biological product, proposed labeling and other relevant information, are submitted to the FDA as part of an NDA for a new drug or BLA for a biological product, requesting approval to market the product. The submission of an NDA or BLA is subject to the payment of a substantial user fee; a waiver of such fee may be obtained under certain limited circumstances.

In addition, under the Pediatric Research Equity Act of 2003, or PREA, which was reauthorized under the Food and Drug Administration Amendments Act of 2007, an NDA or BLA or supplement to an NDA or BLA must contain data to assess the safety and effectiveness of the drug or biological product for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any drug or biological product for an indication for which orphan designation has been granted.

The FDA reviews all NDAs and BLAs submitted to ensure that they are sufficiently complete for substantive review before it accepts them for filing. The FDA may request additional information rather than accept a NDA or BLA for filing. In this event, the NDA or BLA must be re-submitted with the additional information. The re-submitted application also is subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review. The FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use and whether its manufacturing is cGMP-compliant to assure and preserve the product's identity, strength, quality and purity. The FDA reviews a BLA to determine, among other things, whether the product is safe, has an acceptable purity profile and is adequately potent, and whether its manufacturing meets standards designed to assure the product's continued identity, sterility, safety, purity and potency. 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 and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. The FDA may refer the NDA or BLA to an advisory committee for review, evaluation and recommendation as to whether the application should be approved and under what conditions. An advisory committee is a panel of experts who provide advice and recommendations when requested by the FDA on matters of importance that come before the agency. The FDA is not bound by the recommendation of an advisory committee but it generally follows such recommendations.



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The approval process is lengthy and difficult and the FDA may refuse to approve an NDA or BLA if the applicable regulatory criteria are not satisfied or may require additional clinical data or other data and information. Even if such data and information is submitted, the FDA may ultimately decide that the NDA or BLA does not satisfy the criteria for approval. Data obtained from clinical studies are not always conclusive and the FDA may interpret data differently than we interpret the same data. The FDA will issue a complete response letter if the agency decides not to approve the NDA or BLA in its present form. The complete response letter usually describes all of the specific deficiencies in the NDA or BLA identified by the FDA. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical studies. Additionally, the complete response letter may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the NDA or BLA, addressing all of the deficiencies identified in the letter, or withdraw the application.

If a product receives regulatory approval, the approval may be significantly limited to specific diseases and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling. In addition, the FDA may require Phase 4 testing which involves clinical studies designed to further assess a drug or biological product's safety and effectiveness after NDA or BLA approval and may require testing and surveillance programs to monitor the safety of approved products that have been commercialized.

### ***Patent Term Restoration and Marketing Exclusivity***

Depending upon the timing, duration and specifics of FDA approval of the use of our product candidates, some of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of an NDA plus the time between the submission date of an NDA and the approval of that application. Only one patent applicable to an approved drug is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The USPTO, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we intend to apply for restorations of patent term for some of our currently owned or licensed patents to add patent life beyond their current expiration dates, depending on the expected length of the clinical studies and other factors involved in the filing of the relevant NDA.

Market exclusivity provisions under the FDCA can also delay the submission or the approval of certain competitor applications. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to gain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. During the exclusivity period, the FDA may not accept for review an abbreviated new drug application, or ANDA, or a 505(b)(2) NDA submitted by another company for another version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement. The FDCA also provides three years of marketing exclusivity for an NDA, 505(b)(2) NDA or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example new indications, dosages or strengths of an



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existing drug. This three-year exclusivity covers only the conditions associated with the new clinical investigations and does not prohibit the FDA from approving ANDAs for drugs containing the original active agent. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical studies necessary to demonstrate safety and effectiveness. HR 3590 provides 12 years of data exclusivity for innovator biologics. During this exclusivity period, competitors are barred from relying on the innovator's safety and efficacy data to gain FDA approval. Therefore, a competitor seeking to obtain marketing approval during this exclusivity period would be required to conduct their own preclinical and clinical studies.

Pediatric exclusivity is another type of exclusivity in the United States. Pediatric exclusivity, if granted, adds an additional six months to an existing exclusivity or statutory delay in approval resulting from a patent certification. This six-month exclusivity, which runs from the end of other exclusivity protection or patent delay, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued Written Request for such a study. The current pediatric exclusivity provision was reauthorized in September 2007.

### ***Orphan Drug Designation***

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biological product intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making a drug or biological product available in the United States for this type of disease or condition will be recovered from sales of the product. Orphan product designation must be requested before submitting an NDA or BLA. After the FDA grants orphan product designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan product designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug or biological product for the same indication, except in very limited circumstances, for seven years. Competitors, however, may receive approval of different products for the indication for which the orphan product has exclusivity or obtain approval for the same product but for a different indication for which the orphan product has exclusivity. Orphan product exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval of the same drug or biological product as defined by the FDA or if our product candidate is determined to be contained within the competitor's product for the same indication or disease. If a drug or biological product designated as an orphan product receives marketing approval for an indication broader than what is designated, it may not be entitled to orphan product exclusivity.

The FDA also administers a clinical research grants program, whereby researchers may compete for funding to conduct clinical studies to support the approval of drugs, biologics, medical devices and medical foods for rare diseases and conditions. A product does not have to be designated as an orphan product to be eligible for the grant program. An application for an orphan grant should propose one discrete clinical study to facilitate FDA approval of the product for a rare disease or condition. The clinical study may address an unapproved new product or an unapproved new use for a product already on the market.

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### ***Expedited Development and Review Programs***

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 for review on a rolling basis sections of the NDA or BLA before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA or BLA, the FDA agrees to accept sections of the NDA or BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA or BLA.

A fast track product may also be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A fast track product is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new drug or biological product designated for priority review in an effort to facilitate the review. Additionally, a fast track product may be eligible for accelerated approval. Drug or biological products studied for their safety and effectiveness in treating serious or life-threatening illnesses and that provide meaningful therapeutic benefit over existing treatments may receive accelerated approval, which means that they may be approved on the basis of adequate and well-controlled clinical studies establishing that the product has an effect on a surrogate endpoint that is reasonably likely to predict a clinical benefit, or on the basis of an effect on a clinical endpoint other than survival or irreversible morbidity. As a condition of approval, the FDA may require that a sponsor of a drug or biological product receiving accelerated approval perform adequate and well-controlled post-marketing clinical studies. Fast track designation, priority review and accelerated approval do not change the standards for approval but may expedite the development or approval process.

We have been granted fast track designation for our product candidate, A-001, for the prevention of acute chest syndrome associated with sickle cell disease in at-risk patients. Even though we have received fast track designation for A-001, the FDA may later decide that A-001 no longer meets the conditions for qualification. In addition, obtaining fast track designation may not provide us with a material commercial advantage.

### ***Post-Approval Requirements***

Any drug or biological products for which we receive FDA approvals are subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the product, providing the FDA with updated safety and efficacy information, product sampling and distribution requirements, complying with certain electronic records and signature requirements and complying with FDA promotion and advertising requirements. The FDA strictly regulates labeling, advertising, promotion and other types of information on products that are placed on the market. Drugs and biological products may be promoted only for the approved indications and in accordance with the provisions of the approved label. Further, manufacturers of drugs and biological products must continue to comply with cGMP requirements, which are extensive and require considerable time, resources and ongoing investment to ensure compliance. In addition, changes to the manufacturing process generally require prior FDA approval before being implemented and other types of changes to the approved product, such as adding new indications and additional labeling claims, are also subject to further FDA review and approval.

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Drug and biological product manufacturers and other entities involved in the manufacturing and distribution of approved drugs or biological products 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 cGMP and other laws. The cGMP requirements apply to all stages of the manufacturing process, including the production, processing, sterilization, packaging, labeling, storage and shipment of the drug or biological product. Manufacturers must establish validated systems to ensure that products meet specifications and regulatory standards, and test each product batch or lot prior to its release.

Manufacturers of biological products must also report to the FDA any deviations from cGMP that may affect the safety, purity or potency of a distributed product; or any unexpected or unforeseeable event that may affect the safety, purity or potency of a distributed product. The regulations also require investigation and correction of any deviations from cGMP and impose documentation requirements.

We rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of our products. Future FDA and state inspections may identify compliance issues at the facilities of our contract manufacturers that may disrupt production or distribution or may require substantial resources to correct.

The FDA may withdraw a product approval if compliance with regulatory standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market. Further, the failure to maintain compliance with regulatory requirements may result in administrative or judicial actions, such as fines, warning letters, holds on clinical studies, product recalls or seizures, product detention or refusal to permit the import or export of products, refusal to approve pending applications or supplements, restrictions on marketing or manufacturing, injunctions or civil or criminal penalties.

In addition, from time to time, legislation is drafted, introduced and passed in Congress that could significantly change the statutory provisions governing the approval, manufacturing and marketing of products regulated by the FDA. For example, in September 2007, the Food and Drug Administration Amendments Act of 2007 was enacted, giving the FDA enhanced post-market authority, including the authority to require post-market studies and clinical studies, labeling changes based on new safety information and compliance with a risk evaluation and mitigation strategy, or REMS, approved by the FDA. In determining whether a REMS is necessary, the FDA must consider the size of the population likely to use the drug or biological product, the seriousness of the disease or condition to be treated, the expected benefit of the product, the duration of treatment, the seriousness of known or potential adverse events for varespladib and whether the product is a new molecular entity. We have submitted a REMS as an appendix to the SPA. If the FDA determines our REMS is necessary, we must submit a REMS plan as part of an NDA or BLA. The FDA may require that a REMS include various elements, such as a medication guide, patient package insert, a communication plan to educate health care providers, limitations on who may prescribe or dispense the product, or other measures.

Failure to comply with any requirements under the new law may result in significant penalties. The new law also authorizes significant civil money penalties for the dissemination of false or misleading direct-to-consumer advertisements and allows the FDA to require companies to submit direct-to-consumer television drug advertisements for FDA review prior to public dissemination. Additionally, the new law expands the clinical study registry so that sponsors of all clinical studies, except for Phase 1 clinical studies, are required to submit certain clinical study information for inclusion in the clinical study registry data bank. In addition to new legislation, the FDA regulations and policies are often revised or reinterpreted by the agency in ways that may significantly affect our business and our

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products. It is impossible to predict whether further legislative or FDA regulation or policy changes will be enacted or implemented and what the impact of such changes, if any, may be.

### ***Foreign Regulation***

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical studies and commercial sales and distribution of our products to the extent we choose to sell any products outside of the United States. Whether or not we obtain FDA approval for a product, we must obtain approval of a product by the comparable regulatory authorities of foreign countries before we can commence clinical studies or marketing of the product in those countries. The approval process varies from country to country and the time may be longer or shorter than that required for FDA approval. The requirements governing the conduct of clinical studies, product licensing, pricing and reimbursement vary greatly from country to country.

In the European Union, our products are subject to extensive regulatory requirements, which provide, among other things, that no medicinal product may be placed on the market of a European Union member state unless a marketing authorization has been issued by the European Medicines Agency or a national competent authority. European Union member states require both regulatory clearance by the national competent authority and a favorable ethics committee opinion prior to the commencement of a clinical study.

Under the European Union 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 European Union 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.

### ***Reimbursement***

Sales of pharmaceutical products depend significantly on the availability of third-party reimbursement. Third-party payors include government health administrative authorities, including at the federal and state level, 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 health care products. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the cost-effectiveness of our products. Our product candidates 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.



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In addition, the U.S. Congress and state legislatures from time to time propose and adopt initiatives aimed at cost containment, which could impact our ability to sell our products profitably. For example, in March 2010, President Obama signed into law the Patient Protection and Affordable Care Act, and the associated reconciliation bill, which we refer to collectively as the Health Care Reform Law, a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms. Effective October 1, 2010, the Health Care Reform Law revises the definition of average manufacturer price for reporting purposes, which could increase the amount of Medicaid drug rebates to states once the provision is effective. Further, beginning in 2011, the new law imposes a significant annual fee on companies that manufacture or import certain branded prescription drug products and biologic agents. Substantial new provisions affecting compliance also have been enacted, which may require us to modify our business practices with healthcare practitioners. We will not know the full effects of the Health Care Reform Law until applicable federal and state agencies issue regulations or guidance under the new law. Although it is too early to determine the effect of the Health Care Reform Law, the new law appears likely to continue the pressure on pharmaceutical pricing, especially under the Medicare program, and also may increase our regulatory burdens and operating costs.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the MMA, imposed new requirements for the distribution and pricing of prescription drugs for Medicare beneficiaries, and included a major expansion of the prescription drug benefit under a new Medicare Part D. Medicare Part D went into effect on January 1, 2006. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities which will provide coverage of outpatient prescription drugs. Part D plans include both stand-alone prescription drug benefit plans and prescription drug coverage as a supplement to Medicare Advantage plans. Unlike Medicare Part A and B, Part D coverage is not standardized. Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee.

It is not clear what effect the MMA will have on the prices paid for currently approved drugs and the pricing options for new drugs approved after January 1, 2006. Government payment for some of the costs of prescription drugs may increase demand for products for which we receive marketing approval. However, any negotiated prices for our products covered by a Part D prescription drug plan will likely be lower than the prices we might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payors.

There are also laws that govern a company's eligibility to participate in Medicare and Medicaid reimbursements. For example, a company may be debarred from participation if it is found to have violated federal anti-kickback laws, which could have a significant effect on a company's ability to operate its business.

The cost of pharmaceuticals continues to generate substantial governmental and third-party payor interest. We expect that the pharmaceutical industry will experience pricing pressures due to the trend toward managed healthcare, the increasing influence of managed care organizations, and additional legislative proposals. Indeed, we expect that there will continue to be a number of federal and state proposals to implement governmental pricing controls and limit the growth of healthcare costs, including the cost of prescription drugs. At the present time, Medicare is prohibited from negotiating directly with pharmaceutical



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companies for drugs. However, Congress is considering passing legislation that would lift the ban on federal negotiations. While we cannot predict whether such legislative or regulatory proposals will be adopted, the adoption of such proposals could harm our business, financial condition and results of operations.

Some third-party payors also require pre-approval of coverage for new or innovative drug therapies before they will reimburse healthcare providers that use such therapies. While we cannot predict whether any proposed cost-containment measures will be adopted or otherwise implemented in the future, the announcement or adoption of these proposals could have a material adverse effect on our ability to obtain adequate prices for our product candidates and operate profitably.

In addition, in some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. In some countries, pricing negotiations with governmental authorities can take six to 12 months or longer after the receipt of marketing approval. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products.

## **Employees**

As of September 30, 2010, we had 25 employees, nine of whom hold an M.D., Ph.D. or Pharm. D. All of our employees are engaged in administration, finance, clinical, regulatory and business development functions. None of our employees are represented by a labor union, and we believe that our relations with our employees are good.

## **Property and Facilities**

We are currently subleasing approximately 7,800 square feet of office space in Hayward, California, which we occupy under a sublease that commenced on October 1, 2008 and will expire on January 31, 2011. We believe our existing facilities are adequate for our current needs and that any additional space we need will be available in the future on commercially reasonable terms.

## **Legal Proceedings**

We are not currently subject to any material legal proceedings.

**Table of Contents****MANAGEMENT****Executive Officers and Directors**

The following table sets forth information regarding our executive officers and directors, including their ages as of September 30, 2010.

<b>Name</b>	<b>Age</b>	<b>Position</b>
Paul F. Truex	42	Chief Executive Officer, President and Director
Christopher P. Lowe	43	Chief Financial Officer and Vice President of Administration
Colin Hislop, M.D.	53	Chief Medical Officer and Senior Vice President
Debra Odink, Ph.D.	46	Senior Vice President, Pharmaceutical Research and Development
Georgina Kilfoil	42	Senior Vice President, Product Development and Clinical Operations
Christopher S. Henney, Ph.D. <sup>(1)</sup>	69	Chairman of the Board of Directors
Annette Bianchi <sup>(1)</sup>	52	Director
James I. Healy, M.D., Ph.D. <sup>(2)</sup>	45	Director
A. Rachel Leheny, Ph.D. <sup>(3)</sup>	47	Director
Donald J. Santel <sup>(2)(3)</sup>	50	Director
Daniel K. Spiegelman <sup>(2)</sup>	52	Director
David E. Thompson <sup>(1)(3)</sup>	63	Director

<sup>(1)</sup> Member of nominating and corporate governance committee.

<sup>(2)</sup> Member of audit committee.

<sup>(3)</sup> Member of compensation committee.

**Paul F. Truex.** Mr. Truex has served as our President and Chief Executive Officer since our inception in September 2004 and as a member of our board of directors since November 2004. Prior to founding Anthera, Mr. Truex served as a Director, President and Chief Executive Officer of Peninsula Pharmaceuticals, Inc., a biopharmaceutical company, from the commencement of its operations in October 2001. Prior to Peninsula, Mr. Truex was Vice President of Commercial Development for Vicuron, Inc. from April 2000 to September 2001. From July 1997 to April 2000, Mr. Truex held various positions at Eli Lilly and Company. Mr. Truex holds an M.B.A. in marketing and finance from Indiana University and a B.A. in economics from the University of Waterloo. Mr. Truex is a director of Trius Therapeutics, Inc. and Eiger Biopharmaceuticals, Inc. Our board of directors has concluded that Mr. Truex should serve on our board based on his deep knowledge of our Company gained from his positions as President and Chief Executive Officer, as well as his substantial experience in the pharmaceutical industry.

**Christopher P. Lowe.** Mr. Lowe has served as our Chief Financial Officer and Vice President of Administration since November 2007. Beginning in September 2005 and up until he joined the company, Mr. Lowe served as Vice President of Finance & Administration and, beginning in January 2006, as Chief Financial Officer of Asthmatx, Inc., a medical technology company. Previously, Mr. Lowe was with Peninsula Pharmaceuticals, Inc., as Corporate Controller from June 2004 to October 2004 and Chief Accounting Officer from October 2004 until June 2005. Mr. Lowe holds a B.S. in business administration from California Polytechnic State University, San Luis Obispo and an M.B.A.



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from Saint Mary's University, Texas. Mr. Lowe is a director of Hansen Medical Corporation, a medical device company.

***Colin Hislop, M.D.*** Dr. Hislop has served as our Senior Vice President and Chief Medical Officer since June 2010. Prior to that, he served as our Senior Vice President of Cardiovascular Products since November 2005 and also served as a consultant to the company from July 2005 through November 2005. From October 2004 until June 2005, Dr. Hislop was Vice President, Clinical Development for Peninsula Pharmaceuticals, Inc. where he oversaw three global development programs for Peninsula's anti-infective product portfolio. From September 2001 until September 2004, Dr. Hislop served as Vice President of Clinical Development at CV Therapeutics, Inc., a biopharmaceutical company. Dr. Hislop holds a B.Sc. in medical biochemistry from the University of Surrey, and a degree in medicine from the University of London.

***Debra Odink, Ph.D.*** Dr. Odink was promoted to Senior Vice President of Pharmaceutical Research and Development in June 2010. Prior to that, she served as our Vice President of Pharmaceutical Research and Development since December 2005. From September 2002 until July 2005, Dr. Odink served as Vice President of Pharmaceutical Chemistry and Product Development at Peninsula Pharmaceuticals, Inc., a biopharmaceutical company, where she was responsible for manufacturing and product development strategies for assets licensed to Peninsula. Dr. Odink holds a B.S. in chemistry from California State University, Stanislaus and a Ph.D. in inorganic chemistry from the University of California at Davis.

***Georgina Kilfoil.*** Ms. Kilfoil has served as our Senior Vice President, Product Development and Project Management since March 2010. Prior to joining us, Ms. Kilfoil was a project management consultant with InClin, Inc., a consulting company. From January 2004 through July 2005, Ms. Kilfoil was the Vice President, Alliance and Project Management of Peninsula Pharmaceuticals, Inc. Ms. Kilfoil holds a B.S. in pharmacology from the University of Bristol, United Kingdom and an M.B.A. from the Australian Graduate School of Management, Sydney, Australia.

***Christopher S. Henney, Ph.D.*** Dr. Henney has served as the Chairman of our board of directors since August 2008 and has been a member of our board of directors since April 2005. Dr. Henney served as Chairman and Chief Executive Officer of Dendreon Corporation, a biotechnology company he co-founded, from 1995 until his retirement in July 2004. Dr. Henney was previously a founder of Immunex Corp. and Icos Corp. Dr. Henney holds a B.Sc. with honors in medical biochemistry, a Ph.D. in experimental pathology and a D.Sc. for contributions to the field of immunology, all from the University of Birmingham, England. Dr. Henney served as a director of AVI BioPharma Inc. from March 2009 until June 2010 and is currently the Chairman and a director of Oncothyreon, Inc. and is vice-chairman and a director of Cyclacel Pharmaceuticals, Inc. Our board of directors has determined that Dr. Henney is a valuable addition to our board based upon his long history with the Company and his extensive experience in the biotechnology industry.

***Annette Bianchi.*** Ms. Bianchi has served as a member of our board of directors since August 2006. Ms. Bianchi has served as a Managing Director at VantagePoint Venture Partners, a venture capital firm, since 2004. From 1999 to 2004, Ms. Bianchi served as a Managing Director at Pacific Venture Group, a dedicated health care fund. From 1992 to 1999, Ms. Bianchi served as a General Partner at Weiss, Peck & Greer Venture Partners, a venture capital firm. From 1985 to 1992, Ms. Bianchi served as an associate and a General Partner of Burr, Egan, Deleage & Co., a venture capital firm. From 2005 through 2008, Ms. Bianchi served as a director of Conceptus Inc. Ms. Bianchi holds a B.S.E. and an M.S.E. in Biomedical Engineering from the University of Pennsylvania and an M.B.A. from The Wharton School of the University of Pennsylvania. Our board of directors has determined that Ms. Bianchi's substantial experience regarding investing in companies in the health care industry and

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her education in biomedical engineering give her the appropriate set of skills to serve as a member of our board.

***James I. Healy, M.D., Ph.D.*** Dr. Healy has served as a member of our board of directors since August 2006. Dr. Healy is a Managing Member of Sofinnova Management VI, LLC, the general partner of Sofinnova Venture Partners VI, L.P., a fund managed by Sofinnova Ventures, Inc., a venture capital firm, a position he has held since June 2000. Prior to Sofinnova, Dr. Healy began his private equity career at Sanderling Ventures, and has been an early investor and board member of numerous biopharmaceutical companies. Dr. Healy holds a B.A. in molecular biology and a B.A. in Scandinavian studies from the University of California at Berkeley, an M.D. from Stanford University School of Medicine and a Ph.D. in immunology from Stanford University. Dr. Healy is a director of InterMune, Inc. and Amarin Corporation plc, both biopharmaceutical companies. Based on Dr. Healy's extensive experience as a director of numerous biopharmaceutical companies and his medical training, our board of directors has determined that Dr. Healy possesses the necessary attributes to serve on our board.

***A. Rachel Leheny, Ph.D.*** Dr. Leheny has served as a member of our board of directors since August 2008. Dr. Leheny is (i) a Managing Director of Caxton Advantage Venture Partners, L.P., which is the General Partner of Caxton Advantage Life Sciences Fund, L.P., a life-sciences venture capital fund that she co-founded in 2006 and (ii) a member of Advantage Life Sciences Partners LLC, the Managing General Partner of Caxton Advantage Venture Partners, L.P. Prior to that, from April 2000 to June 2002, she was head of the biotechnology research team at Lehman Brothers. Before Lehman, from April 1998 to April 2000, Dr. Leheny headed the biotechnology research team at UBS Warburg and before that, from April 1993 to April 1998, worked at Hambrecht & Quist, most recently as Managing Director and Senior Analyst. Dr. Leheny holds an A.B. in chemistry from Harvard and a Ph.D. from Columbia University. She did post-doctoral work at the University of California at Berkeley, where she was a National Institutes of Health fellow and lecturer. Due to Dr. Leheny's vast experience with respect to the life sciences industry, both from investment and educational standpoints, our board of directors believes that Dr. Leheny has skills enabling her to contribute meaningfully to our board and our Company.

***Donald J. Santel.*** Mr. Santel has served as a member of our board of directors since October 2007. From February 2000 until January 2007, Mr. Santel held various positions in and was a member of the board of directors of CoTherix, Inc., a pharmaceutical company he co-founded. From October 2003 to August 2004, Mr. Santel served as President and Chief Operating Officer of CoTherix and from August 2004 until January 2007, Mr. Santel served as Chief Executive Officer. From June 2008 through June 2009, Mr. Santel served as a consultant and from June 2009 until the present, Mr. Santel has served as the Chief Executive Officer of Hyperion Therapeutics, Inc., a pharmaceutical company. Mr. Santel holds a B.S.E. in biomedical engineering from Purdue University and an M.S. in electrical engineering from the University of Minnesota. Based on Mr. Santel's executive experience and service on other boards of directors in the biotechnology and pharmaceutical industries, our board of directors believes Mr. Santel has the appropriate set of skills to serve as a member of our board.

***Daniel K. Spiegelman.*** Mr. Spiegelman has served as a member of our board of directors since February 2010. Currently, Mr. Spiegelman provides management and financial consulting services to biotechnology companies. From January 1998 to May 2009, Mr. Spiegelman served as Senior Vice President and Chief Financial Officer of CV Therapeutics, Inc., a biopharmaceutical company that was acquired by Gilead Sciences, Inc. in April 2009. From July 1991 to January 1998, Mr. Spiegelman served at Genentech, Inc., most recently as Treasurer. Mr. Spiegelman also serves on the board of directors of Affymax, Inc., Cyclacel Pharmaceuticals, Inc., Omeros Corporation and Oncothyreon, Inc., all of which are publicly-traded biopharmaceutical companies. Mr. Spiegelman also previously served on the board of directors of Xcyte Therapies, Inc. from 2003 through 2006, a publicly-traded company, until Cyclacel acquired Xcyte via reverse merger in 2006. Mr. Spiegelman holds a B.A. in economics

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from Stanford University and an M.B.A. from the Stanford Graduate School of Business. Due to Mr. Spiegelman's experience in serving as a director of multiple publicly-traded biopharmaceutical companies, as well as his prior employment at various pharmaceutical companies, our board of directors has concluded that Mr. Spiegelman possesses the necessary attributes to serve on our board.

**David E. Thompson.** Mr. Thompson has served as a member of our board of directors since November 2005. Mr. Thompson served as Vice President of Corporate Strategy Business Development for Eli Lilly and Company from January 2001 until his retirement in July 2005. Thereafter, he was a partner at VantagePoint Venture Partners from 2006 through 2008. Mr. Thompson holds a B.S. and an M.B.A. from Michigan State University. Our board of directors believes Mr. Thompson is suited to serve on our board due to his substantial investing experience and prior experience working in the pharmaceutical industry.

## **Composition of VISTA-16 Study Steering Committee**

**Stephen J. Nicholls, M.D., Ph.D.** Dr. Nicholls is the chairman of the Phase 3 Steering Committee for our VISTA-16 (Vascular Inflammation Suppression to Treat Acute Coronary Syndrome 16 weeks) study. Dr. Nicholls has been Assistant Professor of Molecular Medicine and Associate Director of the Cleveland Clinic Coordinating Center for Clinical Research since 2006. Dr. Nicholls holds a medical degree from the University of Adelaide in Australia and completed his doctoral studies at the Heart Research Institute in Sydney, Australia. Dr. Nicholls later completed a postdoctoral fellowship in atherosclerosis imaging with intravascular ultrasound at the Cleveland Clinic. Dr. Nicholls received the Young Investigator Award at the 13th Symposium of the International Atherosclerosis Society and was a finalist for the Samuel A. Levine Young Investigator Award of the American Heart Association. Dr. Nicholls speaks frequently at international meetings on a wide variety of topics including atherosclerosis imaging and preventive cardiology and serves on the editorial board of *Arteriosclerosis, Thrombosis, and Vascular Biology* and the *European Journal of Cardiovascular Prevention and Rehabilitation*.

**John J.P. Kastelein, M.D., Ph.D.** Dr. Kastelein is a member of the Phase 3 Steering Committee for our VISTA-16 study. Dr. Kastelein has been a Professor of Medicine and Chairman of the Department of Vascular Medicine at the Academic Medical Center, or AMC, of the University of Amsterdam since January 2003, where Dr. Kastelein holds the Strategic Chair of Genetics of Cardiovascular Disease. Dr. Kastelein holds a medical degree from the University of Amsterdam and also received subsequent specialty training in internal medicine from the AMC. Dr. Kastelein also received training in medical genetics, lipidology and molecular biology at the University of British Columbia, Vancouver. Dr. Kastelein is the founder of the Lipid Research Clinic in Amsterdam. Dr. Kastelein is president of the Dutch Atherosclerosis Society and chairs the National Scientific Committee on Familial Hypercholesterolemia. Dr. Kastelein is also a member of the Royal Dutch Society for Medicine & Physics, the Council for Basic Science of the American Heart Association and the European Atherosclerosis Society. In addition, Dr. Kastelein is a board member of the International Task Force for Coronary Heart Disease Prevention and was recently appointed to the Executive Board of the International Atherosclerosis Society.

## **Composition of Scientific Advisory Board**

**Stephen J. Nicholls, M.D., Ph.D.** Dr. Nicholls is a member of our Scientific Advisory Board. Dr. Nicholls has been Assistant Professor of Molecular Medicine and Associate Director of the Cleveland Clinic Coordinating Center for Clinical Research since 2006. Dr. Nicholls holds a medical degree from the University of Adelaide in Australia and completed his doctoral studies at the Heart Research Institute in Sydney, Australia. Dr. Nicholls later completed a postdoctoral fellowship in atherosclerosis imaging with intravascular ultrasound at the Cleveland Clinic. Dr. Nicholls received the Young Investigator Award at the 13th Symposium of the International Atherosclerosis Society and was a finalist for the Samuel A. Levine Young Investigator Award of the American Heart Association.



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Dr. Nicholls speaks frequently at international meetings on a wide variety of topics including atherosclerosis imaging and preventive cardiology and serves on the editorial board of Arteriosclerosis, Thrombosis, and Vascular Biology and the European Journal of Cardiovascular Prevention and Rehabilitation.

***John J.P. Kastelein, M.D., Ph.D.*** Dr. Kastelein is a member of our Scientific Advisory Board. Dr. Kastelein has been a Professor of Medicine and Chairman of the Department of Vascular Medicine at the Academic Medical Center, or AMC, of the University of Amsterdam since January 2003, where Dr. Kastelein holds the Strategic Chair of Genetics of Cardiovascular Disease. Dr. Kastelein holds a medical degree from the University of Amsterdam and also received subsequent specialty training in internal medicine from the AMC. Dr. Kastelein also received training in medical genetics, lipidology and molecular biology at the University of British Columbia, Vancouver. Dr. Kastelein is the founder of the Lipid Research Clinic in Amsterdam. Dr. Kastelein is president of the Dutch Atherosclerosis Society and chairs the National Scientific Committee on Familial Hypercholesterolemia. Dr. Kastelein is also a member of the Royal Dutch Society for Medicine & Physics, the Council for Basic Science of the American Heart Association and the European Atherosclerosis Society. In addition, Dr. Kastelein is a board member of the International Task Force for Coronary Heart Disease Prevention and was recently appointed to the Executive Board of the International Atherosclerosis Society.

***David D. Waters, M.D.*** Dr. Waters is a member of our Scientific Advisory Board. Dr. Waters was Chief of Cardiology at San Francisco General Hospital and the Maurice Eliaser Jr. Distinguished Professor of Medicine at University of California, San Francisco from 1999 to 2007, and is now Emeritus Professor in the Department of Medicine. He completed medical school at the University of Western Ontario and did his Internal Medicine training at McGill University. After completing his cardiology fellowship training at Emory University, he was a Canadian Heart Foundation Research Fellow at Cedars-Sinai Medical Center in Los Angeles. From 1976 to 1992 he worked at the Montreal Heart Institute, where he was Director of the Research Center from 1988 to 1992. Dr. Waters has published more than 300 manuscripts, mainly related to coronary artery disease, has written more than 60 book chapters, and has lectured in 40 countries. He is a member of the editorial boards of several major cardiology journals and was for several years an associate editor of the Journal of the American College of Cardiology. His early research involved vasospastic angina, risk stratification in acute coronary syndromes and trials of antiplatelet and antithrombotic therapy for unstable angina. For most of his career he has been involved in clinical trials assessing the effect of different interventions, including hormone replacement therapy and cholesterol lowering therapy, upon the progression of coronary disease or upon clinical endpoints.

***Richard Furie, M.D.*** Dr. Furie is Chief of the Division of Rheumatology and Allergy-Clinical Immunology at the North Shore-Long Island Jewish Health System. He directs the Hospital's SLE and Autoimmune Disease Treatment Center, which has become nationally recognized for its role in the development of new therapies for SLE. Regarded as one of the senior rheumatologists in the New York metropolitan area, he has been on the Boards of Directors of the local chapters of the Arthritis Foundation and the Lupus Alliance of America and is a member of the editorial board of the Lupus Foundation of America Lupus News. Dr. Furie continues to serve on many committees of the American College of Rheumatology after completing a three-year term as chair of the Annual Scientific Meeting.

***Kenneth Kalunian, M.D.*** Dr. Kalunian is a Professor in the Division of Rheumatology, Allergy and Immunology at the University of California, San Diego School of Medicine. He serves as the Associate Director of the UCSD Center for Innovative Therapy. Dr. Kalunian completed fellowships at the Lutheran General Hospital for arthroscopic surgery and the University of California, Los Angeles for rheumatology. He has authored over 50 peer-reviewed papers and serves on several committees, including the Collective Data Analysis Initiative for the Lupus Foundation, serving as the Chair.

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**Michelle Petri, M.D.** Dr. Petri is a Professor of Medicine at the Johns Hopkins University School of Medicine. She is also the Director of the Hopkins Lupus Cohort, a longitudinal study of morbidity and mortality in SLE. In addition, she serves as the Co-Director of the Hopkins Lupus Pregnancy Center. Previously, she completed two fellowship programs at the University of California, San Francisco in allergy and immunology and rheumatology.

**Lee S. Simon, M.D., FACP, FACR** Dr. Simon is a Rheumatologist and a Principal at SDG LLC, a consulting firm that helps companies create successful drug development programs. He also serves as a regulatory consultant to Leerink Swann/Medacorp. Previously, Dr. Simon was the Division Director of Analgesic, Anti-inflammatory and Ophthalmologic Drug Products (DAAODP) within the Center for Drug Evaluation and Research (CDER) of the U.S. FDA, where he was the recipient of several Quality Performance Awards, as well as a Faculty Recognition Award. Before joining the FDA, he was an Associate Professor of Medicine at Harvard Medical School. Dr. Simon is a fellow of the American College of Physicians and the American College of Rheumatology. In 2003, he was awarded the Scientific Leadership Award by the Lupus Research Institute. He has served on editorial boards of multiple journals and has authored more than 110 original publications, review articles and chapters, as well as co-edited four books.

**David Wofsy, M.D.** Dr. Wofsy is a Professor of Medicine and Microbiology/Immunology at the University of California, San Francisco, where he also serves as Associate Dean for Admissions. He has served as Chief of Rheumatology at the San Francisco VA Medical Center and as Director of the Department of Medicine Clinical Trials Center at UCSF. Dr. Wofsy is also a former President of the American College of Rheumatology. He is best known for his research in murine models of SLE, where he developed and tested several novel treatment strategies. Dr. Wofsy's current clinical research is devoted to testing novel biologic therapies for patients with SLE.

## **Board Composition**

Our board of directors consists of eight directors, seven of whom qualify as independent directors according to the rules and regulations of The NASDAQ Global Market. Our amended and restated certificate of incorporation provides for a classified board of directors divided into three classes with members of each class of directors serving staggered three-year terms. As a result, a portion of our board of directors will be elected each year. Ms. Bianchi, Dr. Healy and Dr. Leheny have been designated Class II directors whose terms will expire at the 2011 annual meeting of stockholders. Dr. Henney, Mr. Spiegelman and Mr. Truex have been designated Class III directors whose terms will expire at the 2012 annual meeting of stockholders. Mr. Santel and Mr. Thompson have been designated Class I directors whose terms will expire at the 2013 annual meeting of stockholders.

Our amended and restated certificate of incorporation also provides that the number of authorized directors will be determined from time to time by resolution of our board of directors and any vacancies in our board of directors and newly created directorships may be filled only by our board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes, so that, as nearly as possible, each class will consist of one-third of the total number of directors. Our amended and restated certificate of incorporation further provides for the removal of a director only for cause or by the affirmative vote of the holders of 75% or more of the shares then entitled to vote at an election of our directors. These provisions and the classification of our board of directors may have the effect of delaying or preventing changes in the control or management of the company.

There are no family relationships among any of our directors or executive officers.

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Our board of directors has considered the relationships of all directors and, where applicable, the transactions involving them described below under Certain Relationships and Related Person Transactions, and determined that each of them does not have any relationship which would interfere with the exercise of independent judgment in carrying out his or her responsibility as a director and that each non-employee director qualifies as an independent director under the applicable rules of The NASDAQ Global Market.

### **Committees of the Board of Directors**

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee, each of which operates pursuant to a separate charter adopted by our board of directors. The composition and responsibilities of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors.

The composition and function of our board of directors and all of our committees complies with all applicable requirements of the Sarbanes-Oxley Act of 2002, The NASDAQ Global Market and SEC rules and regulations.

#### ***Audit Committee***

Mr. Spiegelman, Mr. Santel and Dr. Healy currently serve on our audit committee. Mr. Spiegelman chairs the audit committee. All members of our audit committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and The NASDAQ Global Market. Our board of directors has determined that Mr. Spiegelman is an audit committee financial expert as defined under the applicable rules of the SEC and has the requisite financial sophistication as defined under the applicable rules and regulations of The NASDAQ Global Market. In addition, our audit committee is composed entirely of independent directors in accordance with current NASDAQ listing standards and meets the enhanced independence standards established by the Sarbanes-Oxley Act of 2002 and related rulemaking of the SEC that apply to companies that have recently completed an initial public offering. The audit committee operates under a written charter that satisfies the applicable standards of the SEC and The NASDAQ Global Market.

The audit committee's responsibilities include:

appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;

pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;

reviewing and discussing with management and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures;

coordinating the oversight and reviewing the adequacy of our internal controls over financial reporting;

establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns; and

preparing the audit committee report required by SEC rules to be included in our annual proxy statement.

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### ***Compensation Committee***

Mr. Thompson, Dr. Leheny and Mr. Santel currently serve on our compensation committee. Mr. Thompson chairs the compensation committee. All of the members of our compensation committee are independent under the applicable rules and regulations of the SEC, The NASDAQ Global Market and the Internal Revenue Code.

The compensation committee's responsibilities include:

annually reviewing and approving corporate goals and objectives relevant to compensation of our chief executive officer;

evaluating the performance of our chief executive officer in light of such corporate goals and objectives and determining the compensation of our chief executive officer;

reviewing and approving the compensation of all our other officers;

overseeing and administering our incentive-based compensation and equity plans; and

reviewing and making recommendations to our board of directors with respect to director compensation.

### ***Nominating and Corporate Governance Committee***

Dr. Henney, Ms. Bianchi and Mr. Thompson currently serve on our nominating and corporate governance committee. Dr. Henney chairs the nominating and corporate governance committee. All of the members of our nominating and corporate governance committee are independent under the applicable rules and regulations of the SEC and The NASDAQ Global Market.

The nominating and corporate governance committee's responsibilities include:

developing and recommending to our board of directors criteria for selecting board and committee membership;

establishing procedures for identifying and evaluating director candidates, including nominees recommended by stockholders;

identifying individuals qualified to become board members;

recommending to our board of directors the persons to be nominated for election as directors and each of the board's committees;

developing and recommending to our board of directors a set of corporate governance guidelines; and

overseeing the evaluation of our board of directors, its committees and management.

### **Board Diversity**

Our nominating and corporate governance committee is responsible for reviewing with the board of directors, on an annual basis, the appropriate characteristics, skills and experience required for the board of directors as a whole and its

individual members. In evaluating the suitability of individual candidates (both new candidates and current members), the nominating and corporate governance

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committee, in recommending candidates for election, and the board of directors, in approving (and, in the case of vacancies, appointing) such candidates, takes into account many factors, including: personal and professional integrity, ethics and values; experience in corporate management, such as serving as an officer or former officer of a publicly held company; experience in the industries in which we compete; experience as a board member of another publicly held company; diversity of expertise and experience in substantive matters pertaining to our business relative to other board members; conflicts of interest; and practical and mature business judgment. The board of directors evaluates each individual in the context of the board of directors as a whole, with the objective of assembling a group that can best maximize the success of the business and represent stockholder interests through the exercise of sound judgment using its diversity of experience in these various areas.

**Compensation Committee Interlocks and Insider Participation**

None of the members of the compensation committee is or has at any time during the past fiscal year been an officer or employee of the company. None of the members of the compensation committee has formerly been an officer of the company. None of our executive officers serve or in the past fiscal year has served as a member of the board of directors or compensation committee of any other entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

**Compensation Policies and Practices as related to Risk Management**

Our board of directors has overall responsibility for the oversight of the Company's risk management process, which is designed to support the achievement of organizational objectives, including strategic objectives, to improve long-term organizational performance and enhance shareholder value. Risk management includes not only understanding company specific risks and the steps management implements to manage those risks, but also what level of risk is acceptable and appropriate for the Company. Management is responsible for establishing our business strategy, identifying and assessing the related risks and implementing appropriate risk management practices. Our board of directors reviews our business strategy and management's assessment of the related risk, and discusses with management the appropriate level of risk for the Company. With respect to compensation policies and practices, our Compensation Committee participates in the design of compensation structures that create incentives that encourage a level of risk-taking behavior consistent with the Company's business strategy.

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**COMPENSATION DISCUSSION AND ANALYSIS**

This section discusses our executive compensation policies and arrangements as they relate to our named executive officers who are listed in the compensation tables set forth below. The following discussion should be read together with the compensation tables and related disclosures set forth below.

**Background and Objectives**

We are a biopharmaceutical company focused on developing and commercializing products to treat serious diseases associated with inflammation, including cardiovascular and autoimmune diseases. The success of development companies is significantly influenced by the quality and motivation of their work forces. As a result, we face significant competition for executives and other talented employees from numerous pharmaceutical research and development companies in the San Francisco Bay Area. With this in mind, we strive to provide what we believe is a competitive total compensation package to our executive officers through a combination of base salary, short-term cash incentives and long-term equity compensation, in addition to broad-based employee benefits programs, in order to closely align the interests of our executive officers with those of our stockholders, to attract talented individuals to manage and operate all aspects of our business, to reward these individuals fairly and to retain those individuals who meet our high expectations and support the achievement of our business objectives.

**Role of Compensation Committee and Executive Officers**

Our executive compensation program is administered by our compensation committee of our board of directors. Our compensation committee is responsible for overseeing our executive compensation policies, plans and programs, reviewing our achievements as a company and the achievements of our individual officers, recommending to our board of directors the type and level of compensation for our named executive officers and our directors. The primary goal of our compensation committee is to closely align the interests of our named executive officers with those of our stockholders. To achieve this goal, our compensation committee relies on compensation that is designed to attract and retain executives whose abilities are critical to our long-term success, that motivates individuals to perform at their highest level and that rewards achievement.

The annual responsibilities of our compensation committee include the following:

reviewing and approving corporate goals and objectives relevant to the compensation of our Chief Executive Officer;

evaluating the performance of our Chief Executive Officer in light of such corporate goals and objectives and determining the compensation of our Chief Executive Officer; and

reviewing and approving the level of equity awards, annual salary and bonuses for our named executive officers and other employees.

In reviewing and approving these matters, our compensation committee considers such matters as it deems appropriate, including our financial and operating performance, the alignment of interests of our executive officers and our stockholders and our ability to attract and retain qualified individuals. For executive compensation decisions, including decisions relating to the grant of stock options and other equity awards to our named executive officers, our compensation committee typically considers the recommendations of Mr. Truex, our Chief Executive Officer.

Mr. Truex also generally participates in our compensation committee's deliberations about executive compensation matters. However, Mr. Truex does not participate in the deliberation or determination of his own compensation.

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Our compensation committee has not established any formal policies or guidelines for allocating compensation between current and long-term equity compensation, or between cash and non-cash compensation. In determining the amount and mix of compensation elements and whether each element provides the correct incentives and rewards for performance consistent with our short-term and long-term goals and objectives, our compensation committee relies on its judgment about each individual's performance in a rapidly changing business environment rather than adopting a formulaic approach to compensatory decisions that are too narrowly responsive to short-term changes in business performance. In making determinations about performance, our compensation committee does not solely rely on formal goals or metrics, but rather takes into account input from appropriate members of management with respect to an individual's performance, as well as its own observations.

### **Role of Compensation Consultant**

Our compensation committee has the authority under its charter to engage the services of any consulting firm or other outside advisor to assist it. In late 2007, our compensation committee engaged J. Thelander Consulting, an independent consulting firm selected by our compensation committee, to review the compensation of our named executive officers and other key employees. J. Thelander Consulting compared the base salary, bonus and equity awards offered to these employees with aggregated data from 193 pre-IPO companies in the biotechnology, medical device, IT/software, cleantech and health care space. These 193 companies were selected because they were at a similar stage of development as we are and the majority of such companies were also based on the west coast and had levels of funding ranging from \$15 million to \$70 million. Accordingly, our compensation committee determined that these companies represented the types of companies with which we compete for executive employees. Based on our goal of attracting and retaining talented individuals to serve as executive officers in a competitive market, J. Thelander Consulting recommended targeting the 75th percentile of base salary, bonus and equity compensation offered by this group of companies. J. Thelander Consulting recommended targeting the 75th percentile of compensation at comparable companies in order to attract above-average executives, since attracting and retaining top talent is important to a smaller company like ours. To that end, J. Thelander Consulting recommended that we increase our offered base salary and bonus compensation for executive officers, and maintain the current level of offered equity compensation. Our compensation committee considered the recommendations and determined that the current compensation packages for our executive officers were sufficient in light of current market conditions, input from management and the desire to allocate resources to our clinical development study instead.

J. Thelander Consulting also reviewed the change in control and severance benefits we had in place at the time for our executives, which included all of our named executive officers. J. Thelander Consulting recommended that we maintain our current benefit levels for cash severance and health benefits, which are 12 months' cash severance and benefits continuation for our Chief Executive Officer and six months' cash severance and benefits continuation for our other executive officers, but provide for 100% acceleration of equity awards vesting in connection with the termination of employment of our executive officers in certain circumstances. At the time of J. Thelander Consulting's review, our change of control and severance benefits provided acceleration of 12 months of equity award vesting for our Chief Executive Officer and Chief Medical Officer and six months of equity award vesting for our other executive officers. Our compensation committee considered the recommendations and determined that the existing change of control and severance provisions for our executive officers were adequate to provide security to our executive officers whose leadership and experience would be crucial to maximize stockholder value during the course of ordinary business.

In September 2009, our compensation committee engaged J. Thelander Consulting to review and provide comparative data on the base salary, bonus and equity compensation of (i) chief executive officers of private biotechnology companies with funding levels between \$50 to \$70 million and (ii) chief



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executive officers and other executive officers of publicly traded biotechnology companies with a market capitalization between \$220 to \$375 million. J. Thelander Consulting also provided a review of the board compensation of such publicly traded biotechnology companies. Our compensation committee reviewed the report by J. Thelander Consulting, but has not yet made a determination on any changes to our executive compensation.

J. Thelander Consulting was retained by and reported directly to our compensation committee.

## **Compensation Elements**

**Base Salary.** The base salaries of our named executive officers are primarily established based on the scope of their responsibilities and performance, taking into account the J. Thelander Consulting comparable company data and based upon our compensation committee's understanding of compensation paid to similarly situated executives, and adjusted as necessary to recruit or retain specific individuals. In making determinations about the performance of our named executive officers, our compensation committee takes into account corporate goals, which are set annually by our compensation committee and generally include milestones related to our preclinical and clinical studies and fundraising, as well as informal individual goals, which are position-specific and are communicated to the named executive officer over the course of the year. In 2008, our corporate goals focused on clinical development of our product candidates, including achieving full enrollment in our Phase 2b clinical study and receiving advice from the FDA on a Special Protocol Assessment for a Phase 3 clinical study protocol for varespladib, while our 2009 corporate goals focused on the continued clinical development of our product candidates, including completion of our Phase 2b clinical study for varespladib.

We typically review the base salaries of our named executive officers annually. We may also increase the base salary of an executive officer at other times if a change in the scope of the executive's responsibilities, such as promotion, justifies such consideration. Although we do not target a specific percentile range, we believe that a competitive base salary relative to the companies with which we compete for executives is a necessary element of any compensation program that is designed to attract and retain talented and experienced executives. We also believe that attractive base salaries can motivate and reward executives for their overall performance. Base salaries are established in part based on experience, skills and expected contributions of our executives and our executives' performance during the prior year.

As part of its annual evaluation of salaries in 2008 for our named executive officers, our board of directors elected to maintain salaries for Mr. Truex and our other named executive officers at then-current levels. This determination was based on the recommendation of our compensation committee that such base salary provided adequate fixed income as compared to comparable company data and our compensation committee's own understanding of compensation at other pre-IPO companies in comparable industries, based in part on their respective experience on the board of directors of such companies, as well as management's view that base salaries should generally stay at the same level.

In February 2009, upon our compensation committee's recommendation, our board of directors approved temporary reduction in cash compensation of approximately 14% on average for all of our employees, including our named executive officers, which compensation reduction was reinstated in August 2009. This measure was taken in connection with the redeployment of resources to our research and development activities and the elimination of four positions in light of the financing and economic environment. In connection with this salary reduction, Mr. Truex was granted special authority by our board of directors to allocate in his sole discretion options to purchase an aggregate of 26,285 shares to individuals, including our named executive officers, who had demonstrated high achievement toward our goals.

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On April 21, 2010, as part of its annual review of compensation, the board of directors, upon the recommendation of the compensation committee, approved annual base salary adjustments for Company employees, including certain of the Company's named executive officers, which became effective on May 1, 2010. The adjusted base salaries for such named executive officers are as follows:

Named Executive Officer	Annual Base Salary Prior to May 1, 2010	Annual Base Salary Effective May 1, 2010
Paul F. Truex, President and Chief Executive Officer	\$ 300,000	\$ 425,000
Christopher P. Lowe, Chief Financial Officer and Vice President of Administration	\$ 250,000	\$ 300,000
James E. Pennington, M.D., Senior Clinical Fellow	\$ 290,000	\$ 290,000
Colin Hislop, M.D., Senior Vice President and Chief Medical Officer	\$ 270,000	\$ 320,000
Debra Odink, Ph.D., Senior Vice President, Pharmaceutical Research and Development	\$ 200,000	\$ 225,000

In connection with Dr. Odink's promotion to Senior Vice President, Pharmaceutical Research and Development in June 2010, her annual base salary was increased from \$225,000 to \$250,000.

**Cash Bonuses.** As of December 31, 2009, we did not have a formal cash incentive program. While we have paid cash bonuses based on the achievement of approved operational milestones in the past, we did not establish a formal cash incentive program, nor did we pay any bonuses based on corporate goals in 2008 or 2009. Our 2008 and 2009 corporate goals were informal, but focused on the achievement of the following: in 2008, (1) developing and implementing an adjusted clinical development plan for our product candidates based on changes in market conditions and regulatory guidance and (2) obtaining additional financing; and in 2009, (1) continued clinical development of our product candidates, and (2) obtaining additional financing. For 2008, our compensation committee made the decision not to pay annual bonuses based on the need to manage expenses and allocate resources to our clinical development programs, and did not formally evaluate whether our 2008 corporate goals had been achieved. We did not have additional individual performance goals for our named executive officers in 2008 or 2009. Our compensation committee has the authority to award discretionary performance-based cash bonuses to our executive officers and certain non-executive employees. Our compensation committee considers awarding such discretionary bonuses in the event of extraordinary short-term efforts and achievements by our executives and employees, as recommended by management. No such discretionary bonuses were awarded in 2008. In 2009, discretionary bonuses were awarded to certain of our employees, including Dr. Hislop and Dr. Odink, in recognition of their efforts in connection with certain business development efforts.

On March 24, 2010, the board of directors adopted the Company's Executive Incentive Bonus Plan, or the Bonus Plan, which applies to certain key executives, or the Executives, that are recommended by the compensation committee and selected by the Board. The Bonus Plan provides for bonus payments based upon the attainment of performance targets established by the Board and related to financial and operational metrics with respect to the Company or any of its subsidiaries, or the Performance Goals, which would include the achievement of clinical study or operational milestones, results of clinical studies and achievement of specified financial metrics or objectives. Any bonuses paid under the Bonus Plan shall be based upon objectively determinable bonus formulas that tie such bonuses to one or

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performance targets relating to the Performance Goals. The bonus formulas shall be adopted in each performance period by the Board and communicated to each Executive. No bonuses shall be paid under the Bonus Plan unless and until the Board makes a determination with respect to the attainment of the performance objectives. Notwithstanding the foregoing, the Company may adjust bonuses payable under the Bonus Plan based on achievement of individual performance goals or pay bonuses (including, without limitation, discretionary bonuses) to Executives under the Bonus Plan based upon such other terms and conditions as the Board may in its discretion determine.

Each Executive shall have a targeted bonus opportunity set for each performance period. The maximum bonus payable to an Executive under the Bonus Plan is 125% of the Executive's bonus opportunity. The Performance Goals will be measured at the end of each fiscal year after the Company's financial reports have been published or such other appropriate time as the Board shall determine. If the Performance Goals are met, payments will be made within 30 days thereafter, and if met for the previous fiscal year, not later than March 31. An Executive must be employed by the Company as of the payment date in order to receive a bonus payment, provided that the Board may make exceptions to this requirement, in its sole discretion, including, without limitation, in the case of an Executive's termination of employment, retirement, death or disability.

**Equity Incentive Compensation.** We generally grant stock options to our employees, including our named executive officers, in connection with their initial employment with us. We also typically grant stock options on an annual basis as part of annual performance reviews of our employees. Our compensation committee has established grant guidelines for our employees, other than our Chief Executive Officer, based on an employee's position. These guidelines specify a range of equity grant amounts, expressed as a percentage of our common stock outstanding on a fully-diluted basis, which range from 0.02% to 2.75%, depending on position. Grant guidelines for our named executive officers, other than our Chief Executive Officer, range from 0.25% to 2.75%, and ranges for each position are as follows:

<b>Principal Position</b>	<b>Grant Guidelines</b>	
Chief Financial Officer	1.25%	2.5%
Chief Medical Officer	1.25%	2.5%
Senior Vice President, Clinical/Medical	1.0%	2.0%
Vice President, Non-Clinical/Pre-Clinical	0.25%	1.0%

Our compensation committee has not established grant guidelines for our Chief Executive Officer and any grants made are at the discretion of our board of directors.

Each of our named executive officers has either purchased restricted shares of common stock or received stock options to purchase shares of common stock in connection with their initial employment with us. We grant equity incentive compensation to our executive officers because we believe doing so will motivate our executives by aligning their interests more closely with the interests of our stockholders. Certain employees, including Mr. Truex, were granted restricted stock in 2004 and 2005 because we believed that it was appropriate for our initial key employees to have an immediate equity stake, and because we believed owning restricted stock would more closely align the interests of the recipient with those of our stockholders. Now that we are a more mature company, we believe it is generally more appropriate to grant options to employees, as is the general practice at other companies with which we compete for talent, although we may continue to grant restricted stock or grant other types of equity awards when we deem it appropriate and in our stockholders' best interests.

In connection with their initial employment, each of our named executive officers was granted stock options to purchase shares of our common stock, for an aggregate of 259,928 shares at an exercise price equal to the fair value of

such shares at the dates of grant, which ranged from \$0.14 to \$1.34 per

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share. The options held by each named executive officer are subject to vesting in order to encourage each named executive officer to remain with us for several years, and subject to the other provisions of their respective option agreements, which are described below.

Prior to our initial public offering, equity incentive grants to our named executive officers and other employees were made at the discretion of our board of directors with the recommendation of our compensation committee out of our 2005 Equity Incentive Plan, or 2005 Equity Plan. In determining equity incentive grants, the compensation committee considered the grant guidelines it had established for each position, along with the equity incentives already provided to an employee. Our compensation committee also considered individual performance, based on an informal evaluation of the individual's contribution to our corporate goals (which generally include milestones related to our preclinical and clinical studies and fundraising) and input received from management.

Our 2008 corporate goals included:

- initiation of our Phase 2b FRANCIS study;
- developing a regulatory path for our cardiovascular program;
- continued enrollment of patients in our IMPACTS study on the schedule prescribed by the clinical study protocol; and
- obtaining financing sufficient to fund the above goals.

Our 2009 corporate goals included:

- completion of our Phase 2b FRANCIS study;
- completion of the technology transfer of A-623 from Amgen;
- successful evaluation by a DSMB of the safety profile of A-001; and
- obtaining financing sufficient to fund the above goals.

In 2008, our board of directors granted options to purchase a total of 327,973 shares of common stock to our employees, directors and consultants, including options to purchase a total of 122,663 shares of common stock to our named executive officers, all at an exercise price of \$1.34 per share, which represented the fair value of our common stock on the dates of grant, as determined by our board of directors. In 2009, our board of directors granted options to purchase a total of 405,358 shares of common stock to our employees, directors and consultants, including options to purchase a total of 198,011 shares of common stock to our named executive officers, at exercise prices of \$1.51 and \$7.70 per share, which represented the fair value of our common stock on the dates of grant, as determined by our board of directors. In exercising its discretion to determine the amount of each grant for recommendation to our board of directors, the compensation committee generally took into account each individual's contributions towards the achievement of our annual corporate goals; however, in 2008, no named executive officers received grants of equity awards, other than Mr. Lowe, whose grant of 122,663 options to purchase shares of our common stock, were made in connection with his initial employment. Furthermore, in 2009, upon the compensation committee's recommendation, our board of directors approved grants of equity awards to employees, including our named executive officers, who received a temporary reduction in cash compensation as discussed above and whose performance supported our 2008 corporate goals. Mr. Truex, Mr. Lowe, Dr. Pennington, Dr. Hislop and Dr. Odink each received grants of equity awards based upon the management team's contributions to our 2008



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corporate goals on a relative scale dependent on such named executive officer's job function and responsibility. The amount of each grant was based upon industry data as well as such named executive officer's current level of equity awards. In addition, as discussed above in connection with the salary reduction, Mr. Truex was granted special authority by our board of directors to allocate in his sole discretion options to purchase shares of our common stock to individuals who had demonstrated high achievement toward our corporate goals, which individuals included our named executive officers. Dr. Hislop received an equity award in April 2009, which grant was based on Dr. Hislop's contributions to our FRANCIS study. All of these grants were made to further motivate the recipients by aligning their interests more closely with our stockholders over the next several years by providing them with an equity interest in the company.

The exercise price of each stock option granted under our 2005 Equity Plan was based on the fair value of our common stock on the date of grant. Historically, the fair value of our common stock for purposes of determining the exercise price of stock options has been determined by our board of directors based on its analysis of a number of factors including, among others, the total company valuation implied by our rounds of financing, the market value of similarly situated public companies, our anticipated future risks and opportunities, the rights and preferences of our preferred stock and the discounts customarily applicable to common stock of privately-held companies. We engaged independent valuation firms to assess the fair value of our common stock during 2006, 2007 and 2008. Based on several factors considered by our board of directors, including the valuation reports prepared by such firms, we determined the fair value of our common stock or option grants made in February and April 2009 to be \$1.51 per share, and for options grants made in 2008 to be \$1.34 per share. Based on several factors considered by our board of directors, we determined the fair value of our option grants made in October 2009 to be \$7.70 per share. Following our initial public offering, all stock options continue to be granted with an exercise price equal to the fair value of our common stock on the date of grant, but fair value is defined as the closing market price of a share of our common stock on the date of grant. We do not currently have any program, plan or practice of setting the exercise price based on a date or price other than the fair value of our common stock on the grant date.

Stock option awards provide our named executive officers and other employees with the right to purchase shares of our common stock at a fixed exercise price, subject to their continued employment. Stock options are earned on the basis of continued service and generally vest over four years, beginning with vesting as to 25% of the award on the one-year anniversary of the date of grant, and pro-rata vesting monthly thereafter. Our stock options may also be exercised prior to the award vesting in full, subject to our right of repurchase. In addition, we have also granted options to purchase smaller amounts of stock, typically fewer than 10,000 shares, which are immediately vested to recognize employee contributions, including those of our named executive officers. Furthermore, we generally grant incentive stock options to employees up to the statutory limit, then non-statutory options thereafter and non-statutory options to non-employees. See the section entitled "Potential Payments Upon Termination or Change in Control" for a discussion of the change in control provisions related to stock options.

While we have only granted restricted stock awards to certain of our initial key employees, we have the authority to do so under our 2005 Equity Plan and our Amended and Restated 2010 Stock Option and Incentive Plan, or 2010 Equity Plan. Restricted stock awards provide our named executive officers and other employees with the ability to purchase shares of our common stock at a fixed purchase price at the time of grant by entering into a restricted stock purchase agreement. Similar to stock options, shares of restricted stock are earned on the basis of continued service and generally vest over four years, beginning with vesting as to 25% of the award on the one year anniversary of the date of grant and pro-rata vesting quarterly thereafter. See the section below entitled "Potential Payments Upon Change in Control and Termination" for a discussion of the change in control provisions related to restricted stock.

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After our initial public offering, we adopted an equity award grant policy that formalized how we grant equity-based awards to officers and employees. Under our equity award grant policy, all grants must be approved by our board of directors or compensation committee. All stock options will be awarded with an exercise price equal to the fair value of our common stock and calculated based on our closing market price on the last trading day of the quarter in which the grant is approved.

***Other Compensation.*** We currently maintain broad-based benefits that are provided to all employees, including health insurance, life and disability insurance, dental insurance and a 401(k) plan.

As discussed below in *Severance and Change in Control Agreements* and in *Potential Payments Upon Change in Control and Termination*, we have, for all named executive officers (other than Dr. Pennington), agreements providing certain benefits upon termination of their employment in relation to a change in control, including the acceleration of vesting of restricted stock and options. Our goal in providing severance and change in control benefits is to offer sufficient cash continuity protection such that our executives will focus their full time and attention on the requirements of the business rather than the potential implications for their respective positions. We prefer to have certainty regarding the potential severance amounts payable to the named executive officers under certain circumstances, rather than negotiating severance at the time that a named executive officer's employment terminates. We have also determined that accelerated vesting provisions in connection with a termination following a change of control are appropriate because they will encourage our restricted stock and option holders, including our named executive officers, to stay focused in such circumstances, rather than the potential implications for them.

All of our named executive officers, except for Dr. Pennington, are party to severance agreements that provide benefits upon termination of employment in connection with a change of control. In addition, in December 2007, our compensation committee recommended and our board of directors agreed that Mr. Lowe, our Chief Financial Officer, should be offered the same change of control severance benefit levels as our Chief Executive Officer, in light of his role in the company.

***Tax and Accounting Treatment of Compensation.*** Section 162(m) of the Internal Revenue Code places a limit of \$1.0 million per person on the amount of compensation that we may deduct in any one year with respect to each of our named executive officers other than the chief financial officer. There is an exemption from the \$1.0 million limitation for performance-based compensation that meets certain requirements. Grants of stock options and stock appreciation rights under our 2010 Equity Plan are intended to qualify for the exemption. Restricted stock awards and restricted stock unit awards under our 2010 Equity Plan, as well as performance cash awards, may qualify for the exemption if certain additional requirements are satisfied. To maintain flexibility in compensating officers in a manner designed to promote varying corporate goals, our compensation committee has not adopted a policy requiring all compensation to be deductible. Although tax deductions for some amounts that we pay to our named executive officers as compensation may be limited by section 162(m), that limitation does not result in the current payment of increased federal income taxes by us due to our significant net operating loss carry-forwards. Our compensation committee may approve compensation or changes to plans, programs or awards that may cause the compensation or awards to exceed the limitation under section 162(m) if it determines that such action is appropriate and in our best interests.

We account for equity compensation paid to our employees under the rules of FASB ASC 718, which requires us to estimate and record an expense for each award of equity compensation over the service period of the award. Accounting rules also require us to record cash compensation as an expense at the time the obligation is incurred.

**Table of Contents****Summary Compensation Table 2009 and 2008**

The following table summarizes the compensation that we paid to our Chief Executive Officer, Chief Financial Officer and each of our three other most highly compensated executive officers during the years ended December 31, 2009 and 2008. We refer to these officers in this prospectus as our named executive officers.

<b>Name and Principal Position</b>	<b>Year</b>	<b>Salary (\$)</b>	<b>Bonus (\$)</b>	<b>Option Awards (\$)<sup>(1)</sup></b>	<b>Total (\$)</b>
Paul F. Truex President, Chief Executive Officer, and Director	2009	\$ 281,837		\$ 88,125	\$ 369,962
	2008	\$ 300,000		\$	\$ 300,000
Christopher P. Lowe Chief Financial Officer and Vice President of Administration	2009	\$ 241,174		\$ 23,500	\$ 264,674
	2008	\$ 250,000		\$ 117,411	\$ 367,411
James E. Pennington, M.D. Executive Vice President and Chief Medical Officer <sup>(2)</sup>	2009	\$ 228,845		\$ 29,375	\$ 258,220
	2008	\$ 290,000		\$	\$ 290,000
Colin Hislop, M.D. Senior Vice President, Cardiovascular Products	2009	\$ 259,621	\$ 1,247	\$ 28,795	\$ 289,663
	2008	\$ 270,000		\$	\$ 270,000
Debra Odink, Ph.D. Vice President, Pharmaceutical Research and Development	2009	\$ 158,580	\$ 3,996	\$ 29,375	\$ 191,951
	2008	\$ 200,000		\$	\$ 200,000

<sup>(1)</sup> This column reflects the aggregate grant date fair value of equity awards granted in 2009 or 2008 as calculated in accordance with FASB ASC 718. See Note 8 to our financial statements for a discussion of the assumptions made in determining the valuation of option awards.

<sup>(2)</sup> As of May 1, 2010, Dr. Pennington ceased serving as our Chief Medical Officer and Executive Vice President and commenced his role with us as Senior Clinical Fellow.

**Grants of Plan-Based Awards**

The following table sets forth certain information with respect to awards under our equity and non-equity incentive plans made by us to our named executive officers and stock options awarded to our named executive officers for the year ended December 31, 2009.

<b>Name</b>	<b>Grant Date</b>	<b>All Other Option Awards: Number of Securities Underlying Options<sup>(1)</sup></b>	<b>Exercise or Base Price of Option Awards (\$/sh)</b>	<b>Grant Date Fair Value of Stock and Option Awards (\$)<sup>(2)</sup></b>
Paul F. Truex	2/18/2009	66,376	\$ 1.51	\$ 66,761

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	2/18/2009	21,240	\$ 1.51	\$ 21,364
Christopher P. Lowe	2/18/2009	23,364	\$ 1.51	\$ 23,500
James E. Pennington, M.D.	2/18/2009	29,205	\$ 1.51	\$ 29,375
Colin Hislop, M.D.	2/18/2009	23,364	\$ 1.51	\$ 23,500
	4/15/2009 <sup>(3)</sup>	5,257	\$ 1.51	\$ 5,295
Debra Odink, Ph.D.	2/18/2009	29,205	\$ 1.51	\$ 29,375

<sup>(1)</sup> Unless otherwise noted in the footnotes, these options vest in equal monthly installments over four years. The vesting commencement date of these grants is August 12, 2008.

<sup>(2)</sup> The grant date fair value of each equity award is computed in accordance with FASB ASC 718, excluding the effect of estimated forfeitures. See Note 8 to our financial statements for a discussion of the assumptions made in determining the valuation of option awards.

<sup>(3)</sup> These options were fully vested on the grant date.

**Table of Contents****Outstanding Equity Awards at Fiscal Year-End**

The following table sets forth certain information with respect to outstanding equity awards as of December 31, 2009 with respect to our named executive officers.

Name	Option Awards				Stock Awards Market	
	Number of Securities Underlying Unexercised Options	Number of Securities Underlying Unexercised Options	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That have not Vested (#) <sup>(1)</sup>	Value of Shares or Units of Stock That have not Vested (\$) <sup>(2)</sup>
Paul F. Truex	21,417	1,947 <sup>(3)</sup>	\$ 0.14	4/6/2016		
	362,826		\$ 0.26	1/23/2017		
	44,252	22,124 <sup>(4)</sup>	\$ 1.51	2/18/2019		
	14,161	7,079 <sup>(5)</sup>	\$ 1.51	2/18/2019		
Christopher P. Lowe	2,920 <sup>(9)</sup>		\$ 0.14	3/6/2016		
	39,004	35,882 <sup>(6)</sup>	\$ 1.34	2/21/2018		
	24,884	22,893 <sup>(7)</sup>	\$ 1.34	2/21/2018		
	15,540	7,824 <sup>(4)</sup>	\$ 1.51	2/18/2019		
James E. Pennington, M.D.	26,103	11,864 <sup>(8)</sup>	\$ 0.26	10/24/2017		
	19,471	9,734 <sup>(4)</sup>	\$ 1.51	2/18/2019	32,857	\$ 252,999
Colin Hislop, M.D.	145,130		\$ 0.26	1/23/2017		
	15,577	7,787 <sup>(4)</sup>	\$ 1.51	2/18/2019		
	5,257		\$ 1.51	4/15/2019		
Debra Odink, Ph.D.	19,471	9,734 <sup>(4)</sup>	\$ 1.51	2/18/2019		

\* Unless otherwise noted in the footnotes, these options vest over four years as follows: 25% of the shares vest one year following the vesting commencement date, with the remaining 75% vesting in equal monthly installments over the next three years. All unvested options granted pursuant to the 2005 Equity Plan contain an early exercise feature subject to the Company's right of repurchase.

(1) The number in this column represents shares of unvested stock options that were acquired upon exercise of stock options prior to the stock option vesting in full and which remain subject to the Company's right of repurchase as of December 31, 2009.

(2) The fair value of our common stock as of December 31, 2009 was \$7.70 per share.

(3) The vesting commencement date of this incentive stock option is April 6, 2006.

(4) This incentive stock option vests in equal monthly installments over four years commencing on August 12, 2008.

(5) This non-statutory stock option vests in equal monthly installments over four years commencing on August 12, 2008.

(6) The vesting commencement date of this incentive stock option is November 26, 2007.

- (7) The vesting commencement date of this non-statutory stock option is November 26, 2007.
- (8) The vesting commencement date of this incentive stock option is March 19, 2007.
- (9) These options were granted to Mr. Lowe on March 6, 2006 in his capacity as a consultant to the Company and vested immediately on the grant date.

**Table of Contents****Option Exercises and Stock Vested*****Stock Vested 2009***

The following table sets forth certain information with respect to the stock vested during the year ended December 31, 2009 with respect to our named executive officers. There were no exercised stock options during the year ended December 31, 2009 with respect to our named executive officers.

Name	Stock Awards	
	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$) <sup>(3)</sup>
Paul F. Truex		
Christopher P. Lowe		
James E. Pennington, M.D.	26,285 <sup>(1)</sup>	195,560
Colin Hislop, M.D.		
Debra Odink, Ph.D.	18,141 <sup>(2)</sup>	134,969

<sup>(1)</sup> On April 23, 2007, Dr. Pennington exercised 105,140 shares underlying a stock option award prior to the award vesting in full. During the year ended December 31, 2009, the Company's right of repurchase lapsed with respect to the number of shares in this column.

<sup>(2)</sup> On October 19, 2007, Dr. Odink exercised 72,565 shares underlying a stock option award prior to the award vesting in full. During the year ended December 31, 2009, the Company's right of repurchase lapsed with respect to the number of shares in this column.

<sup>(3)</sup> This column reflects the intrinsic value realized for shares vested in 2009, which represents the difference between the fair value of our common stock as of December 31, 2009 and the exercise price of the stock option.

**Stock and Benefit Plans*****2005 Equity Incentive Plan***

Our 2005 Equity Plan was adopted by our board of directors and approved by our stockholders in April 2005. We reserved 2,175,817 shares of our common stock for the issuance of awards under the 2005 Equity Plan.

Our 2005 Equity Plan is administered by our board of directors, which has the authority to delegate full power and authority to a committee of the board. Our board of directors or any committee delegated by our board of directors has the power to select the individuals to whom awards will be granted, to make any combination of awards to participants, to accelerate the exercisability or vesting of any award, to provide substitute awards and to determine the specific terms and conditions of each award, subject to the provisions of the 2005 Equity Plan.

The 2005 Equity Plan permits us to make grants of incentive stock options, non-qualified stock options, restricted stock awards and stock appreciation rights to employees, directors and consultants. Stock options granted under the 2005 Equity Plan have a maximum term of 10 years from the date of grant and incentive stock options have an exercise price of no less than the fair market value of our common stock on the date of grant. Upon a sale event in which all awards are not assumed or substituted by the successor entity, the vesting of awards under the 2005 Equity Plan shall be accelerated in full prior to the sale event and all stock options issued thereunder will terminate.

All stock option awards that are granted to our named executive officers are covered by a stock option agreement. Except as noted above, under the stock option agreements, 25% of the shares vest on the

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first anniversary of the grant date and the remaining shares vest monthly over the following three years. Our board of directors may accelerate the vesting schedule in its discretion. We did not engage in any option repricing or other modification to any of our outstanding equity awards during the fiscal year ended December 31, 2009.

Our board of directors determined not to grant any further awards under the 2005 Equity Plan after the completion of our initial public offering. We have adopted the 2010 Equity Plan under which we expect to make all future awards.

***Amended and Restated 2010 Stock Option and Incentive Plan***

In February 2010, our board of directors, upon the recommendation of our compensation committee, approved the 2010 Equity Plan, which was also approved by our stockholders. Our board of directors subsequently approved the amendment and restatement of our 2010 Equity Plan, which was approved by our stockholders at our annual stockholders meeting held in July 2010. The 2010 Equity Plan became effective upon the consummation of our initial public offering and replaced the 2005 Equity Plan, as our board of directors determined not to make additional awards under that plan once the 2010 Equity Plan became effective. The 2010 Equity Plan provides flexibility to our compensation committee to use various equity-based incentive awards as compensation tools to motivate our workforce.

We initially reserved 233,644 shares of our common stock for the issuance of awards under the 2010 Equity Plan plus an additional 35,670 shares of common stock available for grant under our 2005 Equity Plan, which shares will be added to the shares reserved under our 2010 Equity Plan, and an additional 200,000 shares that were added by the amendment and restatement approved at our 2010 annual stockholders meeting. The 2010 Equity Plan provides that the number of shares reserved and available for issuance under the plan will automatically increase each January 1, beginning in 2011, by 4% of the outstanding number of shares of common stock on the immediately preceding December 31. This number is subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization.

The shares we issue under the 2010 Equity Plan are authorized but unissued shares or shares that we reacquire. The shares of common stock underlying any awards that are forfeited, canceled, held back upon exercise or settlement of an award to satisfy the exercise price or tax withholding, reacquired by us prior to vesting, satisfied without any issuance of stock, expire or are otherwise terminated (other than by exercise) under the 2010 Equity Plan are added back to the shares of common stock available for issuance under the 2010 Equity Plan.

The 2010 Equity Plan is administered by our board of directors under recommendation by our compensation committee. Our board of directors has full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted, to make any combination of awards to participants and to determine the specific terms and conditions of each award, subject to the provisions of the 2010 Equity Plan. The board of directors may delegate to our compensation committee or our Chief Executive Officer the authority to grant options to certain individuals. Persons eligible to participate in the 2010 Equity Plan will be those of our full or part-time officers, employees, non-employee directors and other key persons (including consultants and prospective employees) as selected from time to time by our board of directors in its discretion.

The 2010 Equity Plan permits the granting of (i) options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Internal Revenue Code and (ii) options that do not so qualify. The option exercise price of each option will be determined by our compensation committee but may not be less than 100% of the fair market value of the common stock on the date of grant. The

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term of each option will be fixed by our compensation committee and may not exceed 10 years from the date of grant. Our compensation committee will determine at what time or times each option may be exercised.

Our board of directors may award stock appreciation rights subject to such conditions and restrictions as our compensation board of directors may determine. Stock appreciation rights entitle the recipient to shares of common stock equal to the value of the appreciation in the stock price over the exercise price. The exercise price shall not be less than the fair market value of the common stock on the date of grant.

Our board of directors may award restricted shares of common stock to participants subject to such conditions and restrictions as our compensation committee may determine. These conditions and restrictions may include the achievement of certain performance goals and/or continued employment with us through a specified restricted period. Our compensation committee may award restricted stock units to any participants. Restricted stock units are ultimately payable in the form of shares of common stock and may be subject to such conditions and restrictions as our compensation committee may determine. These conditions and restrictions may include the achievement of certain performance goals and/or continued employment through a specified vesting period. Our board of directors may also grant shares of common stock which are free from any restrictions under the 2010 Equity Plan. Unrestricted stock may be granted to any participant in recognition of past services or other valid consideration and may be issued in lieu of cash compensation due to such participant.

Our board of directors may grant performance share awards to any participant which entitles the recipient to receive shares of common stock upon the achievement of certain performance goals and such other conditions as our compensation committee shall determine.

Our board of directors may grant dividend equivalent rights to participants which entitle the recipient to receive credits for dividends that would be paid if the recipient had held specified shares of common stock.

Our board of directors may grant cash bonuses under the 2010 Equity Plan to participants. The cash bonuses may be subject to the achievement of certain performance goals.

The 2010 Equity Plan also provides that upon the effectiveness of a sale event as defined in the 2010 Equity Plan, except as otherwise provided by our compensation committee in the award agreement, all awards will automatically terminate, unless the parties to the sale event agree that such awards will be assumed or continued by the successor entity. Awards with conditions and restrictions relating to the attainment of performance goals may become vested and non-forfeitable in connection with a sale event in the compensation committee's discretion. In addition, in the case of a sale event in which our stockholders will receive cash consideration, we may make or provide for a cash payment to participants holding options and stock appreciation rights equal to the difference between the per share cash consideration and the exercise price of the options or stock appreciation rights.

No awards may be granted under the 2010 Equity Plan after the date that is 10 years from the date of stockholder approval.

### ***2010 Employee Stock Purchase Plan***

Our board of directors adopted the Anthera Pharmaceuticals, Inc. 2010 Employee Stock Purchase Plan, or the 2010 ESPP, and our stockholders approved the 2010 ESPP at our 2010 annual stockholders' meeting. We have reserved 100,000 shares of common stock for issuance thereunder plus on January 1, 2011 and each January 1 thereafter, the number of shares of stock reserved and available for issuance under the Plan shall be cumulatively increased by the lesser of (i) one percent (1%) of the number of



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shares of common stock issued and outstanding on the immediately preceding December 31 or (ii) 250,000 shares of common stock. Under the 2010 ESPP, eligible employees of the Company and certain designated subsidiaries of the Company may authorize the Company to deduct amounts from their compensation, which amounts are used to enable the employees to purchase shares of the Company's common stock. The purpose of the 2010 ESPP is to attract and retain key personnel, and encourage stock ownership by the Company's employees.

The 2010 ESPP is a broad-based employee stock purchase plan under Section 423 of the Internal Revenue Code of 1986, as amended, and the regulations thereunder, or the Code.

The shares that are reserved under the 2010 ESPP have an aggregate value of approximately \$0.4 million based on the closing price of the common stock as reported on The NASDAQ Global Market on September 30, 2010.

The 2010 ESPP is administered by the person or persons appointed by the Company's board of directors. The 2010 ESPP provides that all employees of the Company and any designated subsidiaries of the Company who work at least 20 hours per week are eligible to participate in the 2010 ESPP, except for persons who are deemed under Section 423(b)(3) of the Code to own five percent (5%) or more of the voting stock of the Company. Participation by any eligible employee is voluntary. The number of employees potentially eligible to participate in the 2010 ESPP is approximately 20 persons.

The 2010 ESPP provides for two offering periods within each year, and the first commenced on September 1, 2010 and will end on December 31, 2010. Thereafter, offering periods will commence on the first business day occurring on or after each January 1 and ending on the last business day occurring on or before the following June 30, and the second commencing on the first business day occurring on or after each July 1 and ending on the last business day occurring on or before the following December 31. Eligible employees may elect to become participants in the 2010 ESPP by enrolling prior to each semi-annual date to purchase shares under the 2010 ESPP. Shares are purchased through the accumulation of payroll deductions of not less than one percent (1%) nor more than ten percent (10%) of each participant's compensation. The maximum number of shares of common stock that can be purchased under the 2010 ESPP during any one calendar year is that number having a fair market value of \$25,000 on the first day of the purchase period pursuant to which the shares are purchased. The number of shares to be purchased with respect to any purchase period will be the lesser of (a) the number of shares determined by dividing the participant's balance in the plan account on the last day of the purchase period by the purchase price per share for the stock, (b) 5,000 shares, and (c) such other lesser maximum number of shares as shall have been established by the administrator in advance of the offering. The purchase price per share will be 85% of the fair market value of the common stock as of the first date or the ending date of the applicable semi-annual purchase period, whichever is less.

A participant's right to purchase shares during a purchase period under the 2010 ESPP is not transferable by the participant except by will or by the laws of descent and distribution. Employees may cease their participation in the offering at any time during the offering period, and participation automatically ceases on termination of employment with the Company.

The number of shares that are reserved for issuance under the 2010 ESPP is subject to adjustment for stock splits and similar events. The proceeds received by the Company from exercise under the 2010 ESPP will be used for the general purposes of the Company. Shares issued under the 2010 ESPP may be authorized but unissued shares or shares reacquired by the Company and held in its treasury.

The 2010 ESPP shall remain in full force and effect until suspended or discontinued by our board of directors. Our board of directors may, at any time, terminate the 2010 ESPP; provided that the 2010 ESPP shall automatically terminate in accordance with its terms as of the tenth anniversary of its



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adoption by the board of directors. Our board of directors may at any time, and from time to time, amend the 2010 ESPP in any respect, *except* that without the approval within 12 months of such board action by the stockholders, no amendment may be made increasing the number of shares approved for the 2010 ESPP or making any other change that would require stockholder approval in order for the 2010 ESPP, as amended, to qualify as an employee stock purchase plan under Section 423(b) of the Code.

### ***401(k) Savings Plan***

We have established a 401(k) plan to allow our employees to save on a tax-favorable basis for their retirement. We do not match any contributions made by any employees, including our named executive officers, pursuant to the plan.

### **Pension Benefits**

None of our named executive officers participate in or have account balances in pension benefit plans sponsored by us.

### **Nonqualified Defined Contribution and Other Nonqualified Defined Compensation Plans**

None of our named executive officers participate in or have account balances in non-qualified defined contribution plans or other deferred compensation plans maintained by us.

### **Proprietary Information and Inventions Agreements**

Each of our named executive officers has also entered into a standard form agreement with respect to proprietary information and inventions. Among other things, this agreement obligates each named executive officer to refrain from disclosing any of our proprietary information received during the course of employment and, with some exceptions, to assign to us any inventions conceived or developed during the course of employment.

### **Severance and Change in Control Arrangements**

We consider it essential to the best interests of our stockholders to foster the continuous employment of our key management personnel. In this regard, we recognize that the possibility of a change in control may exist and that the uncertainty and questions that it may raise among management could result in the departure or distraction of management personnel to the detriment of the Company and our stockholders. In order to reinforce and encourage the continued attention and dedication of certain key members of management, we have entered into several change in control agreements and severance agreements with certain of our executive officers.

In these agreements, the definition of change in control generally means the occurrence, in a single transaction or in a series of related transactions of any one or more of the following events, subject to specified events: (a) any Exchange Act Person (defined in the change in control agreements generally as any natural person, entity, or group not including the Company or any subsidiaries) becomes the owner of securities representing more than 50% of the combined voting power of our then outstanding securities; (b) a merger, consolidation or similar transaction involving the Company is consummated and immediately after the consummation of such merger, consolidation, or similar transaction, our stockholders immediately prior thereto do not own either outstanding voting securities representing more than 50% of the combined outstanding voting power of the surviving entity or more than 50% of the combined outstanding voting power of the parent of the surviving entity in such merger, consolidation, or similar transaction; or (c) a sale, lease, license or other disposition of all or substantially all of our consolidated assets is consummated.



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In these agreements, *cause* means: (a) gross negligence or willful misconduct in the performance of duties that is not cured within 30 days of written notice, where such gross negligence or willful misconduct has resulted or is likely to result in substantial and material damage to the Company; (b) repeated unexplained or unjustified absence; (c) a material and willful violation of any federal or state law; (d) commission of any act of fraud with respect to the Company; or (e) commission of an act of moral turpitude or conviction of or entry of a plea of nolo contendere to a felony.

***Constructive Termination*** means an officer's resignation within 180 days of the occurrence of any of the following events without the officer's prior written consent, provided the officer provides notice within 90 days of the first occurrence of such event and such event remains uncured 30 days after delivery of the written notice: (a) a material diminution of such officer's duties, responsibilities or authority; (b) a material diminution of base compensation; or (c) a material change in the geographic location at which the officer provides services to us.

### ***Paul F. Truex***

On October 15, 2009, we entered into an amended and restated change in control agreement with Mr. Truex. Upon the occurrence of a change in control or within 12 months thereafter, if we terminate Mr. Truex's employment for any reason other than for cause or if there is a constructive termination, in either case, Mr. Truex is entitled to receive as severance compensation 100% of his then-current base salary for a period of up to 12 months and payment of continuation coverage premiums for health, dental, and vision benefits for Mr. Truex and his covered dependants, if any, for a period of 12 months pursuant to COBRA. In addition, Mr. Truex is entitled to receive (i) 12 months accelerated vesting of any unvested options to purchase our common stock and (ii) the immediate lapsing of any vesting restrictions on any restricted stock awards as of the date of termination.

### ***Christopher P. Lowe***

On October 12, 2009, we entered into an amended and restated change in control agreement with Mr. Lowe. Upon the occurrence of a change in control or within 12 months thereafter, if we terminate Mr. Lowe's employment for any reason other than for cause or if there is a constructive termination, in either case, Mr. Lowe is entitled to receive as severance compensation 100% of his then-current base salary for a period of up to 12 months and payment of continuation coverage premiums for health, dental, and vision benefits for Mr. Lowe and his covered dependants, if any, for a period of 12 months pursuant to COBRA. In addition, Mr. Lowe is entitled to receive (i) 12 months accelerated vesting of any unvested options to purchase our common stock and (ii) the immediate lapsing of any vesting restrictions on any restricted stock awards as of the date of termination.

### ***James E. Pennington, M.D.***

On October 15, 2009, we entered into an amended and restated severance benefits agreement with Dr. Pennington, which provides certain benefits upon the termination of employment. If we terminate Dr. Pennington's employment for any reason other than for cause or if there is a constructive termination, in either case, Dr. Pennington is entitled to receive as severance compensation 100% of his then-current base salary and payment of continuation coverage premiums for health, dental, and vision benefits for Dr. Pennington and his covered dependents, if any, for a period of 12 months pursuant to COBRA. In addition, Dr. Pennington is entitled to receive: (i) 12 months accelerated vesting of his unvested options to purchase our common stock and (ii) the immediate lapsing of any vesting restrictions on any restricted stock awards as of the date of termination. This agreement was terminated on May 1, 2010, and Dr. Pennington is therefore no longer entitled to the severance benefits thereunder.

On June 2, 2010, we entered into an employment agreement with Dr. Pennington, which replaces the amended and restated severance benefits agreement entered into on October 15, 2009. The employment



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agreement provides that, as of May 1, 2010, and for a period of one year thereafter, Dr. Pennington will serve as our Senior Clinical Fellow. Dr. Pennington's annual base salary will remain unchanged and any unvested portions of Dr. Pennington's outstanding option grants shall be modified in that they shall vest (and the repurchase option with respect to any early exercised option grants shall lapse) over twelve months from May 1, 2010.

In addition, should we terminate Dr. Pennington's employment prior to May 1, 2011 for any reason other than for cause or if there is a constructive termination, then Dr. Pennington is entitled to receive his base salary and COBRA premiums for health benefits to the same extent as if he had remained employed through May 1, 2011. Additionally, upon such termination of employment, all unvested shares to purchase our common stock pursuant to stock options shall become vested and any vesting restrictions on any restricted stock awards that Dr. Pennington holds as of the date of such termination of employment shall lapse.

***Colin Hislop, M.D.***

On October 15, 2009, we entered into an amended and restated change in control agreement with Dr. Hislop. Upon the occurrence of a change in control or within 12 months thereafter, if we terminate Dr. Hislop's for any reason other than for cause or if there is a constructive termination, in either case, Dr. Hislop is entitled to receive as severance compensation 100% of his then-current base salary for a period of up to six months and payment of continuation coverage premiums for health, dental, and vision benefits for Dr. Hislop and his covered dependants, if any, for a period of six months pursuant to COBRA. In addition, Dr. Hislop is entitled to receive (i) six months accelerated vesting of any unvested options to purchase our common stock and (ii) the immediate lapsing of any vesting restrictions on any restricted stock awards as of the date of termination.

***Debra Odink, Ph.D.***

On October 15, 2009, we entered into an amended and restated change in control agreement with Dr. Odink. Upon the occurrence of a change in control or within 12 months thereafter, if we terminate Dr. Odink's employment for any reason other than for cause or if there is a constructive termination, in either case, Dr. Odink is entitled to receive as severance compensation 100% of her then-current base salary for a period of up to six months and payment of continuation coverage premiums for health, dental, and vision benefits for Dr. Odink and her covered dependants, if any, for a period of six months pursuant to COBRA. In addition, Dr. Odink is entitled to receive (i) six months accelerated vesting of any unvested options to purchase our common stock and (ii) the immediate lapsing of any vesting restrictions on any restricted stock awards as of the date of termination.

***Georgina Kilfoil***

On July 7, 2010, we entered into a change in control agreement with Ms. Kilfoil. Upon the occurrence of a change in control or within 12 months thereafter, if we terminate Ms. Kilfoil's employment for any reason other than for cause or if there is a constructive termination, in either case, Ms. Kilfoil is entitled to receive as severance compensation 100% of her then-current base salary for a period of up to 12 months and payment of continuation coverage premiums for health, dental and vision benefits for Ms. Kilfoil and her covered dependants, if any, for a period of 12 months pursuant to COBRA. In addition, Ms. Kilfoil is entitled to receive (i) 12 months accelerated vesting of any unvested options to purchase our common stock and (ii) the immediate lapsing of any vesting restrictions on any restricted stock awards as of the date of termination.

All payments and benefits are conditioned on the executive's execution and non-revocation of a general release agreement at the time of termination. All payments due upon termination (as discussed in this



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entire section) may be delayed up to six months from the termination date if necessary to avoid adverse tax treatment under Section 409A of the Internal Revenue Code.

**Potential Payments Upon Change in Control and Termination**

The tables below reflect potential payments and benefits available for each of our named executive officers upon termination in connection with a change in control or termination, assuming the date of occurrence is December 31, 2009. See section entitled Severance and Change in Control Agreements above.

***Named Executive Officer Benefits and Payments Upon Termination<sup>(1)</sup>***

Name	Involuntary Termination <sup>(2)</sup>	Involuntary Termination within One Year of Change in Control <sup>(3)</sup>
Paul F. Truex		\$ 310,630
Christopher P. Lowe		\$ 259,483
James E. Pennington, M.D.	\$ 297,385	\$ 297,385
Colin Hislop, M.D.		\$ 139,792
Debra Odink, Ph.D.		\$ 104,663

<sup>(1)</sup> Assumes triggering event effective as of December 31, 2009. Upon a voluntary termination or termination for cause, each named executive officer would receive any earned but unpaid base salary and unpaid vacation accrued until December 31, 2009. These payments would be available to all employees upon termination.

<sup>(2)</sup> Includes continuation of base salary determined as of December 31, 2009 and health, dental and vision benefits for 12 months for Dr. Pennington.

<sup>(3)</sup> Includes continuation of base salary determined as of December 31, 2009 and health, dental and vision benefits for 12 months for Mr. Truex, Mr. Lowe and Dr. Pennington. All other named executive officers receive six months continuation of base salary and benefits.

***Acceleration of Vesting of Options upon Termination<sup>(1)</sup>***

Name	Number of Shares of Accelerated Stock and Value Upon Involuntary Termination and in Connection with a Change in Control <sup>(2)</sup>	Number of Shares of Accelerated Stock and Value Upon Involuntary Termination and not in Connection with a Change in Control <sup>(3)</sup>
Paul F. Truex	\$ 73,472 <sup>(4)</sup>	
Christopher P. Lowe	\$ 189,183 <sup>(5)</sup>	
James E. Pennington, M.D.	\$ 261,169 <sup>(6)</sup>	\$ 261,169 <sup>(6)</sup>
Colin Hislop, M.D.	\$ 8,015 <sup>(7)</sup>	
Debra Odink, Ph.D.	\$ 10,019 <sup>(8)</sup>	

<sup>(1)</sup> Assumes triggering event effective as of December 31, 2009 and excludes vested stock held as of such date. There was no public market for our common stock in 2009. We have estimated the market value of the accelerated option shares based on the difference between our initial public offering price of \$7.00 per share and the exercise price of

such accelerated options.

- (2) Includes acceleration of options for 12 months for Mr. Truex, Mr. Lowe and Dr. Pennington. All other named executive officers have six months acceleration of options.
- (3) Includes acceleration of options for 12 months for Dr. Pennington.
- (4) 12,897 of Mr. Truex's options would accelerate upon involuntary termination and in connection with a change of control.
- (5) 33,510 of Mr. Lowe's options would accelerate upon involuntary termination and in connection with a change of control.

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- (6) 39,426 of Dr. Pennington's options would accelerate upon involuntary termination, including 26,285 shares with respect to which the Company's right of repurchase would lapse, which shares were acquired by Dr. Pennington upon exercise of options containing an early exercise feature.
- (7) 1,460 of Dr. Hislop's options would accelerate upon involuntary termination and in connection with a change of control.
- (8) 1,825 of Dr. Odink's options would accelerate upon involuntary termination and in connection with a change of control.

## **Director Compensation**

In June 2008, the board of directors, upon the recommendation of our compensation committee, adopted a formal compensation program for the Chairman of our board of directors and our independent directors who were not affiliated with any of our investors. Pursuant to this program, the chairman of our board of directors, Dr. Henney, received a \$20,000 annual retainer fee plus an additional \$60,000 as consideration for his services as Chairman. Pursuant to this program, two of our directors, Mr. Santel and Mr. Thompson, received a \$20,000 annual retainer fee, as well as \$2,000 for each board meeting attended in person (\$1,000 for meetings attended by telephone conference).

Under the director compensation program effective prior to January 2010, each non-employee director initially received (i) a nonqualified stock option to purchase 14,602 shares of our common stock upon election and (ii) each year thereafter an additional nonqualified stock option to purchase 5,841 shares of our common stock. One quarter of the shares issuable pursuant to the initial nonqualified stock option vested upon the completion of one year of continuous service by such director following the date of commencement of the vesting of such option; the remaining three quarters of the shares issuable pursuant to each such option vested in equal monthly installments over a period of three years until the date that is the fourth anniversary of the date of the option grant. The shares issuable pursuant to the annual nonqualified stock option vested in equal monthly installments over a period of four years. All of these options have an exercise price equal to the fair market value of our common stock on the date of the grant. The option numbers set forth above take into account our 1-for-1.712 reverse stock split of our common stock effected on February 22, 2010.

In January 2010, the board of directors approved changes to the current director compensation program, which apply to all non-employee directors. Each non-employee director receives a \$40,000 annual retainer fee instead of per-meeting fees. In consideration for their services, the Chairman of our board of directors receives an additional \$40,000, the chairman of our Audit Committee receives an additional \$15,000 and the chairman of our compensation committee receives an additional \$10,000, each on an annual basis.

In addition, since the completion of our initial public offering, each new non-employee director receives a non-qualified stock option to purchase 25,000 shares of our common stock upon joining the Board, which vests over a four-year period from the date of grant. In addition, each non-employee director receives a non-qualified stock option to purchase 12,000 shares of our common stock each year, which vests over a one-year period from the date of grant. Any new Chairman of our board of directors would receive a non-qualified stock option to purchase 45,000 shares of our common stock upon election to the Board, which would vest over a four-year period from the date of grant. Our Chairman also receives a non-qualified stock option to purchase 15,000 shares of our common stock each year, which vests over a one-year period from the date of grant.

All members of our board of directors are eligible to receive full reimbursement for travel expenses arising from their attendance of our board meetings.

**Table of Contents****Director Compensation Table 2009**

The following table sets forth information with respect to the compensation earned by our non-employee directors during the fiscal year ended December 31, 2009.

<b>Name</b>	<b>Fees Earned or Paid in Cash (\$)</b>	<b>Option Awards (\$)<sup>(1)</sup></b>	<b>Total (\$)</b>
Christopher S. Henney, Ph.D. (Chairman)	\$ 80,000	\$ 5,875 <sup>(2)</sup>	\$ 85,875
Annette Bianchi		\$ 5,875 <sup>(3)</sup>	\$ 5,875
James I. Healy, M.D., Ph.D.		\$ 5,875	\$ 5,875
A. Rachel Leheny, Ph.D.		\$ 14,688 <sup>(4)</sup>	\$ 14,688
Donald J. Santel	\$ 35,000	\$ 5,875 <sup>(5)</sup>	\$ 40,875
Daniel K. Spiegelman <sup>(6)</sup>			
David E. Thompson	\$ 34,000	\$ 5,875 <sup>(7)</sup>	\$ 39,875

<sup>(1)</sup> This column reflects the aggregate grant date fair value of equity awards granted in 2009 and calculated in accordance with FASB ASC 718, excluding the effect of estimated forfeitures. See Note 8 to our financial statements for a discussion of the assumptions made in determining the valuation of option awards.

<sup>(2)</sup> Dr. Henney held 40,887 shares underlying stock options as of December 31, 2009.

<sup>(3)</sup> Ms. Bianchi held 20,443 shares underlying stock options as of December 31, 2009.

<sup>(4)</sup> Dr. Leheny held 14,602 shares underlying stock options as of December 31, 2009.

<sup>(5)</sup> Mr. Santel held 20,443 shares underlying stock options as of December 31, 2009.

<sup>(6)</sup> Mr. Spiegelman joined our board of directors on February 2, 2010.

<sup>(7)</sup> Mr. Thompson held 17,523 shares underlying stock options as of December 31, 2009.

**Table of Contents****CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS**

Since January 1, 2007, we have engaged in the following transactions with our directors, executive officers, holders of more than 5% of our voting securities, each of whom we refer to as a Beneficial Owner, or any member of the immediate family of any of the foregoing persons.

**Private Placements of Securities*****2008 Note Financing***

The following discussion does not give effect to the conversion of our preferred stock into shares of common stock in connection with our initial public offering. On February 15, 2008 and May 14, 2008, we sold convertible promissory notes, or the 2008 notes, to certain of our existing investors for an aggregate purchase price of \$12.2 million. The 2008 notes accrued interest at a rate of 4.2% per annum and had a maturity date of the earliest of (i) September 30, 2008, (ii) immediately prior to (A) our underwritten public offering pursuant to the Securities Act of 1933, as amended, or the Securities Act, (B) any consolidation or merger of the Company with or into another into any other corporation or entity or (C) a sale of all or substantially of the assets or intellectual property of the Company or (iii) an event of default pursuant to the terms of the 2008 notes. In August 2008, in connection with our Series B-2 preferred stock financing described below, the full principal amount of the 2008 notes, along with accrued but unpaid interest thereon of \$155,630, were automatically converted into an aggregate of 2,264,178 shares of our Series B-2 convertible preferred stock at a conversion price of approximately \$5.46, or 75% of the issue price of our Series B-2 convertible preferred stock sold in our Series B-2 preferred stock financing.

The following table summarizes the participation in the sale of the 2008 notes by any of our current directors, executive officers, Beneficial Owners or any member of the immediate family of any of the foregoing persons:

<b>Name</b>	<b>Aggregate Consideration  Paid</b>	<b>Series B-2 Convertible Preferred Shares Issued Upon Conversion of Principal of Notes</b>
VantagePoint Venture Partners IV, L.P. and affiliated entities, or VantagePoint	\$ 5,652,174 <sup>(1)</sup>	1,035,765
Sofinnova Venture Partners VI, L.P. and affiliated entities, or Sofinnova	\$ 4,662,056 <sup>(2)</sup>	854,326
A.M. Pappas Life Science Ventures III, L.P. and affiliated entities, or Pappas	\$ 1,290,512 <sup>(3)</sup>	236,487
<b>TOTAL:</b>	<b>\$ 11,604,742</b>	<b>2,126,578</b>

<sup>(1)</sup> Consists of (i) a convertible promissory note with a principal amount of \$1,536,261 purchased by VantagePoint Venture Partners IV (Q), L.P. on February 15, 2008, (ii) a convertible promissory note with a principal amount of \$3,584,609 purchased by VantagePoint Venture Partners IV (Q), L.P. on May 14, 2008, (iii) a convertible promissory note with a principal amount of \$153,795 purchased by VantagePoint Venture Partners IV, L.P. on February 15, 2008, (iv) a convertible promissory note with a principal amount of \$358,857 purchased by VantagePoint Venture Partners IV, L.P. on May 14, 2008, (v) a convertible promissory note with a principal

amount of \$5,596 purchased by VantagePoint Venture Partners IV Principals Fund, L.P. on February 15, 2008 and (vi) a convertible promissory note with a principal amount of \$13,057 purchased by VantagePoint Venture Partners IV Principals Fund, L.P. on May 14, 2008. Annette Bianchi, a member of our board of directors, is a Managing Director at VantagePoint. Alan E. Salzman, through his authority to cause the general partner of the limited partnerships that directly hold such shares to act, may be deemed to have voting and investment power with respect to such shares. Mr. Salzman disclaims beneficial ownership with respect to such shares and other shares as described in this section, except to the extent of his pecuniary interest therein.

*footnotes continued on following page*

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- (2) Consists of (i) a convertible promissory note with a principal amount of \$948,617 purchased by Sofinnova Venture Partners VI, L.P. on February 15, 2008 and (ii) a convertible promissory note with a principal amount of \$3,713,439 purchased by Sofinnova Venture Partners VI, L.P. on May 14, 2008. Alain Azan, Eric Buatois, Michael Powell and Dr. James I. Healy are the managing members of the general partner of the limited partnership that directly holds such shares, and as such, may be deemed to share voting and investment power with respect to such shares. Dr. Healy is a member of our board of directors. Messrs. Azan, Buatois and Powell and Dr. Healy disclaim beneficial ownership, except to the extent of their proportionate pecuniary interest in Sofinnova.
- (3) Consists of (i) a convertible promissory note with a principal amount of \$223,272 purchased by A.M. Pappas Life Science Ventures III, L.P. on February 15, 2008, (ii) a convertible promissory note with a principal amount of \$13,881 purchased by PV III CEO Fund, L.P. on February 15, 2008, (iii) a convertible promissory note with a principal amount of \$991,704 purchased by A.M. Pappas Life Science Ventures III, L.P. on May 14, 2008 and (iv) a convertible promissory note with a principal amount of \$61,655 purchased by PV III CEO Fund, L.P. on May 14, 2008. Arthur M. Pappas, in his role as chairman of the investment committee of AMP&A Management III, LLC, the general partner of A. M. Pappas Life Science Ventures III, L.P. and PV III CEO Fund, L.P., has voting and investment authority over these shares. Mr. Pappas disclaims beneficial ownership of these shares except to the extent of his pecuniary interest arising therein.

**Series B-2 Preferred Stock Financing**

The following discussion does not give effect to the conversion of our preferred stock into shares of common stock in connection with our initial public offering. On August 12, 2008, we sold in a private placement (i) an aggregate of 3,226,244 shares of our Series B-2 convertible preferred stock, \$0.001 par value per share, and (ii) warrants, which we refer to as the 2008 warrants, to purchase an aggregate of 240,516 shares of our common stock, par value \$0.001 per share, at an exercise price of \$1.34 per share, which transaction we refer to as our Series B-2 preferred stock financing. Excluding the 2,264,178 shares of our Series B-2 convertible preferred stock that were issued upon the conversion of \$12.2 million of principal and \$155,630 interest accrued on the 2008 notes at a conversion price of approximately \$5.46, or 75% of the issue price of our Series B-2 convertible preferred stock, the remaining 962,066 shares were sold at a per share price of \$7.28.

The following table summarizes the participation in our Series B-2 preferred stock financing by any of our current directors, executive officers, Beneficial Owners or any member of the immediate family of any of the foregoing persons:

Name	Aggregate Consideration Paid	Shares of Series B-2 Convertible Preferred Stock	Shares of Common Stock Issuable Upon the Exercise of 2008 Warrants
VantagePoint	\$ 5,727,421 <sup>(1)</sup>	1,049,554	
Sofinnova	\$ 4,719,515 <sup>(2)</sup>	864,855	
Pappas	\$ 1,306,155 <sup>(3)</sup>	239,353	
Caxton Advantage Life Sciences Fund, L.P. <sup>(4)</sup>	\$ 3,500,003	481,033	120,258
HBM BioCapital, L.P. and affiliated entities, or HBM BioCapital <sup>(5)</sup>	\$ 3,500,003	481,033	120,258
<b>TOTAL:</b>	<b>\$ 18,753,097</b>	<b>3,115,828</b>	<b>240,516</b>

- (1) This aggregate consideration was paid by conversion of (i) convertible promissory notes in a total principal amount of \$5,120,870 issued to VantagePoint Venture Partners IV (Q), L.P. on February 15, 2008 and May 14, 2008 and \$68,176 accrued but unpaid interest thereon, (ii) convertible promissory notes in a total principal amount of \$512,652 issued to VantagePoint Venture Partners IV, L.P. on February 15, 2008 and May 14, 2008 and \$6,825 accrued but unpaid interest thereon and (iii) convertible promissory notes in a total principal amount of \$18,652 issued to VantagePoint Venture Partners IV Principals Fund, L.P. on February 15, 2008 and May 14, 2008 and \$246 accrued but unpaid interest thereon. Includes 950,897 shares of

*footnotes continued on following page*

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Series B-2 convertible preferred stock owned of record by VantagePoint Venture Partners IV (Q), L.P., 95,194 shares of Series B-2 convertible preferred stock owned of record by VantagePoint Venture Partners IV, L.P. and 3,463 shares of Series B-2 convertible preferred stock owned of record by VantagePoint Venture Partners IV Principals Fund, L.P.

- (2) This aggregate consideration was paid by conversion of convertible promissory notes in a total principal amount of \$4,662,056 issued to Sofinnova Venture Partners VI, L.P. on February 15, 2008 and May 14, 2008 and \$57,459 accrued but unpaid interest thereon.
- (3) This aggregate consideration was paid by conversion of (i) convertible promissory notes in a total principal amount of \$1,214,977 issued to A.M. Pappas Life Science Ventures III, L.P. on February 15, 2008 and May 14, 2008 and \$14,729 accrued but unpaid interest thereon and (ii) convertible promissory notes in a total principal amount of \$75,536 issued to PV III CEO Fund, L.P. on February 15, 2008 and May 14, 2008 and \$913 accrued but unpaid interest thereon. Includes 225,344 shares of Series B-2 convertible preferred stock owned of record by A. M. Pappas Life Science Ventures III, L.P. and 14,009 shares of Series B-2 convertible preferred stock owned of record by PV III CEO Fund, L.P.
- (4) Dr. A. Rachel Leheny, a member of our board of directors, is (i) a Managing Director of Caxton Advantage Venture Partners, L.P., which is the General Partner of Caxton Advantage Life Sciences Fund, L.P., a life-sciences venture capital fund that she co-founded in 2006 and (ii) a member of Advantage Life Sciences Partners LLC. Caxton Advantage Venture Partners, L.P. has voting and investment power with respect to such shares. Decisions by Caxton Advantage Venture Partners, L.P. with respect to such shares are made by Advantage Life Sciences Partners, LLC, the Managing General Partner of Caxton Advantage Venture Partners, L.P., together with the investment committee of Caxton Advantage Venture Partners, L.P. Dr. Leheny and Eric Roberts have authority to take action on behalf of Advantage Life Sciences Partners, LLC as members of Advantage Life Sciences Partners, LLC. Mr. Roberts and Dr. Leheny and the members of the Caxton Advantage Venture Partners, L.P. investment committee disclaim beneficial ownership, except to the extent of their proportionate pecuniary interests, either directly, or indirectly through Caxton Advantage Venture Partners, L.P. (or through any other entity which is a limited partner in Caxton Advantage Life Sciences Fund, L.P.), in Caxton Advantage Life Sciences Fund, L.P.
- (5) Includes 408,878 shares of Series B-2 convertible preferred stock owned of record by HBM BioCapital (EUR) L.P. and 72,155 shares of Series B-2 convertible preferred stock owned of record by HBM BioCapital (USD) L.P. The board of directors of HBM BioCapital Ltd., the general partner of both HBM BioCapital (EUR) L.P. and HBM BioCapital (USD) L.P., together the HBM BioCapital Funds, has sole voting and dispositive power with respect to such shares. The board of directors of HBM BioCapital Ltd. consists of John Arnold, Sophia Harris, Richard Coles, Dr. Andreas Wicki and John Urquhart, each of whom disclaims beneficial ownership with regard to the shares and other shares as described in this section, except to the extent of their proportionate pecuniary interests in HBM BioCapital Ltd.

***2009 Note and Warrant Financing***

In July and September 2009, we sold convertible promissory notes, or the 2009 notes, that were secured by a first priority security interest in all of our assets, and warrants, or the 2009 warrants, to purchase shares of our equity securities to certain of our existing investors for an aggregate purchase price of \$10.0 million. We refer to these transactions collectively as our 2009 note and warrant financing. The 2009 notes accrued interest at a rate of 8% per annum and had a maturity date of the earliest of (i) July 17, 2010, (ii) the date of the sale of all or substantially all of our equity interests or assets or (iii) an event of default pursuant to the terms of the 2009 notes. The 2009 notes were automatically convertible into the securities that were sold in our next equity financing at a 25% discount to the price to which such securities were sold to other investors, or they were alternatively convertible into shares of our Series B-2 convertible preferred stock in connection with a change of control of the Company. Each 2009 warrant is exercisable for the security into which each 2009 note was converted, at the price at which that security was sold to other investors. Depending on when the 2009 notes converted, each 2009 warrant would be exercisable for a number of shares equal to the quotient obtained by dividing (x) (i) 25% of the principal amount of the accompanying 2009

notes, in the event the conversion occurred prior to April 1, 2010, or (ii) 50% of the principal amount of the accompanying 2009 notes, in the event the conversion occurred on or after April 1, 2010, by (y) the purchase price of the securities into which the note was ultimately converted. In addition, if a sale of all or substantially all of our equity interests or assets occurred prior to our next equity financing and any 2009 note had not been converted, we were obligated to pay such 2009 note holder an amount equal to the accrued interest and two times the outstanding principal amount on such note in conjunction with the closing of such sale. The 2009 notes converted into shares of common stock in connection with our initial public offering, and thus no principal or interest payments were ever made on the notes and no amounts remain due under such notes.

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The following table summarizes the participation in the 2009 bridge financing by any of our current directors, executive officers, Beneficial Owners or any member of the immediate family of any of the foregoing persons:

Name	Aggregate Consideration Paid	Shares Acquired upon Conversion of Notes <sup>(a)</sup>	Shares Underlying Outstanding Warrants <sup>(b)</sup>
VantagePoint	\$ 4,569,675 <sup>(1)</sup>	907,345	163,200
Sofinnova	\$ 2,951,720 <sup>(2)</sup>	586,088	105,418
Pappas	\$ 770,225 <sup>(3)</sup>	152,932	27,507
Caxton Advantage Life Sciences Fund, L.P.	\$ 854,190 <sup>(4)</sup>	169,605	30,506
HBM BioCapital	\$ 854,190 <sup>(5)</sup>	169,605	30,505
<b>TOTAL:</b>	<b>\$ 10,000,000</b>	<b>1,985,575</b>	<b>357,136</b>

<sup>(a)</sup> Numbers in this column were calculated by dividing (x) the sum of (i) principal and (ii) accrued interest by (y) the conversion price of \$5.25 per share.

<sup>(b)</sup> Numbers in this column were calculated by dividing (x) the quotient of (i) the principal and (ii) 25% by (y) the initial public offering price of \$7.00 per share.

<sup>(1)</sup> Consists of (i) a convertible promissory note with a principal amount of \$1,656,051 purchased by VantagePoint Venture Partners IV (Q), L.P. on July 17, 2009, (ii) a convertible promissory note with a principal amount of \$2,484,076 purchased by VantagePoint Venture Partners IV (Q), L.P. on September 9, 2009, (iii) a convertible promissory note with a principal amount of \$165,788 purchased by VantagePoint Venture Partners IV, L.P. on July 17, 2009, (iv) a convertible promissory note with a principal amount of \$248,681 purchased by VantagePoint Venture Partners IV, L.P. on September 9, 2009, (v) a convertible promissory note with a principal amount of \$6,031 purchased by VantagePoint Venture Partners IV Principals Fund, L.P. on July 17, 2009 and (vi) a convertible promissory note with a principal amount of \$9,047 purchased by VantagePoint Venture Partners IV Principals Fund, L.P. on September 9, 2009.

<sup>(2)</sup> Consists of (i) a convertible promissory note with a principal amount of \$1,180,688 purchased by Sofinnova Venture Partners VI, L.P. on July 17, 2009 and (ii) a convertible promissory note with a principal amount of \$1,771,032 purchased by Sofinnova Venture Partners VI, L.P. on September 9, 2009.

<sup>(3)</sup> Consists of (i) a convertible promissory note with a principal amount of \$290,058 purchased by A.M. Pappas Life Science Ventures III, L.P. on July 17, 2009, (ii) a convertible promissory note with a principal amount of \$435,086 purchased by A.M. Pappas Life Science Ventures III, L.P. on September 9, 2009, (iii) a convertible promissory note with a principal amount of \$18,032 purchased by PV III CEO Fund, L.P. on July 17, 2009 and (iv) a convertible promissory note with a principal amount of \$27,049 purchased by PV III CEO Fund, L.P. on September 9, 2009.

<sup>(4)</sup> Consists of (i) a convertible promissory note with a principal amount of \$341,676 purchased by Caxton Advantage Life Sciences Fund, L.P. on July 17, 2009 and (ii) a convertible promissory note with a principal amount of \$512,514 purchased by Caxton Advantage Life Sciences Fund, L.P. on September 9, 2009.

<sup>(5)</sup> Consists of (i) a convertible promissory note with a principal amount of \$290,424 purchased by HBM BioCapital (EUR) L.P. on July 17, 2009, (ii) a convertible promissory note with a principal amount of \$435,637 purchased by HBM BioCapital (EUR) L.P. on September 9, 2009, (iii) a convertible promissory note with a principal amount of \$51,252 purchased by HBM BioCapital (USD) L.P. on July 17, 2009 and (iv) a convertible promissory note with a principal amount of \$76,877 purchased by HBM BioCapital (USD) L.P. on September 9, 2009.

***2009 Equity Financing***

On September 25, 2009, we entered into a stock purchase agreement, as amended to add an additional purchaser on November 3, 2009, with certain existing holders of our preferred stock for the sale of shares of our common stock equal to \$20.5 million divided by the price per share at which shares of our common stock were sold to the public in our initial public offering, or IPO, minus any per-share underwriting discounts, commissions or fees. We refer to this transaction as the 2009 equity financing. Pursuant to the terms of the stock purchase agreement, the investors deposited \$20.5 million into an escrow account for the purchase of the shares. On December 11, 2009, we entered into a note purchase agreement and amended escrow agreement with the investors to release \$3.4 million of the \$20.5 million held in the escrow account and issued such investors convertible promissory notes for the released

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amount, which notes we refer to as the escrow notes and which are more fully described below. The balance of the funds, or \$17.1 million, held in the escrow account would be released simultaneously with the closing of an IPO in which the aggregate net proceeds to us (after underwriting discounts, commissions and fees) were at least \$50.0 million. On February 24, 2010, we amended the stock purchase agreement and escrow agreement with such holders to provide that the funds held in the escrow account would be released simultaneously with the closing of an IPO in which the aggregate net proceeds to us (after underwriting discounts, commissions and fees) were at least \$20.0 million. The funds held in the escrow account were released in connection with the closing of our initial public offering on March 4, 2010.

The following table summarizes commitments made to participate in the 2009 equity financing by any of our current directors, executive officers, Beneficial Owners or any member of the immediate family of any of the foregoing:

Name	Aggregate Consideration to be Paid upon Closing of the 2009 Equity Financing	Shares Issued upon Release of Escrow Account <sup>(a)</sup>
VantagePoint	\$ 7,586,035 <sup>(1)</sup>	1,152,891
Sofinnova	\$ 4,898,784	744,496
Pappas	\$ 1,279,265 <sup>(2)</sup>	194,416
Caxton Advantage Life Sciences Fund, L.P.	\$ 1,417,958	215,495
HBM BioCapital	\$ 1,417,958 <sup>(3)</sup>	215,495
<b>TOTAL:</b>	<b>\$ 16,600,000</b>	<b>2,522,793</b>

<sup>(a)</sup> Numbers in this column calculated by dividing the Aggregate Consideration to be Paid upon Closing of the 2009 Equity Financing by \$6.58 (which equals the price per share to the public in our initial public offering less the underwriting discounts, commissions and fees).

<sup>(1)</sup> Includes approximately \$6,872,948 to be paid by VantagePoint Ventures IV (Q), L.P., approximately \$688,053 to be paid by VantagePoint Venture Partners IV, L.P. and approximately \$25,034 to be paid by VantagePoint Venture Partners IV Principals Fund, L.P.

<sup>(2)</sup> Includes approximately \$1,204,428 to be paid by A.M. Pappas Life Science Ventures III, L.P. and approximately \$74,837 to be paid by PV III CEO Fund, L.P.

<sup>(3)</sup> Includes approximately \$1,205,264 to be paid by HBM BioCapital (EUR) L.P. and approximately \$212,694 to be paid by HBM BioCapital (USD) L.P.

One additional purchaser, Shionogi & Co., Ltd., who is not a current director, executive officer, Beneficial Owner or a member of the immediate family of any of the foregoing, had also committed \$0.5 million to our 2009 equity financing, and thus received 75,987 shares upon release of the escrow account.

**2009 Escrow Notes**

On December 11, 2009, we sold convertible promissory notes, or the escrow notes, that were secured by a first priority security interest in all of our assets to purchase shares of our equity securities to certain of our existing investors for an aggregate purchase price of \$3.4 million. The escrow notes accrued interest at a rate of 8% per annum and had a maturity date of the earlier of (i) July 17, 2010 or (ii) an event of default pursuant to the terms of the escrow notes. The escrow notes were automatically convertible into common stock upon the consummation of an IPO in which the aggregate net proceeds to us (after underwriting discounts, commissions and fees) were at least

\$50.0 million, at the price per share in which shares were sold to the public, minus any per-share underwriting discounts, commissions or fees. However, if an IPO was not consummated by February 28, 2010, the escrow notes became exchangeable for exchange notes in the same principal amount plus any accrued interest

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thereon, which would be automatically convertible into the securities that were sold in our next equity financing at a 25% discount to the price in which such securities were sold to other investors, or they were alternatively convertible into shares of our Series B-2 convertible preferred stock in connection with a change of control of the Company. In addition, each exchange note that would be issued would be accompanied by a warrant, which would be exercisable for the security into which the accompanying exchange note, if any, was converted, at the price at which that security was sold to other investors. Depending on when the exchange notes converted, each warrant would be exercisable for a number of shares equal to the quotient obtained by dividing (x) (i) 25% of the principal amount of the accompanying exchange notes, in the event the conversion occurred prior to April 1, 2010, or (ii) 50% of the principal amount of the accompanying exchange notes, in the event the conversion occurred on or after April 1, 2010, by (y) the purchase price of the securities into which the exchange note was ultimately converted. Furthermore, if a sale of all or substantially all of our equity interests or assets occurred prior to our next equity financing and any exchange note had not converted, we were obligated to pay such exchange note holder an amount equal to the accrued interest and two times the outstanding principal amount on such note in conjunction with the closing of such sale. On February 24, 2010, the note holders waived their right to exchange the escrow notes for exchange notes and warrants unless our initial public offering was not consummated by March 31, 2010. In addition, on February 24, 2010, we amended the note purchase agreement relating to the escrow notes to provide that the escrow notes were automatically convertible into common stock upon the consummation of an initial public offering in which the aggregate net proceeds to us (after underwriting discounts, commissions and fees) were at least \$20.0 million. The escrow notes automatically converted into common stock upon the closing of our initial public offering on March 4, 2010, and thus no principal or interest payments were ever made on the notes and no amounts remain due under such notes. Moreover, because the escrow notes were not exchanged, no warrants were ever issued in connection with such notes.

The following table summarizes the participation in the 2009 escrow notes by any of our current directors, executive officers, Beneficial Owners or any member of the immediate family of any of the foregoing persons:

Name	Aggregate Consideration Paid	Shares Issued upon Conversion of Escrow Notes <sup>(a)</sup>
VantagePoint	\$ 1,553,766 <sup>(1)</sup>	240,222
Sofinnova	\$ 1,003,366	155,127
Pappas	\$ 262,018 <sup>(2)</sup>	40,509
Caxton Advantage Life Sciences Fund, L.P.	\$ 290,425	44,901
HBM BioCapital	\$ 290,425 <sup>(3)</sup>	44,901
<b>TOTAL:</b>	<b>\$ 3,400,000</b>	<b>525,660</b>

<sup>(a)</sup> Calculated by dividing (x) the sum of (i) Aggregate Consideration to be Paid and (ii) accrued interest by (y) \$6.58 (which equals the price per share to the public in our initial public offering less the underwriting discounts, commissions and fees).

<sup>(1)</sup> Consists of (i) a convertible promissory note with a principal amount of \$1,407,712 purchased by VantagePoint Venture Partners IV (Q), L.P., (ii) a convertible promissory note with a principal amount of \$140,927 purchased by VantagePoint Venture Partners IV, L.P. and (iii) a convertible promissory note with a principal amount of \$5,127 purchased by VantagePoint Venture Partners IV Principals Fund, L.P.

<sup>(2)</sup> Consists of (i) a convertible promissory note with a principal amount of \$246,690 purchased by A.M. Pappas Life Science Ventures III, L.P. and (ii) a convertible promissory note with a principal amount of \$15,328 purchased by PV III CEO Fund, L.P.

<sup>(3)</sup>

Consists of (i) a convertible promissory note with a principal amount of \$246,861 purchased by HBM BioCapital (EUR) L.P. and (ii) a convertible promissory note with a principal amount of \$43,564 purchased by HBM BioCapital (USD) L.P.

**Table of Contents*****September 2010 Private Placement***

On September 20, 2010, we entered into a securities purchase agreement with certain accredited investors pursuant to which we sold, on September 24, 2010, an aggregate of 10,500,000 units, with each unit consisting of one share of our common stock and a Warrant to purchase 0.40 shares of our common stock. The purchase price per unit was \$3.00. Piper Jaffray & Co. served as our lead placement agent and Wedbush PacGrow Life Sciences served as co-placement agent in the private placement. Each Warrant is exercisable in whole or in part at any time until September 24, 2015 at a per share exercise price of \$3.30, subject to certain adjustments as specified in the Warrant.

The following table summarizes the participation in the private placement by any of our current directors, executive officers, Beneficial Owners or any member of the immediate family of any of the foregoing persons:

Name	Aggregate Consideration Paid	Shares of Common Stock Issued	Shares of Common
			Stock Underlying Outstanding Warrants
Caxton Advantage Life Sciences Fund, L.P.	\$ 750,000	250,000	100,000
HBM BioCapital <sup>(1)</sup>	\$ 999,999	333,333	133,333
Pappas <sup>(2)</sup>	\$ 1,400,001	466,667	186,667
Caduceus Private Investments IV, LP	\$ 10,000,002	3,333,334	1,333,334
Visium Balanced Master Fund, Ltd.	\$ 3,750,000	1,250,000	500,000
Total	\$ 16,900,002	5,633,334	2,253,334

<sup>(1)</sup> Includes 283,333 shares of common stock and a Warrant to purchase 113,333 shares of common stock issued to HBM BioCapital (EUR), L.P. and 50,000 shares of common stock and a warrant to purchase 20,000 shares of common stock issued to HBM BioCapital (USD), L.P.

<sup>(2)</sup> Includes 439,352 shares of common stock and a Warrant to purchase 175,741 shares of common stock issued to A.M. Pappas Life Science Ventures III, L.P. and 27,315 shares of common stock and a Warrant to purchase 10,926 shares of common stock issued to PV III CEO Fund, L.P.

***Other Related-Party Transaction***

The spouse of Georgina Kilfoil, our Senior Vice President, Product Development and Clinical Operations, is the Chief Executive Officer of InClin, Inc., or InClin. Ms. Kilfoil was a consultant for InClin until joining us in March 2010. We use InClin's clinical research organization services to supplement the clinical research organization services we receive from other providers. For the time period beginning January 1, 2009 and ending December 31, 2010, we expect that we will have paid InClin approximately \$1.0 million for the clinical research organization services it provides to us.

***Indemnification Agreements***

We have entered into indemnification agreements with each of our directors and certain of our executive officers. As permitted by the Delaware General Corporation Law, we have adopted provisions in our amended and restated certificate of incorporation that limit or eliminate the personal liability of our directors to us for monetary damages for a breach of their fiduciary duty as a director, except for liability for:

any breach of the director's duty of loyalty to us or our stockholders;

any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;

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any unlawful payments related to dividends or unlawful stock repurchases, redemptions or other distributions; or

any transaction from which the director derived an improper personal benefit.

Pursuant to our amended and restated certificate of incorporation and amended and restated bylaws, we are obligated, to the maximum extent permitted by Delaware law, to indemnify each of our directors and officers against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the corporation. A director or officer includes any person who is or was a director or officer of us or as a director, partner, trustee, officer, employee or agent of any other corporation, partnership, limited liability company, joint venture, trust, employee benefit plan, foundation, association, organization or other legal entity which such person is or was serving at our request, but does not include the status of a person who is serving or has served as a director, officer, employee or agent of a constituent corporation absorbed in a merger or consolidation transaction with the Company with respect to such person's activities prior to said transaction unless specifically authorized by our board of directors or our stockholders. Pursuant to our amended and restated bylaws, we also have the power to indemnify our employees to the extent permitted under Delaware law. Our amended and restated bylaws provide that we shall advance expenses to directors in connection with any proceeding in which such director is involved because of his or her status as a director and we may, at the discretion of our board of directors, advance expenses to officers and employees in connection with any proceeding in which such officer or employee is involved because of his or her status as such. Our amended and restated bylaws permit us to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of us or, at our request, served in such a capacity for another enterprise.

We have entered into indemnification agreements with each of our directors and certain of our executive officers that are, in some cases, broader than the specific indemnification provisions permitted by Delaware law, and that may provide additional procedural protection. The indemnification agreements require us, among other things, to:

indemnify officers and directors against certain liabilities that may arise because of their status as officers or directors; and

advance expenses, as incurred, to officers and directors in connection with a legal proceeding, subject to limited exceptions.

At present, there is no pending litigation or proceeding involving any of our directors, officers or employees in which indemnification is sought, nor are we aware of any threatened litigation or proceeding that may result in claims for indemnification.

**Procedures for Approval of Related Person Transactions**

The Audit Committee shall conduct an appropriate review of all related party transactions for potential conflict of interest situations on an ongoing basis, and the approval of the Audit Committee shall be required for all such transactions. The Audit Committee may establish such policies and procedures as it deems appropriate to facilitate such review.

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**PRINCIPAL STOCKHOLDERS**

The following table sets forth information with respect to the beneficial ownership of our common stock as of September 30, 2010, the most recent practicable date, and as adjusted to reflect the sale of common stock offered by the selling stockholders in this offering, for:

each beneficial owner of more than 5% of our outstanding common stock;

each of our named executive officers and directors; and

all of our executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities and include shares of common stock issuable upon the exercise of stock options that are immediately exercisable or exercisable within 60 days after September 30, 2010, but excludes unvested stock options, which contain an early exercise feature. Except as otherwise indicated, all of the shares reflected in the table are shares of common stock and all persons listed below have sole voting and investment power with respect to the shares beneficially owned by them, subject to applicable community property laws. The information is not necessarily indicative of beneficial ownership for any other purpose.

Percentage ownership calculations for beneficial ownership are based on 32,835,437 shares outstanding as of September 30, 2010 and calculations for beneficial ownership after this offering assume the selling stockholders have sold all shares offered hereby. Except as otherwise indicated in the table below, addresses of named beneficial owners are in care of Anthera Pharmaceuticals, Inc., 25801 Industrial Blvd., Suite B, Hayward, California 94545.

In computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person, we deemed outstanding shares of common stock subject to options or warrants held by that person that are currently exercisable or exercisable within 60 days of

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September 30, 2010. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person.

Name of Beneficial Owner	Shares Beneficially Owned Before Offering	Percentage of Common Stock Beneficially Owned Before Offering	Shares Beneficially Owned After Offering	Percentage of Common Stock Beneficially Owned After Offering
<b>5% or Greater Stockholders:</b>				
VantagePoint Venture Partners IV, L.P. and affiliated entities, or VantagePoint <sup>(1)</sup>	6,466,942	19.59%	6,466,942	19.59%
Sofinnova Venture Partners VI, L.P. and affiliated entities, or Sofinnova <sup>(2)</sup>	4,177,621	12.68%	509,139	1.55%
HBM BioCapital, L.P. and affiliated entities <sup>(3)</sup>	1,988,517	6.03%	1,697,616	5.14%
A.M. Pappas Life Science Ventures III, L.P. and affiliated entities <sup>(4)</sup>	1,813,140	5.49%	855,301	2.59%
Caduceus Private Investments IV, LP <sup>(5)</sup>	4,783,068	14.00%	4,783,068	14.00%
Visium Balanced Master Fund, Ltd. <sup>(6)</sup>	1,750,000	5.25%	1,750,000	5.25%
All 5% or greater stockholders as a group	20,979,288	59.38%	16,062,066	45.46%
<b>Named Executive Officers and Directors:</b>				
Paul F. Truex <sup>(7)</sup>	1,124,530	3.38%	1,124,530	3.38%
Christopher P. Lowe <sup>(8)</sup>	225,749	*	225,749	*
James E. Pennington, M.D. <sup>(9)</sup>	165,357	*	165,357	*
Colin Hislop, M.D. <sup>(10)</sup>	174,482	*	174,482	*
Debra Odink, Ph.D. <sup>(11)</sup>	119,745	*	119,745	*
Christopher S. Henney, Ph.D. <sup>(12)</sup>	107,429	*	107,429	*
Annette Bianchi <sup>(13)</sup>	17,628	*	17,628	*
James I. Healy, M.D., Ph.D. <sup>(2)(14)</sup>	4,202,064	12.75%	533,582	1.62%
A. Rachel Leheny, Ph.D. <sup>(15)</sup>	1,566,616	4.75%	527,839	1.60%
Donald J. Santel <sup>(16)</sup>	18,541	*	18,541	*
Daniel K. Spiegelman <sup>(17)</sup>	4,000	*	4,000	*
David E. Thompson <sup>(18)</sup>	35,636	*	35,636	*
All named executive officers and directors as a group (12 persons)	7,761,777	22.88%	3,054,518	9.00%

\* Represents beneficial ownership of less than 1% of the shares of common stock.

(1) Includes (i) 5,695,228 shares of common stock and 147,861 shares of common stock issuable upon exercise of warrants, all owned of record by VantagePoint Venture Partners IV (Q), L.P., (ii) 570,147 shares of common stock and 14,801 shares of common stock issuable upon exercise of warrants, all owned of record by VantagePoint Venture Partners IV, L.P., (iii) 20,739 shares of common stock and 538 shares of common stock issuable upon exercise of warrants, all owned of record by VantagePoint Venture Partners IV Principals Fund, L.P., and (iv) options to purchase an additional 17,628 shares of common stock that are exercisable within 60 days of September 30, 2010 that are owned of record by Annette Bianchi, over which VantagePoint has sole voting and investment power. Ms. Bianchi, a director of Anthera, is a Managing Director at VantagePoint. Alan E. Salzman, through his authority to cause the general partner of the limited partnerships that directly hold such shares to act,

may be deemed to have voting and investment power with respect to such shares. Mr. Salzman disclaims beneficial ownership with respect to such shares except to the extent of his pecuniary interest therein. The address for VantagePoint Venture Partners is 1001 Bayhill Drive, Suite 300, San Bruno, CA 94066.

- (2) Includes (i) 3,360,574 shares of common stock (2,940,408 shares of which are registered for resale under this prospectus) and 86,996 shares of common stock issuable upon exercise of warrants (all of which are registered for resale under this prospectus), all owned of record by Sofinnova Venture Partners VI, L.P.; (ii) 665,820 shares of common stock (582,574 shares of which are registered for resale under this prospectus) and 17,237 shares of common stock issuable upon exercise of warrants (all of which are registered for resale under this prospectus), all owned of record by Sofinnova Venture Partners VI GmbH & Co. KG; and (iii) 45,809 shares of common stock (40,082 shares of which are registered for resale under this prospectus) and 1,185 shares of

*footnotes continued on following page*

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common stock issuable upon exercise of warrants (all of which are registered for resale under this prospectus), all owned of record by Sofinnova Venture Affiliates VI, L.P. Alain Azan, Eric Buatois, Michael Powell and Dr. James I. Healy are the managing members of the general partner of the limited partnership, that directly hold such shares, and as such, may be deemed to share voting and investment power with respect to such shares. Dr. Healy is a director of Anthera. Messrs. Azan, Buatois and Powell and Dr. Healy disclaim beneficial ownership, except to the extent of their proportionate pecuniary interest in Sofinnova. The address for Sofinnova Ventures is 850 Oak Grove Ave., Menlo Park, CA 94025.

- (3) Includes (i) 1,550,978 shares of common stock (221,337 shares of which are registered for resale under this prospectus) and 139,263 shares of common stock issuable upon exercise of warrants (25,930 shares of which are registered for resale under this prospectus), all owned of record by HBM BioCapital (EUR) L.P. and (ii) 273,701 shares of common stock (39,059 shares of which are registered for resale under this prospectus) and 24,575 shares of common stock issuable upon exercise of warrants (4,575 shares of which are registered for resale under this prospectus), all owned of record by HBM BioCapital (USD) L.P., collectively, the HBM BioCapital Funds. The board of directors of HBM BioCapital Ltd., the general partner of the HBM BioCapital Funds, has sole voting and dispositive power with respect to such shares. The board of directors of HBM BioCapital Ltd. consists of John Arnold, Sophia Harris, Richard Coles, Dr. Andreas Wicki and John Urquhart, none of whom has individual voting or investment power with respect to the shares. The address for the HBM BioCapital Funds is c/o HBM BioCapital Ltd., Centennial Towers, 3rd Floor, 2454 West Bay Road, Grand Cayman, Cayman Islands.
- (4) Includes (i) 1,505,394 shares of common stock (875,890) shares of which are registered for resale under this prospectus) and 201,638 shares of common stock issuable upon exercise of warrants (25,897 shares of which are registered for resale under this prospectus), all owned of record by A. M. Pappas Life Science Ventures III, L.P. and (ii) 93,572 shares of common stock (54,442 shares of which are registered for resale under this prospectus) and 12,536 shares of common stock issuable upon exercise of warrants (1,610 shares of which are registered for resale under this prospectus), all owned of record by PV III CEO Fund, L.P. Arthur M. Pappas, in his role as chairman of the investment committee of AMP&A Management III, LLC, the general partner of A. M. Pappas Life Science Ventures III, L.P. and PV III CEO Fund, L.P., has voting and investment authority over these shares. Mr. Pappas disclaims beneficial ownership of these shares except to the extent of his pecuniary interest arising therein. The address for both A. M. Pappas Life Science Ventures III, L.P. and PV III CEO Fund, L.P. is 2520 Meridian Parkway, Suite 400, Durham, NC 27713.
- (5) Includes 3,449,734 shares of common stock and 1,333,334 shares of common stock issuable upon exercise of warrants, all owned of record by Caduceus Private Investments, LP. OrbiMed Advisors LLC, a registered investment adviser under the Investment Advisers Act of 1940, as amended, is the sole managing member of OrbiMed Capital GP IV LLC, which is the sole general partner of Caduceus Private Investments IV, LP. Samuel D. Isaly is the owner of a controlling interest in OrbiMed Advisors LLC. As such, OrbiMed Advisors LLC, OrbiMed Capital GP IV LLC and Mr. Isaly may be deemed to have voting and investment power with respect to such shares. The address for OrbiMed Advisors LLC is 767 Third Avenue, 30th Floor, New York, New York 10017.
- (6) Includes 1,250,000 shares of common stock and 500,000 shares of common stock issuable upon exercise of warrants, all owned of record by Visium Balanced Master Fund, Ltd. Jacob Gottlieb, Managing Member of JG Asset, LLC, which is the General Partner of Visium Asset Management, L.P., which is the investment managed to pooled investment funds, may be deemed to have voting and investment power with respect to such shares. The address for Visium Balanced Master Fund, Ltd. is 950 Third Avenue, New York, NY 10022.
- (7) Includes 693,253 shares of common stock and options to purchase an additional 431,277 shares of common stock that are exercisable within 60 days of September 30, 2010, all owned of record by Paul F. Truex.
- (8) Includes (i) 9,637 shares of common stock owned of record by Dina Gonzalez, Mr. Lowe's spouse, (ii) options to purchase 112,592 shares of common stock that are exercisable within 60 days of September 30, 2010 and 22,523 shares of common stock owned of record by Mr. Lowe and (iii) 80,997 shares of common stock owned of record by BioVest III. Mr. Lowe has sole voting and sole investment power with respect to the shares owned of record by BioVest III. Mr. Lowe disclaims beneficial ownership with respect to such shares except to the extent of

- his pecuniary interest therein. The address for BioVest III is 25801 Industrial Blvd., Suite B, Hayward, CA 94545.
- (9) Includes 105,140 shares of common stock, 8,762 shares of which are subject to the Company's right of repurchase, and options to purchase an additional 60,217 shares of common stock that are exercisable within 60 days of September 30, 2010 owned of record by Dr. Pennington. As of May 1, 2010, Dr. Pennington ceased serving as our Chief Medical Officer and Executive Vice President and commenced his role with us as Senior Clinical Fellow.
- (10) Includes 20,524 shares of common stock and options to purchase an additional 153,958 shares of common stock that are exercisable within 60 days of September 30, 2010 owned of record by Dr. Hislop.
- (11) Includes 96,928 shares of common stock and options to purchase an additional 22,817 shares of common stock that are exercisable within 60 days of September 30, 2010, all owned of record by the Debra A. Odink Living Trust, for which Dr. Odink serves as trustee.
- (12) Includes 102,429 shares of common stock, 12,900 shares of which are subject to the Company's right of repurchase and options to purchase an additional 5,000 shares of common stock that are exercisable within 60 days of September 30, 2010, owned of record by Dr. Henney.
- (13) Includes options to purchase 17,628 shares of common stock that are exercisable within 60 days of September 30, 2010 owned of record by Ms. Bianchi. VantagePoint has sole voting and investment power with respect to these shares, and Ms. Bianchi

*footnotes continued on following page*

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disclaims beneficial ownership thereof except to the extent of her pecuniary interest in the shares of common stock issuable upon exercise of the option.

- (14) Includes 20,443 shares of common stock owned of record by Dr. Healy, 6,815 shares of which are subject to the Company's right of repurchase and options to purchase an additional 4,000 shares of common stock that are exercisable within 60 days of September 30, 2010, owned of record by Dr. Healy.
- (15) Includes (i) 1,423,896 shares of common stock (1,008,271 shares of which are registered for resale under this prospectus) and 130,506 shares of common stock issuable upon exercise of warrants (30,506 shares of which are registered for resale under this prospectus), all owned of record by Caxton Advantage Life Sciences Fund, L.P. and (ii) options to purchase an additional 12,214 shares of common stock that are exercisable within 60 days of September 30, 2010 that are owned of record by Dr. A. Rachel Leheny over which Caxton Advantage Life Sciences Fund, L.P. may be deemed to hold voting power with respect to 6,107 of these shares. Caxton Advantage Venture Partners, L.P. has voting and investment power with respect to such shares. Decisions by Caxton Advantage Venture Partners, L.P. with respect to such shares are made by Advantage Life Sciences Partners, LLC, the Managing General Partner of Caxton Advantage Venture Partners, L.P., together with the investment committee of Caxton Advantage Venture Partners, L.P. Dr. Leheny and Eric Roberts have authority to take action on behalf of Advantage Life Sciences Partners, LLC as members of Advantage Life Sciences Partners, LLC. The investment committee of Caxton Advantage Venture Partners, L.P. as of the date hereof is comprised of (i) Mr. Roberts, (ii) Dr. Leheny, (iii) Bruce Kovner and (iv) Peter D. Angelo and the consent of four members is required with respect to any decision by the Investment Committee. Dr. Leheny is a director of Anthera, is (i) a Managing Director of Caxton Advantage Venture Partners, L.P., which is the General Partner of Caxton Advantage Life Sciences Fund, L.P., a life-sciences venture capital fund that she co-founded in 2006 and is (ii) a member of Advantage Life Sciences Partners LLC. Mr. Roberts and Dr. Leheny and the members of the Caxton Advantage Venture Partners, L.P. investment committee disclaim beneficial ownership, except to the extent of their proportionate pecuniary interests, either directly, or indirectly through Caxton Advantage Venture Partners, L.P. (or through any other entity which is a limited partner in Caxton Advantage Life Sciences Fund, L.P.), in Caxton Advantage Life Sciences Fund, L.P. The address for Caxton Advantage Life Sciences Fund, L.P. is 500 Park Avenue, New York, NY 10022.
- (16) Includes options to purchase 18,541 shares of common stock that are exercisable within 60 days of September 30, 2010 owned of record by the Donald J. Santel and Kelly L. McGinnis Revocable Living Trust.
- (17) Includes options to purchase 4,000 shares of common stock that are exercisable within 60 days of September 30, 2010.
- (18) Includes 20,443 shares of common stock and options to purchase an additional 15,193 shares of common stock that are exercisable within 60 days of September 30, 2010 owned of record by Mr. Thompson.

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**DESCRIPTION OF CAPITAL STOCK**

**General**

The following description of our capital stock is intended as a summary only and is qualified in its entirety by reference to our amended and restated certificate of incorporation and amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus forms a part, and to the applicable provisions of the Delaware General Corporation Law. We refer in this section to our amended and restated certificate of incorporation as our certificate of incorporation, and we refer to our amended and restated bylaws as our bylaws.

Our authorized capital stock consists of 95,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of preferred stock, par value \$0.001 per share, all of which shares of preferred stock are undesignated.

As of September 30, 2010, 32,835,437 shares of our common stock were outstanding. In addition, as of September 30, 2010, we had outstanding options to purchase 1,307,066 shares of our common stock under our 2010 Stock Option Plan at a weighted-average exercise price of \$1.27 per share, 1,209,566 of which were exercisable, 333,000 shares of restricted stock units which vest over a weighted-average 2.96 years, and outstanding warrants to purchase 4,557,136 shares of our common stock.

**Common Stock**

The holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders. The holders of our common stock do not have any cumulative voting rights. Holders of our common stock are entitled to receive ratably any dividends declared by our board of directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Our common stock has no preemptive rights, conversion rights or other subscription rights or redemption or sinking fund provisions.

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding preferred stock. The shares registered in this offering are, and the shares underlying the warrants will be, when issued and paid for, validly issued, fully paid and non-assessable.

**Preferred Stock**

Our board of directors is authorized, subject to any limitations prescribed by law, without stockholder approval, to issue from time to time up to an aggregate of 5,000,000 shares of preferred stock, in one or more series, each series to have such rights and preferences, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences as our board of directors determines. The rights of the holders of common stock will be subject to, and may be adversely affected by, the rights of holders of any preferred stock that may be issued in the future. Issuance of preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, a majority of our outstanding voting stock. We currently have no shares of preferred stock outstanding and we have no present plans to issue any shares of preferred stock.

**Warrants**

As of September 30, 2010, warrants exercisable for an aggregate of up to 4,557,136 shares of our common stock were outstanding. Warrants were issued in connection with a bridge financing

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arrangement, are exercisable for 357,136 shares of our common stock and will expire upon the earlier of either July or September, 2014, as applicable, or upon the date of the sale of all or substantially of our equity interests or assets. In addition, warrants to purchase 4,200,000 shares of common stock were issued in a private placement transaction that closed on September 24, 2010. Such warrants expire on September 24, 2015. Each of the warrants contains a customary net issuance feature, which allows the warrant holder to pay the exercise price of the warrant by forfeiting a portion of the exercised warrant shares with a value equal to the aggregate exercise price.

**Registration Rights**

**Second Amended and Restated Investor Rights Agreement**

Holders of approximately 13,380,000 shares of our common stock have rights, under the terms of an investor rights agreement between us and these holders, to require us to file registration statements under the Securities Act, subject to limitations and restrictions, or request that their shares be covered by a registration statement that we are otherwise filing, subject to specified exceptions. We refer to these shares as registrable securities. The investor rights agreement does not provide for any liquidated damages, penalties or other rights in the event we do not file a registration statement. These rights will continue in effect following this offering.

***Demand Registration Rights.*** At any time after August 29, 2010, subject to certain exceptions, the holders of (a) a majority of the registrable securities issuable upon the conversion of our Series A-1 convertible preferred stock or (b) two-thirds of the then-outstanding registrable securities issuable upon the conversion of our Series A-2 convertible preferred stock, Series B-1 convertible preferred stock and Series B-2 convertible preferred stock have the right to demand that we file a registration statement covering the offering and sale of at least a majority of the registrable securities then outstanding (or a lesser percent if the anticipated aggregate offering price, net of underwriting discounts and commissions, would exceed \$5.0 million).

We have the ability to delay the filing of such registration statement under specified conditions or if our board of directors deems it advisable to delay such filing or if we are in possession of material nonpublic information that would be in our best interests not to disclose. Postponements at the discretion of our board of directors cannot exceed 120 days during any twelve-month period. We are not obligated to file a registration statement on more than one occasion upon the request of the holders of a majority of the registrable securities issuable upon the conversion of our Series A-1 convertible preferred stock, and we are not obligated to file a registration statement on more than two occasions upon the request of the holders of two-thirds of the then-outstanding registrable securities issuable upon the conversion of our Series A-2 convertible preferred stock, Series B-1 convertible preferred stock and Series B-2 convertible preferred stock.

***Form S-3 Registration Rights.*** If we are eligible to file a registration statement on Form S-3, the holders of the registrable securities described above have the right, on one or more occasions, to request registration on Form S-3 of the sale of the registrable securities held by such holder provided such securities are anticipated to have an aggregate sale price (net of underwriting discounts and commissions, if any) in excess of \$1.0 million.

We have the ability to delay the filing of such registration statement under specified conditions, such as for a period of time prior to our intention to make a public offering, if our board of directors deems it advisable to delay such filing or if we are in possession of material nonpublic information that would be in our best interests not to disclose. Such postponements cannot exceed 120 days during any 12-month period. We are not obligated to effect more than two registrations of registrable securities on Form S-3 in any 12-month period.

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***Piggyback Registration Rights.*** The holders of the registrable securities described above have piggyback registration rights. Under these provisions, if we register any securities for public sale, including pursuant to any stockholder-initiated demand registration, these holders will have the right to include their shares in the registration statement, subject to customary exceptions. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in the registration statement, and piggyback registration rights are also subject to the priority rights of stockholders having demand registration rights in any demand registration. In connection with this registration statement, holders have exercised their piggyback registration rights with respect to an aggregate of 6,547,797 shares of common stock.

***Expenses of Registration.*** We will pay all registration expenses, other than underwriting discounts and commissions, related to any demand, Form S-3 or piggyback registration, including reasonable attorneys' fees and disbursements of one counsel for the holders of registrable securities in an amount not to exceed an aggregate of \$25,000.

***Indemnification.*** The investor rights agreement contains customary cross-indemnification provisions, under which we are obligated to indemnify the selling stockholders in the event of material misstatements or omissions in the registration statement attributable to us, and each selling stockholder is obligated to indemnify us for material misstatements or omissions in the registration statement due to information provided by such stockholder provided that such information was not changed or altered by us.

***Expiration of Registration Rights.*** The registration rights granted under the investor rights agreement will terminate in March 2017.

## **Registration Rights with Respect to September 2010 Private Placement**

In connection with a private placement of units consisting of common stock and warrants that closed on September 24, 2010, we entered into a registration rights agreement, or the Registration Rights Agreement, with the investors in the private placement. The Registration Rights Agreement provides that we will file a resale registration statement covering all of the shares of common stock and the common stock underlying the warrants issued in the private placement, up to the maximum number of shares able to be registered pursuant to applicable SEC regulations, within 30 days of the closing of the private placement. If any shares of common stock are unable to be included on the initial registration statement, we have agreed to file subsequent registration statements until all the shares have been registered. Under the terms of the Registration Rights Agreement, we are obligated to maintain the effectiveness of the resale registration statement until all securities therein are sold or otherwise can be sold pursuant to Rule 144, without any restrictions. The Registration Rights Agreement contains customary terms and conditions for a transaction of this type, including certain customary cash penalties on the Company for our failure to satisfy specified filing and effectiveness time periods. We filed the resale registration statement covering the shares of common stock and the common stock underlying the warrants on October 22, 2010 and such registration statement was declared effective by the SEC on November 3, 2010.

## **Anti-Takeover Effects of Delaware Law and Provisions of Our Certificate of Incorporation and Bylaws**

Our certificate of incorporation and bylaws includes a number of provisions that may have the effect of delaying, deferring or preventing another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

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***Board Composition and Filling Vacancies.*** In accordance with our certificate of incorporation, our board is divided into three classes serving staggered three-year terms, with one class being elected each year. Our certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of 75% or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. The classification of directors, together with the limitations on removal of directors and treatment of vacancies, has the effect of making it more difficult for stockholders to change the composition of our board of directors.

***No Written Consent of Stockholders.*** Our certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

***Meetings of Stockholders.*** Our certificate of incorporation and bylaws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

***Advance Notice Requirements.*** Our bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting.

***Amendment to Certificate of Incorporation and Bylaws.*** As required by the Delaware General Corporation Law, any amendment of our certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our certificate of incorporation, must thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, board composition, limitation of liability and the amendment of our certificate of incorporation must be approved by not less than 75% of the outstanding shares entitled to vote on the amendment, and not less than 75% of the outstanding shares of each class entitled to vote thereon as a class. Our bylaws may be amended by the affirmative vote of a majority of the directors then in office, subject to any limitations set forth in the bylaws; and may also be amended by the affirmative vote of at least 75% of the outstanding shares entitled to vote on the amendment, or, if our board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

***Undesignated Preferred Stock.*** Our certificate of incorporation provides for 5,000,000 authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the



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best interests of our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

### **Section 203 of the Delaware General Corporation Law**

We are subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A business combination includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, 15% or more of the corporation's voting stock. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

before the stockholder became interested, our board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder; or

at or after the time the stockholder became interested, the business combination was approved by our board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

#### ***Section 203 defines a business combination to include:***

any merger or consolidation involving the corporation and the interested stockholder;

any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;

subject to exceptions, any transaction that results in the issuance of transfer by the corporation of any stock of the corporation to the interested stockholder;

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subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interest stockholder; and

the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

**The NASDAQ Global Market Listing**

Our common stock is listed on The NASDAQ Global Market under the trading symbol ANTH.

**Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC.

**Table of Contents****SHARES ELIGIBLE FOR FUTURE SALE**

As of September 30, 2010, we have outstanding an aggregate of 32,835,437 shares of common stock. Of these shares, all shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares purchased by our affiliates, as that term is defined in Rule 144 under the Securities Act, whose sales would be subject to certain limitations and restrictions described below. Of the remaining 26,287,640 shares of common stock outstanding, approximately 3,665,799 shares are restricted securities as that term is defined in Rule 144 under the Securities Act or restricted due to lock-up agreements as described below. Restricted securities may be sold in the public market only if registered or if they qualify for exemption under Rule 144 under the Securities Act, which rule is summarized below, or another exemption.

As a result of the lock-up agreements described below and the provisions of Rule 144 under the Securities Act, the shares of our common stock (excluding the shares sold in this offering) that will be available for sale in the public market are as follows:

<b>Date of Availability of Sale</b>	<b>Approximate Number of Shares</b>
As of the effective date of this prospectus	24,389,912
30 days after the effective date of this prospectus, although a portion of such shares will be subject to volume limitations pursuant to Rule 144	1,897,728

**Lock-Up Agreements**

In connection with the private placement that closed on September 24, 2010, certain of our directors and officers have agreed not to, directly or indirectly, offer, sell, contract to sell or otherwise dispose of, or enter into any transaction that is designed to, or could be expected to, result in the disposition of any shares of our common stock or other securities convertible into or exchangeable or exercisable for shares of our common stock or derivatives of our common stock owned by these persons prior to such private placement or common stock issuable upon exercise of options or warrants held by these persons for a period of 30 days after the effective date of the registration statement that registers the shares of common stock and common stock underlying warrants issued in the private placement, without the prior written consent of Piper Jaffray & Co., the placement agent for the private placement. Such lock-up agreements shall expire on December 4, 2010.

Transfers can be made during the lock-up period in the case of (a) shares of common stock acquired in open market transactions, (b) gifts or for estate planning purposes and distributions to partners, members or stockholders of the transferor where the transferee signs a lock-up agreement, and (c) shares of common stock (i) effected pursuant to an exchange of underwater options with the Company, (ii) pursuant to an existing plan, contract or instruction that satisfies the requirements of Rule 10b5-1(c)(1)(i)(B), (iii) as forfeitures of common stock to satisfy tax withholding obligations of the stockholder in connection with the vesting or exercise of equity awards by the stockholder pursuant to our equity plans, or pursuant to a net exercise or cashless exercise by the stockholder of outstanding equity awards pursuant to our equity plans, or (iv) pursuant to the conversion or sale of, or an offer to purchase, all or substantially all of our outstanding common stock, whether pursuant to a merger, tender offer or otherwise; provided that in the case of a transfer in clauses (c)(iii) or (iv) above, no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made in connection with such transactions.



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**Rule 144**

In general, under Rule 144, a person who is not our affiliate and has not been our affiliate at any time during the preceding three months will be entitled to sell any shares of our common stock that such person has beneficially owned for at least six months, including the holding period of any prior owner other than one of our affiliates, without regard to volume limitations. Sales of our common stock by any such person would be subject to the availability of current public information about us if the shares to be sold were beneficially owned by such person for less than one year. If such shares to be sold were beneficially owned by such person for at least one year, a person may sell shares of our common stock acquired from us, without regard to volume limitations or the availability of public information about us.

In addition, under Rule 144, our affiliates who have beneficially owned shares of our common stock for at least six months, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell within any three-month period a number of shares that does not exceed the greater of:

1% of the number of shares of our common stock then outstanding, which will equal approximately 328,354 shares immediately after this offering; and

the average weekly trading volume in our common stock on The NASDAQ Global Market during the four calendar weeks preceding the date of filing of a Notice of Proposed Sale of Securities Pursuant to Rule 144 with respect to the sale.

Sales under Rule 144 by our affiliates are also subject to manner of sale provisions and notice requirements and to the availability of current public information about us.

**Registration of Shares in Connection with Compensatory Benefit Plans**

We have filed registration statements under the Securities Act covering shares of common stock issued or reserved for issuance under our 2005 Plan, 2010 Plan and 2010 ESPP. Accordingly, shares registered under these registration statements will, subject to vesting provisions and Rule 144 public information, volume limitation or notice filing provisions applicable to our affiliates, be available for sale in the open market immediately after any applicable lock-up agreements expire.

**Registration Rights**

Excluding the shares held by the selling stockholders that are being registered hereby, the holders of approximately 6,830,000 shares of our common stock have certain rights with respect to the registration of such shares under the Securities Act. See the section entitled **Description of Capital Stock Registration Rights**. Upon the effectiveness of a registration statement covering these shares, the shares would become freely tradable.

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**CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS**

The following is a summary of certain U.S. federal income tax considerations relating to the acquisition, ownership and disposition of common stock. Except where noted, this summary deals only with common stock held as a capital asset by a stockholder, and does not discuss the U.S. federal income tax considerations applicable to a stockholder that is subject to special treatment under U.S. federal income tax laws, including: a dealer in securities or currencies; a financial institution; a regulated investment company; a real estate investment trust; a tax-exempt organization; an insurance company; a person holding common stock as part of a hedging, integrated, conversion or straddle transaction or a person deemed to sell common stock under the constructive sale provisions of the Internal Revenue Code of 1986, as amended, or the Tax Code; a trader in securities that has elected the mark-to-market method of accounting; a person liable for alternative minimum tax; an entity that is treated as a partnership for U.S. federal income tax purposes; a person that received such common stock in connection with services provided; a U.S. person whose functional currency is not the U.S. dollar; a controlled foreign corporation; a passive foreign investment company; or a U.S. expatriate.

This summary is based upon provisions of the Tax Code, and applicable regulations, rulings and judicial decisions in effect as of the date hereof. Those authorities may be changed, perhaps retroactively, or may be subject to differing interpretations, so as to result in U.S. federal income tax consequences different from those discussed below. This summary does not address all aspects of U.S. federal income tax, does not deal with all tax considerations that may be relevant to stockholders in light of their personal circumstances and does not address any state, local, foreign, gift, estate or alternative minimum tax considerations.

For purposes of this discussion, a U.S. holder is a beneficial holder of common stock that is: an individual citizen or resident of the United States; a corporation (or any other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia; an estate the income of which is subject to U.S. federal income taxation regardless of its source; a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

For purposes of this discussion, a non-U.S. holder is a beneficial holder of common stock (other than a partnership or any other entity or arrangement that is treated as a partnership for U.S. federal income tax purposes) that is a non-resident alien individual or foreign corporation for U.S. federal income tax purposes.

If a partnership (or an entity or arrangement that is treated as a partnership for U.S. federal income tax purposes) holds common stock, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. A partner of a partnership holding common stock is urged to consult its own tax advisors.

**Holders of common stock are urged to consult their own tax advisors concerning their particular U.S. federal income tax consequences in light of their specific situations, as well as the tax consequences arising under the laws of any other taxing jurisdiction.**

**U.S. Holders**

***Ownership and Disposition of Common Stock.*** The following discussion is a summary of certain U.S. federal income tax considerations relevant to a U.S. holder of common stock.



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Distributions with respect to common stock, if any, will be includible in the gross income of a U.S. holder as ordinary dividend income to the extent paid out of current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. Any portion of a distribution in excess of current or accumulated earnings and profits would be treated as a return of the holder's tax basis in its common stock and then as gain from the sale or exchange of the common stock. Under current law, if certain requirements are met, a maximum 15% U.S. federal income tax rate will apply to any dividends paid to a holder of common stock who is a U.S. individual and that is included in the U.S. holder's income prior to January 1, 2011.

Distributions constituting dividends for U.S. federal income tax purposes to U.S. holders that are corporate stockholders may qualify for the 70% dividends received deduction, or DRD, which is generally available to corporate stockholders that own less than 20% of the voting power or value of the outstanding stock of the distributing corporation. A U.S. holder that is a corporate stockholder holding 20% or more of the distributing corporation may be eligible for an 80% DRD. No assurance can be given that we will have sufficient earnings and profits (as determined for U.S. federal income tax purposes) to cause any distributions to be treated as dividends eligible for a DRD. In addition, a DRD is available only if certain holding periods and other taxable income requirements are satisfied. The length of time that a stockholder has held stock is reduced by any period during which the stockholder's risk of loss with respect to the stock is diminished by reason of the existence of certain options, contracts to sell, short sales, or other similar transactions. Also, to the extent that a corporation incurs indebtedness that is directly attributable to an investment in the stock on which the dividend is paid, all or a portion of the DRD may be disallowed. In addition, any dividend received by a corporation may also be subject to the extraordinary distribution provisions of the Tax Code.

A U.S. holder of common stock will generally recognize gain or loss on the taxable sale, exchange, or other disposition of such stock in an amount equal to the difference between such U.S. holder's amount realized on the sale and its tax basis in the common stock sold. A U.S. holder's amount realized should equal the amount of cash and the fair market value of any property received in consideration of its stock. The gain or loss will be capital gain or loss if the U.S. holder holds the common stock as a capital asset, and will be long-term capital gain or loss if the common stock is held for more than one year at the time of disposition. Capital loss can generally only be used to offset capital gain (individuals may also offset excess capital losses against up to \$3,000 of ordinary income per tax year). Under current law, long-term capital gain recognized by an individual U.S. holder prior to January 1, 2011 is subject to a maximum 15% U.S. federal income tax rate.

## **Non-U.S. Holders**

***Ownership and Disposition of Common Stock.*** The following discussion is a summary of certain U.S. federal tax considerations relevant to a non-U.S. holder of common stock.

Distributions treated as dividends that are paid to a non-U.S. holder, if any, with respect to the shares of common stock will be subject to withholding tax at a 30% rate (or lower applicable income tax treaty rate) unless the dividends are effectively connected with the non-U.S. holder's conduct of a trade or business in the United States. If a non-U.S. holder is engaged in a trade or business in the United States and dividends with respect to the common stock are effectively connected with the conduct of that trade or business and, if required by an applicable income tax treaty, are attributable to a U.S. permanent establishment, then the non-U.S. holder will be subject to U.S. federal income tax on those dividends on a net income basis (although the dividends will be exempt from the 30% U.S. federal withholding tax, provided certain certification requirements are satisfied) in the same manner as if received by a U.S. person as defined under the Tax Code. Any such effectively connected income received by a foreign corporation may, under certain circumstances, be subject to an additional branch profits tax at a 30% rate (or lower applicable income tax treaty rate). To claim the exemption from withholding with respect



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to any such effectively connected income, the non-U.S. holder must generally furnish to us or our paying agent a properly executed IRS Form W-8ECI (or applicable successor form).

A non-U.S. holder of shares of common stock who wishes to claim the benefit of an exemption or reduced rate of withholding tax under an applicable treaty must furnish to us or our paying agent a valid IRS Form W-8BEN (or applicable successor form) certifying such holder's qualification for the exemption or reduced rate. If a non-U.S. holder is eligible for a reduced rate of U.S. withholding tax pursuant to an income tax treaty, it may obtain a refund of any excess amounts withheld by filing an appropriate claim for refund with the Internal Revenue Service.

Non-U.S. holders may recognize gain upon the sale, exchange, redemption or other taxable disposition of common stock. Such gain generally will not be subject to U.S. federal income tax unless: (i) that gain is effectively connected with the conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, is attributable to a U.S. permanent establishment) by a non-U.S. holder; (ii) the non-U.S. holder is a non-resident alien individual who is present in the United States for 183 days or more in the taxable year of that disposition, and certain other conditions are met; or (iii) we are or have been a U.S. real property holding corporation for U.S. federal income tax purposes. We believe that we are not and we do not anticipate becoming a U.S. real property holding corporation for U.S. federal income tax purposes.

If a non-U.S. holder is an individual described in clause (i) of the preceding paragraph, the non-U.S. holder will generally be subject to tax on the net gain at regular graduated U.S. federal income tax rates. If the non-U.S. holder is an individual described in clause (ii) of the preceding paragraph, the non-U.S. holder will generally be subject to a flat 30% tax on the gain, which may be offset by U.S. source capital losses even though the non-U.S. holder is not considered a resident of the United States. If a non-U.S. holder is a foreign corporation that falls under clause (i) of the preceding paragraph, it will be subject to tax on its net gain in the same manner as if it were a U.S. person as defined under the Tax Code and, in addition, the non-U.S. holder may be subject to the branch profits tax at a rate equal to 30% of its effectively connected earnings and profits or at such lower rate as may be specified by an applicable income tax treaty.

## **Information Reporting and Backup Withholding Tax**

We report to our U.S. holders and the IRS the amount of dividends paid during each calendar year, and the amount of any tax withheld. All distributions to holders of common stock are subject to any applicable withholding. Under U.S. federal income tax law, interest, dividends, and other reportable payments may, under certain circumstances, be subject to backup withholding at the then applicable rate (currently 28%). Backup withholding generally applies to a U.S. holder if the holder (i) fails to furnish its social security number or other taxpayer identification number, or TIN, (ii) furnishes an incorrect TIN, (iii) fails to properly report interest or dividends, or (iv) under certain circumstances, fails to provide a certified statement, signed under penalty of perjury, that the TIN provided is its correct number and that it is a U.S. person that is not subject to backup withholding. Backup withholding is not an additional tax but merely an advance payment, which may be refunded to the extent it results in an overpayment of tax and the appropriate information is supplied to the IRS. Certain persons are exempt from backup withholding, including, in certain circumstances, financial institutions.

We also report to our non-U.S. holders and the IRS the amount of dividends paid during each calendar year, and the amount of any tax withheld. These information reporting requirements apply even if no withholding was required because the distributions were effectively connected with the non-U.S. holder's conduct of a United States trade or business, or withholding was reduced or eliminated by an applicable income tax treaty. This information also may be made available under a specific treaty or agreement with the tax authorities in the country in which the non-U.S. holder resides or is established. Backup



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withholding, however, generally will not apply to distributions to a non-U.S. holder of our common stock provided the non-U.S. holder furnishes to us or our paying agent the required certification as to its non-U.S. status, such as by providing a valid IRS Form W-8BEN or IRS Form W-8ECI, or certain other requirements are met. Notwithstanding the foregoing, backup withholding may apply if either we or our paying agent has actual knowledge, or reason to know, that the holder is a U.S. person that is not an exempt recipient.

**New Legislation Relating to Foreign Accounts**

Newly enacted legislation may impose withholding taxes on certain types of payments made to foreign financial institutions and certain other non-U.S. entities. Under this legislation, the failure to comply with additional certification, information reporting and other specified requirements could result in withholding tax being imposed on payments of dividends and sales proceeds to U.S. holders who own the shares through foreign accounts or foreign intermediaries and certain non-U.S. holders. The legislation imposes a 30% withholding tax on dividends on, and gross proceeds from the sale or other disposition of, our common stock paid to a foreign financial institution or to a foreign non-financial entity, unless (i) the foreign financial institution undertakes certain diligence and reporting obligations or (ii) the foreign non-financial entity either certifies it does not have any substantial United States owners or furnishes identifying information regarding each substantial United States owner. If the payee is a foreign financial institution, it must enter into an agreement with the United States Treasury requiring, among other things, that it undertake to identify accounts held by certain United States persons or United States-owned foreign entities, annually report certain information about such accounts, and withhold 30% on payments to account holders whose actions prevent it from complying with these reporting and other requirements. The legislation would apply to payments made after December 31, 2012. Prospective investors should consult their tax advisors regarding this legislation.

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**LEGAL MATTERS**

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Goodwin Procter LLP, San Francisco, California.

**EXPERTS**

The financial statements as of December 31, 2008 and 2009 and for each of the three years in the period ended December 31, 2009 and for the period from September 9, 2004 (Date of Inception) to December 31, 2009 included in this prospectus have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing herein (which report expresses an unqualified opinion and includes an explanatory paragraph regarding the Company's development stage status and the Company's ability to continue as a going concern) and have been so included on reliance upon the report of such firm given upon their authority as experts in auditing and accounting.

**WHERE YOU CAN FIND MORE INFORMATION**

We have filed with the SEC a registration statement on Form S-1 under the Securities Act, as amended, with respect to the shares of common stock offered by this prospectus. This prospectus does not contain all of the information included in the registration statement. For further information pertaining to us and our common stock, you should refer to the registration statement and the exhibits and schedules filed with the registration statement. Whenever we make reference in this prospectus to any of our contracts, agreements or other documents, the references are not necessarily complete, and you should refer to the exhibits attached to the registration statement for copies of the actual contract, agreement or other document.

We are subject to the informational requirements of the Securities Exchange Act and file annual, quarterly and current reports, proxy statements and other information with the SEC. You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at [www.sec.gov](http://www.sec.gov). You may also read and copy any document we file with the SEC at its Public Reference Room at 100 F Street, N.E., Washington, D.C., 20549.

You may also obtain copies of the documents at prescribed rates by writing to the Public Reference Room of the SEC at 100 F Street, N.E., Washington, D.C., 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facility.

**ANTHERA PHARMACEUTICALS, INC.**  
**(A Development Stage Company)**

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholders of  
Anthera Pharmaceuticals, Inc.  
Hayward, California

We have audited the accompanying balance sheets of Anthera Pharmaceuticals, Inc. (a development stage company)(the Company ) as of December 31, 2009 and 2008, and the related statements of operations, stockholders deficit and comprehensive income (loss), and cash flows for each of the three years in the period ended December 31, 2009 and for the period from September 9, 2004 (Date of Inception) to December 31, 2009. These financial statements are the responsibility of the Company s management. Our responsibility is to express an opinion on the 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. The Company was not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company s internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2009 and 2008, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2009 and for the period from September 9, 2004 (Date of Inception) to December 31, 2009, in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. The Company is a development stage enterprise engaged in developing therapeutics to treat diseases associated with inflammation. As discussed in Note 1 to the financial statements, the deficiency in working capital at December 31, 2009 and the Company s operating losses since inception raise substantial doubt about its ability to continue as a going concern. Management s plans concerning these matters are also described in Note 1 to the financial statements. The financial statements do not include any adjustments that might result from the outcome of these uncertainties.

/s/ Deloitte & Touche LLP

San Francisco, California  
January 28, 2010

(except for the last four paragraphs of Note 12, as to which the date is February 24, 2010)

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**ANTHERA PHARMACEUTICALS, INC.**  
**(A Development Stage Company)**

**BALANCE SHEETS**

	December 31, 2008	December 31, 2009	September 30, 2010 (unaudited)
<b>ASSETS</b>			
<b>CURRENT ASSETS:</b>			
Cash and cash equivalents	\$ 7,895,113	\$ 3,803,384	\$ 51,208,720
Short term investments			21,878,890
Restricted cash	40,000		
Prepaid expenses and other current assets	63,468	19,825	1,813,482
<b>Total current assets</b>	<b>7,998,581</b>	<b>3,823,209</b>	<b>74,901,092</b>
Property and equipment net	27,779	12,994	22,113
Deferred financing cost		1,922,183	
Other assets	7,794	130,403	
<b>TOTAL</b>	<b>\$ 8,034,154</b>	<b>\$ 5,888,789</b>	<b>\$ 74,923,205</b>
<b>LIABILITIES AND STOCKHOLDERS DEFICIT</b>			
<b>CURRENT LIABILITIES:</b>			
Accounts payable	\$ 1,597,300	\$ 3,145,706	\$ 2,798,085
Accrued clinical study	1,461,179	565,034	967,917
Accrued liabilities	319,893	767,663	497,785
Accrued payroll and related costs	116,045	153,235	573,920
Warrant and derivative liabilities		406,130	
Convertible promissory notes		13,129,877	
License fee payable	5,000,000		
<b>Total current liabilities</b>	<b>8,494,417</b>	<b>18,167,645</b>	<b>4,837,707</b>
<b>Total liabilities</b>	<b>8,494,417</b>	<b>18,167,645</b>	<b>4,837,707</b>
Commitments and Contingencies (Note 5)			
Stockholders equity (deficit)			
Series A-1 convertible preferred stock, \$0.001 par value, 552,530 shares authorized, issued and outstanding at December 31, 2008 and 2009; (aggregate liquidation value of \$813,508 as of December 31, 2008 and 2009); 0 shares outstanding at September 30, 2010			
	552	552	
Series A-2 convertible preferred stock, \$0.001 par value, 1,635,514 shares authorized; 1,620,669, shares issued and outstanding at December 31, 2008 and 2009; (aggregate			
	1,621	1,621	

liquidation value of \$8,323,782 as of December 31, 2008 and 2009); 0 shares outstanding at September 30, 2010			
Series B-1 convertible preferred stock, \$0.001 par value, 2,751,168 shares authorized; 2,746,865 shares issued and outstanding at December 31, 2008 and 2009; (aggregate liquidation value of \$19,986,220 as of December 31, 2008 and 2009); 0 shares outstanding at September 30, 2010	2,747	2,747	
Series B-2 convertible preferred stock, \$0.001 par value, 7,009,345 shares authorized; 3,226,244 shares issued and outstanding at December 31, 2008 and December 31, 2009; (aggregate liquidation value of \$23,474,182 as of December 31, 2008 and 2009); 0 shares outstanding at September 30, 2010	3,226	3,226	
Preferred stock, \$0.001 par value			
Common stock, \$0.001 par value, 18,443,341 shares authorized at December 31, 2008 and 2009; 95,000,000 shares authorized at September 30, 2010; 1,454,890, 1,566,199 and 32,796,690 shares issued and outstanding at December 31, 2008, 2009 and September 30, 2010, respectively	1,455	1,566	32,796
Additional paid-in capital	52,557,756	52,941,384	162,494,362
Accumulated other comprehensive income (loss)	(1,160)		161,987
Deficit accumulated the during the development stage	(53,026,460)	(65,229,952)	(92,603,647)
Total stockholders equity (deficit)	(460,263)	(12,278,856)	70,085,498
TOTAL	\$ 8,034,154	\$ 5,888,789	\$ 74,923,205

See accompanying notes to financial statements.

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**ANTHERA PHARMACEUTICALS, INC.**  
**(A Development Stage Company)**

**STATEMENTS OF OPERATIONS**

	Years Ended December 31,			Cumulative Period from September 9, 2004 (Date of Inception) to December 31, 2009	Nine Months Ended September 30,		Cumulative Period from September 2009 (Date of Inception)
	2007	2008	2009	2009	2010	2009	September 2009
<b>OPERATING EXPENSES:</b>							
Research and development	\$ 23,921,932	\$ 10,882,322	\$ 8,415,414	\$ 51,323,981	\$ 18,565,088	\$ 7,727,129	\$ 69,618,138
General and administrative	2,468,607	2,980,170	3,425,690	9,917,567	4,244,000	2,730,482	14,917,149
Marketing expenses	26,390,539	13,862,492	11,841,104	61,241,548	22,809,088	10,457,611	84,500,247
PROVISION FOR INDEBTEDNESS	(26,390,539)	(13,862,492)	(11,841,104)	(61,241,548)	(22,809,088)	(10,457,611)	(84,500,247)
<b>OPERATING INCOME (LOSS):</b>							
Other income	696,962	178,129	23,534	1,019,760	76,562	21,559	1,139,944
Other expense		(296,303)	(385,922)	(699,620)	(4,641,169)	(289,776)	(5,667,687)
Conversion		(4,118,544)		(4,308,544)			(4,308,544)
Operating income	696,962	(4,236,718)	(362,388)	(3,988,404)	(4,564,607)	(268,217)	(8,582,845)
Operating loss	\$ (25,693,577)	\$ (18,099,210)	\$ (12,203,492)	\$ (65,229,952)	\$ (27,373,695)	\$ (10,725,828)	\$ (92,932,472)
Operating loss per share - basic and diluted	\$ (28.15)	\$ (13.47)	\$ (8.06)		\$ (1.40)	\$ (7.16)	
Average number of shares used in per share calculation - basic and diluted	912,668	1,343,420	1,513,598		19,567,058	1,498,108	

See accompanying notes to financial statements.



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**ANTHERA PHARMACEUTICALS, INC.**  
**(A Development Stage Company)**

**STATEMENTS OF STOCKHOLDERS EQUITY (DEFICIT) AND COMPREHENSIVE LOSS**

DATE OF INCEPTION	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Deficit Accumulated During Development Stage	Total Stockholders Equity (Deficit)
	Shares	Amount	Shares	Amount				
September 9, 2004								
Issuance of common stock to founders for cash		\$	140,186	\$ 140	\$ 100	\$	\$	\$ 240
Issuance of common stock to founders for service			735,981	736	524			1,260
Repurchase of common stock from founder			(73,014)	(73)	(52)			(125)
Issuance of Series A convertible preferred stock for cash at \$1.47 per share, net of issuance cost of \$8,555	526,955	527			766,768			767,295
Issuance of Series A convertible preferred stock in exchange for service at \$1.47 per share	25,575	25			37,631			37,656
Issuance of common stock upon exercise of stock			33,292	33	4,527			4,560

options							
Reclass of							
early exercise							
of stock							
options to							
liability			(29,204)	(29)	(3,971)		(4,000)
Stock-based							
compensation							
expense							
related to							
consultant							
options					842		842
Net loss						(554,427)	(554,427)
BALANCE							
December 31,							
2005	552,530	552	807,241	807	806,369	(554,427)	253,301
Conversion of							
Series A							
convertible							
preferred							
stock to							
Series A-1							
convertible							
preferred							
stock at a ratio							
of 1:1							
Issuance of							
Series A-2							
convertible							
preferred							
stock for cash							
at \$5.14 per							
share net of							
issuance cost							
of \$202,019	1,138,677	1,139			5,645,093		5,646,232
Issuance of							
Series A-2							
convertible							
preferred							
stock upon							
conversion of							
convertible							
promissory							
notes at \$3.85							
and \$5.14 per							
share	224,248	224			961,527		961,751
Issuance of	257,744	258			1,323,524		1,323,782
Series A-2							
convertible							

preferred stock in exchange for licensed technology at \$5.14 per share						
Beneficial conversion feature related to conversion of convertible promissory notes into Series A-1 convertible preferred stock					190,000	190,000
Issuance of Series B convertible preferred stock for cash at \$7.28 per share net of issuance cost of \$20,930	2,619,568	2,620			19,036,450	19,039,070
Issuance of Series B convertible preferred stock in exchange for licensed technology at \$7.28 per share	127,297	127			926,091	926,218
Issuance of common stock upon exercise of stock options			125,581	126	17,074	17,200
Reclass of early exercise of stock options to liability			(36,810)	(37)	(5,006)	(5,043)
Stock-based compensation expense related to					4,358	4,358

consultant options Stock-based compensation expense related to employee options						4,648			4,648
Net loss							(8,679,246)		(8,679,246)

BALANCE December 31, 2006	4,920,064	\$ 4,920	896,012	\$ 896	\$ 28,910,128	\$	\$ (9,233,673)	\$	19,682,271
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See accompanying notes to financial statements.

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**ANTHERA PHARMACEUTICALS, INC.**  
**(A Development Stage Company)**

**STATEMENTS OF STOCKHOLDERS EQUITY (DEFICIT) AND COMPREHENSIVE LOSS (Continued)**

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Deficit Accumulated During Development Stage	Total Stockholder Equity (Deficit)
	Shares	Amount	Shares	Amount				
<b>PERIOD ENDING DECEMBER 31, 2006</b>								
Balance at December 31, 2006	4,920,064	\$ 4,920	896,012	\$ 896	\$ 28,910,128	\$	\$ (9,233,673)	\$ 19,682,278
Issuance of common stock upon exercise of stock options			493,605	494	118,426			118,920
Issuance of common stock for service of stock-based compensation			16,355	16	2,434			2,451
Change in other comprehensive loss								
Realized loss on investments							(1,812)	(1,812)
Net loss							(25,693,577)	(25,693,577)
Comprehensive loss								(25,695,389)
<b>PERIOD ENDING DECEMBER 31, 2007</b>								
Balance at December 31, 2007	4,920,064	4,920	1,165,807	1,166	29,058,005	(1,812)	(34,927,250)	(5,864,972)
Conversion of Series B convertible preferred stock to Series B-1 convertible preferred stock at a ratio of 1:1	962,066	962			6,512,241			6,513,203
Issuance of common stock for service of stock-based compensation								
Change in other comprehensive loss								
Realized loss on investments								
Net loss								
Comprehensive loss								

convertible preferred stock for cash at \$28 per share net issuance cost of \$42,327 and warrants issuance (allow)					
balance of Series B-2 convertible preferred stock upon conversion of convertible promissory notes at \$46 per share	2,235,661	2,235		12,197,765	12,200,000
balance of Series B-2 convertible preferred stock in lieu of interest payment at \$46 per share	28,517	29		155,601	155,630
balance of warrants connection with balance of Series B-2 convertible preferred stock				244,478	244,478
beneficial conversion feature related to conversion of convertible promissory notes to Series B-2 convertible preferred stock				4,118,544	4,118,544
balance of common stock upon exercise of stock options		179,886	180	67,925	68,100
release of early exercise of stock options liability		128,180	128	12,773	12,900
purchase of common stock upon employee termination		(18,983)	(19)	(4,856)	(4,870)
stock-based compensation expense related to consultant options				51,874	51,874
stock-based compensation				143,406	143,406

Expense related to employee options								
Change in other comprehensive loss								
Realized gain on investments						652		652
Net loss							(18,099,210)	(18,099,210)
Comprehensive loss								(18,098,558)
<b>BALANCE</b>								
December 31, 2008	8,146,308	8,146	1,454,890	1,455	52,557,756	(1,160)	(53,026,460)	(460,260)
Balance of common stock upon exercise								
Stock options			19,089	19	15,255			15,274
Release of early exercise of stock options liability			92,220	92	26,027			26,116
Stock-based compensation								
Expense related to consultant options					88,382			88,382
Stock-based compensation								
Expense related to employee options					253,964			253,964
Change in other comprehensive loss								
Realized gain on investments						1,160		1,160
Net loss							(12,203,492)	(12,203,492)
Comprehensive loss								(12,202,332)
Balance								
December 31, 2009	8,146,308	\$ 8,146	1,566,199	\$ 1,566	\$ 52,941,384	\$	\$ (65,229,952)	\$ (12,278,850)

See accompanying notes to financial statements.

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**ANTHERA PHARMACEUTICALS, INC.**  
**(A Development Stage Company)**

**STATEMENTS OF STOCKHOLDERS EQUITY (DEFICIT) AND COMPREHENSIVE LOSS (Continued)**

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Deficit Accumulated During Development Stage	Total Stockholders Equity (Deficit)
	Shares	Amount	Shares	Amount				
December 31, 2009	8,146,308	\$ 8,146	1,566,199	\$ 1,566	\$ 52,941,384	\$	\$ (65,229,952)	\$ (12,278,000)
Conversion of convertible preferred stock to common stock at a ratio of 1:1	(8,146,308)	(8,146)	8,146,308	8,146				
Issuance of common stock for cash at \$0.257* per share net of issuance cost of \$0.00257*			6,000,000	6,000	37,075,034			37,081,034
Issuance of common stock upon conversion of convertible preferred stock			2,511,235	2,511	13,880,601			13,883,116
Issuance of common stock upon release of investment funds*			2,598,780	2,599	17,097,373			17,099,972
Issuance of common stock upon cashless exercise of warrants			194,474	194	218			218
Issuance of common stock to collaborator upon achievement of milestone			531,914	532	3,499,468			3,501,934
Issuance of common stock upon exercise of warrants allotted by underwriters net of issuance cost of \$0.001			604,492	605	3,959,662			3,964,669
			118,878	119	89,066			89,066

Price of common stock upon exercise of stock options						
Price of common stock upon private placement						
Gain, net of cost of						
2014	10,500,000	10,500	23,806,591			23,817,091
Price of warrants in connection with the placement						
Gain			5,323,944			5,323,944
Change of early exercise of stock options and liability	24,410	24	(5,336)			(5,312)
Gain of warrant derivative						
Gain from equity in connection with acquisition of						
Convertible						
Warrant notes						
Common stock based			4,473,491			4,473,491
Gain related to						
Warrant options based			8,399			8,399
Gain related to						
Employee options			344,467			344,467
Gain in other						
Comprehensive loss						
Realized gain on						
Investments and						
Foreign currency						
Translation				161,987		161,987
Loss					(27,373,695)	(27,373,695)
Comprehensive loss						(27,211,708)
Balance						
December 31, 2010	32,796,690	\$ 32,796	\$ 162,494,362	\$ 161,987	\$ (92,603,647)	\$ 70,085,202

\* unaudited

See accompanying notes to financial statements.

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**ANTHERA PHARMACEUTICALS, INC.**  
**(A Development Stage Company)**

**STATEMENTS OF CASH FLOWS**

	Years Ended December 31,			September 9, 2004 (Date of Inception) to	Nine Months Ended		Sept
	2007	2008	2009	December 31, 2009	September 30, 2010	2009	Sept
CASH FROM							
OPERATING ACTIVITIES:							
Net change in assets and liabilities to reconcile net cash used in operating activities:	\$ (25,693,577)	\$ (18,099,210)	\$ (12,203,492)	\$ (65,229,952)	\$ (27,373,695)	\$ (10,725,828)	\$ (9,215,000)
Change in prepaids and other assets:							
Change in accounts payable	18,922	21,997	18,451	72,327	12,453	14,599	14,599
Change in discount on investments	(130,248)			(130,248)			
Change in loss on short-term investments		7,522	1,160	8,682		1,160	
Gain from disposal of property and equipment			(214)	(214)			
Change in compensation accrued to employees	74,861	143,406	253,964	476,879	344,467	203,215	
Change in compensation accrued to consultants	12,489	51,874	88,382	157,945	8,399	2,889	
Change in common stock subscription service	2,450			41,366			
Change in common and preferred stock for service							
Change in fee				2,250,000	3,500,000		
Change in common and preferred stock in lieu of cash payment		155,630		157,381	173,194		
Change in conversion feature		4,118,544		4,308,544			
Change in discount on convertible promissory notes			136,722	136,722	768,948	39,266	
Change in discount on convertible debt			79,644	79,644			
Change in market adjustment on convertible debt and derivative			(715)	(715)	3,796,491		
Change in assets and liabilities							

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expenses and other	(62,269)	31,182	51,437	(19,826)	(1,793,658)	29,812	(3,853)
payable	3,002,254	(2,176,982)	(212,623)	1,384,676	1,413,408	125,931	2,000,000
clinical study	1,160,717	65,013	(896,145)	565,034	402,883	109,007	1,000,000
liabilities	8,489	135,137	473,889	732,192	(248,095)	348,720	1,000,000
payroll and related	651,529	(578,910)	37,190	153,235	420,685	29,020	1,000,000
payable	6,000,000	(1,000,000)	(5,000,000)			(500,000)	1,000,000
used in operating	(14,954,383)	(17,124,797)	(17,172,350)	(54,856,328)	(18,574,520)	(10,322,209)	(7,000,000)
<b>INVESTING ACTIVITIES:</b>							
and equipment	(27,145)	(6,752)	(3,852)	(85,507)	(21,572)	(3,853)	(3,853)
from disposal of			400	400			
and equipment							
of short-term							
investments	(14,800,564)			(14,800,564)	(22,458,692)		(3,000,000)
from sale of							
investments	9,104,000	5,818,132		14,922,132	747,000		15,000,000
cash	(70,000)	30,000	40,000				
provided by (used	(5,793,709)	5,841,380	36,548	(36,461)	(21,733,264)	(3,853)	(2,000,000)
in investing							
activities							
<b>FINANCING ACTIVITIES:</b>							
from issuance of		12,200,000	13,400,000	26,560,000		10,000,000	20,000,000
debt notes							
of debt issuance			(97,317)	(97,317)	(210,282)		
proceeds from issuance							
of common stock		6,757,681		32,210,278			32,000,000
net of financing cost for							
public offering and							
underwriting			(273,884)	(273,884)	(2,949,473)		(3,000,000)
from issuance of							
common stock net of				115	90,788,900		90,000,000
costs							
from exercise of	118,920	68,105	15,274	224,059	89,185	15,213	
warrants							
provided by	118,920	19,025,786	13,044,073	58,623,251	87,718,330	10,015,213	140,000,000
investing							
activities							
change rate							
of cash and cash							
equivalents					(5,210)		
DECREASE	(20,629,172)	7,742,369	(4,091,729)	3,803,384	47,405,336	(310,849)	5,000,000
(INCREASE)							
IN CASH							
AND							
CASH							

MENTS										
D CASH										
MENTS	Beginning	20,781,916	152,744	7,895,113		3,803,384		7,895,113		
D CASH										
MENTS	End of	\$ 152,744	\$ 7,895,113	\$ 3,803,384	\$ 3,803,384	\$ 51,208,720	\$ 7,584,264	\$ 5		

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**ANTHERA PHARMACEUTICALS, INC.**  
**(A Development Stage Company)**

**STATEMENTS OF CASH FLOWS (Continued)**

	Years Ended December 31,			September 9, 2004 (Date of Inception) to	Nine Months Ended		September 9, 2004 (Date of Inception) to
	2007	2008	2009	December 31, 2009	September 30, 2010	2009	September 30, 2010
SUPPLEMENTAL CASH DISCLOSURES OF CASH FLOW INFORMATION:							
Interest paid	\$	\$ 1,413	\$	\$ 15,229	\$	\$	\$ 15,229
Taxes paid	\$ 8,235	\$ 4,379	\$ 4,900	\$ 29,587	\$ 18,972	\$ 2,299	\$ 48,559
NONCASH INVESTMENT AND FINANCING ACTIVITIES:							
Conversion of convertible promissory notes and accrued interest into Series A-2 convertible preferred stock and Series B-2 convertible preferred stock	\$	\$ 12,355,630	\$	\$ 13,317,381	\$ 13,883,112	\$	\$ 27,200,493
Beneficial conversion feature	\$	\$ 4,118,544	\$	\$ 4,308,544	\$	\$	\$ 4,308,544
Accrued and deferred offering cost	\$	\$	\$ 1,648,299	\$ 1,648,299	284,864	837,536	284,864
Accrued and deferred debt issuance cost	\$	\$	\$ 112,730	\$ 112,730	\$	\$	\$

Unamortized debt discount charged to equity in conjunction with conversion of promissory notes into common stock	\$	\$	\$	\$	\$	185,883	\$	\$	185,883
Reclassification of warrant and derivative liabilities to additional paid-in capital	\$	\$	\$	\$	\$	406,130	\$	\$	406,130
Reclass of issuance costs charged to equity	\$	\$	\$	\$	\$	3,508,221	\$	\$	3,508,221

See accompanying notes to financial statements.

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**1. ORGANIZATION AND DESCRIPTION OF BUSINESS**

Anthera Pharmaceuticals, Inc., the Company or Anthera, was incorporated on September 9, 2004 in the state of Delaware. During 2006, the Company opened its headquarters in San Mateo, California, and subsequently moved to Hayward, California. Anthera is a biopharmaceutical company focused on developing and commercializing therapeutics to treat serious diseases associated with inflammation, including cardiovascular and autoimmune diseases. Two of the Company's primary product candidates, varespladib and A-001, are inhibitors of the family of human enzymes known as secretory phospholipase A<sub>2</sub>, or sPLA<sub>2</sub>. The Company's other primary product candidate, A-623, targets elevated levels of B-cell activating factor, or BAFF. The Company's activities since inception have consisted principally of acquiring product and technology rights, raising capital, and performing research and development. Accordingly, the Company is considered to be in the development stage as of December 31, 2009, as defined by the Financial Accounting Standard Board, or FASB, Accounting Standard Codification, or ASC, 915. Successful completion of the Company's development programs and, ultimately, the attainment of profitable operations are dependent on future events, including, among other things, its ability to access potential markets; secure financing, develop a customer base; attract, retain and motivate qualified personnel; and develop strategic alliances. As of December 31, 2009, the Company has been funded by private equity and debt financings. Although management believes that the Company will be able to successfully fund its operations, there can be no assurance that the Company will be able to do so or that the Company will ever operate profitably.

The Company expects to continue to incur substantial losses over the next several years during its development phase. To fully execute its business plan, the Company will need to complete certain research and development activities and clinical studies. Further, the Company's product candidates will require regulatory approval prior to commercialization. These activities may span many years and require substantial expenditures to complete and may ultimately be unsuccessful. Any delays in completing these activities could adversely impact the Company. The Company plans to meet its capital requirements primarily through issuances of equity securities and, in the longer term, revenue from product sales.

The accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States, or GAAP, which contemplate continuation of the Company as a going concern. During the year ended December 31, 2009, the Company incurred a net loss of \$12,203,492 and had negative cash flows from operations of \$17,172,350. In addition, the Company had an accumulated deficit of \$65,229,952 at December 31, 2009. The Company expects to incur additional operating losses and negative cash flows for the foreseeable future. Failure to generate revenue or raise additional capital would adversely affect the Company's ability to achieve its intended business objectives.

***Going Concern***

The Company has historically incurred losses since inception. Because of these historical losses, the Company will require additional working capital to develop business operations. The Company intends



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to raise additional working capital through private placements, public offerings, bank financing or advances from related parties or shareholder loans.

The continuation of the Company's business is dependent upon obtaining further financing and ultimately achieving a profitable level of operations. The issuance of additional equity securities by the Company could result in a significant dilution in the equity interests of the Company's current or future stockholders. Obtaining commercial loans, assuming those loans would be available, will increase liabilities and future cash commitments.

There are no assurances that the Company will be able to either (i) achieve a level of revenues adequate to generate sufficient cash flow from operations; or (ii) obtain additional financing through either private placements, public offerings or bank financing necessary to support the Company's working capital requirements. To the extent that funds generated from operations and any private placements, public offerings or bank financing are insufficient, the Company will have to raise additional working capital. No assurance can be given that additional financing will be available, or if available, will be on terms acceptable to the Company. If adequate working capital is not available, the Company may cease operations.

These conditions raise substantial doubt about the Company's ability to continue as a going concern. The financial statements do not include any adjustments relating to the recoverability and classification of asset carrying amounts or the amount and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

## **2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

### ***Unaudited Interim Financial Information***

The accompanying interim balance sheet as of September 30, 2010, the statements of operations and cash flows for the nine months ended September 30, 2009 and 2010, and for the cumulative period from September 9, 2004 (date of inception) to September 30, 2010 and the statements of stockholders' equity (deficit) and comprehensive loss for the nine months ended September 30, 2010 are unaudited. The unaudited interim financial statements have been prepared on the same basis as the audited financial statements. In the opinion of management, the unaudited interim financial statements include all adjustments, consisting of normal recurring adjustments, necessary for the fair presentation of the Company's financial position at September 30, 2010 and the Company's results of operations and cash flows for the nine months ended September 30, 2009 and 2010 and for the cumulative period from September 9, 2004 (date of inception) to September 30, 2010. The results for the nine months ended September 30, 2010 are not necessarily indicative of the results to be expected for the year ending December 31, 2010 or for any future period.

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***Use of Estimates***

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Significant estimates include assumptions made in the accrual of clinical costs and stock-based compensation. Actual results could differ from those estimates.

***Cash and Cash Equivalents***

The Company considers all highly liquid instruments purchased with an original maturity or remaining maturities of three months or less at the date of purchase to be cash equivalents.

***Short-Term Investments***

The Company has designated its investments as available for sale and the investment are carried at fair value. The Company determines the appropriate classification of securities at the time of purchase and reevaluates such classification as of each balance sheet date. Securities with maturity exceeding three months but less than one year are classified as short-term investments. Realized gains and losses and declines in value judged to be other than temporary are determined based on specific identification method and are reported in the statements of operations. The Company includes any unrealized gains and losses on short-term investments in stockholders' equity as a component of other comprehensive income (loss).

***Restricted Cash***

At December 31, 2008, the Company had restricted cash of \$40,000 to collateralize the Company's corporate credit card. The credit card was cancelled in November 2009.

***Concentration of Credit Risk***

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash, cash equivalents and short-term investments. The Company's cash equivalents consist of cash, certificates of deposit with maturities less than three months and treasury money market funds. The Company's short-term investments consist of certificates of deposit and corporate bonds with maturities exceeding three months but less than one year. The Company has not experienced any losses in such accounts. The Company believes it is not exposed to significant credit risk related to cash, cash equivalents and short-term investments.

***Property and Equipment Net***

Property and equipment are stated at cost, less accumulated depreciation. Depreciation is computed over the estimated useful lives of the respective assets, which range from three to five years, using the straight-line method. Repairs and maintenance costs are expensed as incurred. Leasehold improvements

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are stated at cost and amortized using the straight-line method over the term of the lease or the life of the related asset, whichever is shorter.

***Deferred Financing Cost***

Deferred financing costs included costs directly attributable to the Company's offering of its equity securities. In accordance with FASB ASC 340-10, *Other Assets and Deferred Costs*, these costs are deferred and capitalized as part of other assets. Costs attributable to the equity offerings will be charged against the proceeds of the offering once completed.

***Long-Lived Assets***

The Company's long-lived assets and other assets are reviewed for impairment in accordance with the guidance of the FASB ASC 360-10, *Property, Plant, and Equipment*, whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. Recoverability of an asset to be held and used is measured by a comparison of the carrying amount of an asset to the future undiscounted cash flows expected to be generated by the asset. If such asset is considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the asset exceeds its fair value. Through December 31, 2009, the Company had not experienced impairment losses on its long-lived assets.

***Fair Value of Financial Instruments***

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Valuation techniques used to measure fair value, as required by Topic 820 of the FASB ASC, must maximize the use of observable inputs and minimize the use of unobservable inputs.

The standard describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value. The Company's assessment of the significance of a particular input to the fair value measurements requires judgment, and may affect the valuation of the assets and liabilities being measured and their placement within the fair value hierarchy. The three levels of input are:

***Level 1*** Quoted prices in active markets for identical assets or liabilities.

***Level 2*** Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

**Level 3** Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

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Following is a description of the Company's valuation methodologies for assets and liabilities measured at fair value.

Where quoted prices are available in an active market, fair value is based upon quoted market prices, and are classified in level 1 of the valuation hierarchy. If quoted market prices are not available, fair value is based upon observable inputs such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data, the assets or liabilities are classified in level 2 of the valuation hierarchy. When quoted prices and observable inputs are unavailable, fair values are based on internally developed cash flow models and are classified in level 3 of the valuation hierarchy. The internally developed cash flow models primarily use, as inputs, estimates for interest rates and discount rates including yields of comparable traded instruments adjusted for illiquidity and other risk factors, amount of cash flows and expected holding periods of the assets. These inputs reflect the Company's own assumptions about the assumptions market participants would use in pricing the assets including assumptions about risk developed based on the best information available in the circumstances.

Other financial instruments, including accounts payable and accrued liabilities, are carried at cost, which the Company believes approximates fair value because of the short-term maturity of these instruments.

***Research and Development Costs***

Research and development expenses consist of personnel costs, including salaries, benefits and stock-based compensation, clinical studies performed by contract research organizations, or CROs, materials and supplies, licenses and fees, and overhead allocations consisting of various administrative and facilities related costs. Research and development activities are also separated into three main categories: research, clinical development, and pharmaceutical development. Research costs typically consist of preclinical and toxicology costs. Clinical development costs include costs for Phase 1 and 2 clinical studies. Pharmaceutical development costs consist of expenses incurred in connection with product formulation and chemical analysis.

The Company charges research and development costs, including clinical study costs, to expense when incurred, consistent with the guidance of FASB ASC 730, *Research and Development*. Clinical study costs are a significant component of research and development expenses. All of the Company's clinical studies are performed by third-party CROs. The Company accrues costs for clinical studies performed by CROs on a straight-line basis over the service periods specified in the contracts and adjusts the estimates, if required, based upon the Company's ongoing review of the level of effort and costs actually incurred by the CROs. The Company monitors levels of performance under each significant contract, including the extent of patient enrollment and other activities through communications with the CROs, and adjusts the estimates, if required, on a quarterly basis so that clinical expenses reflect the actual effort expended by each CRO.



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All material CRO contracts are terminable by the Company upon written notice and the Company is generally only liable for actual effort expended by the CROs and certain noncancelable expenses incurred at any point of termination.

Amounts paid in advance related to incomplete services will be refunded if a contract is terminated. Some contracts include additional termination payments that become due and payable if the Company terminates the contract. Such additional termination payments are only recorded if a contract is terminated.

***Comprehensive Income (Loss)***

Comprehensive income (loss) consists of other comprehensive income and net loss. Other comprehensive income includes certain changes in equity that are excluded from net income (loss). Specifically, the Company includes unrealized gains (losses) on available for sale securities in other comprehensive income (loss). Comprehensive income (loss) for each period presented is set forth in the Statement of Stockholders' Equity (Deficit) and Comprehensive Loss.

***Income Taxes***

The Company accounts for income taxes in accordance with FASB ASC 740, *Income Taxes*. FASB ASC 740 prescribes the use of the liability method whereby deferred tax asset and liability account balances are determined based on differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Company provides a valuation allowance, if necessary, to reduce deferred tax assets to their estimated realizable value.

FASB ASC 740-10 clarifies the accounting for income taxes, by prescribing a minimum recognition threshold a tax position is required to meet before being recognized in the financial statements. It also provides guidance on derecognition, measurement and classification of amounts relating to uncertain tax positions, accounting for and disclosure of interest and penalties, accounting in interim periods, disclosures and transition relating to the adoption of the new accounting standard. FASB ASC 740-10 is effective for fiscal years beginning after December 15, 2006. The Company adopted FASB ASC 740-10 as of January 1, 2007, as required, and determined that the adoption of FASB ASC 740-10 did not have a material impact on the Company's financial position and results of operations.

***Net Loss Per Share***

The Company computes net loss per share in accordance with FASB ASC 260, *Earnings Per Share*, under which basic net loss attributable to common stockholders per share is computed by dividing income available to common stockholders (the numerator) by the weighted-average number of common shares outstanding (the denominator) during the period. Shares issued during the period and shares reacquired during the period are weighted for the portion of the period that they were outstanding. The computation of diluted EPS is similar to the computation of basic EPS except that the denominator is



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increased to include the number of additional common shares that would have been outstanding if the dilutive potential common shares had been issued. In addition, in computing the dilutive effect of convertible securities, the numerator is adjusted to add back any convertible preferred dividends and the after-tax amount of interest recognized in the period associated with any convertible debt. The numerator also is adjusted for any other changes in income or loss that would result from the assumed conversion of those potential common shares, such as profit-sharing expenses. Diluted EPS is identical to basic EPS since common equivalent shares are excluded from the calculation, as their effect is anti-dilutive.

The following table summarizes the Company's calculation of net loss per common share:

	Years Ended December 31,			Nine Months Ended	
	2007	2008	2009	September 30, 2010	2009 (unaudited)
<b>Historical net loss per share</b>					
Numerator					
Net loss	\$ (25,693,577)	\$ (18,099,210)	\$ (12,203,492)	(\$ 27,373,695)	\$ (10,725,828)
Denominator					
Weighted-average common shares outstanding	1,174,317	1,573,448	1,623,677	19,619,670	1,619,650
Less: Weighted-average shares subject to repurchase	(261,649)	(230,028)	(110,079)	(52,612)	(121,542)
Denominator for basic and diluted net loss per share	912,668	1,343,420	1,513,598	19,567,058	1,498,108
Basic and diluted net loss per share	\$ (28.15)	\$ (13.47)	\$ (8.06)	\$ (1.40)	\$ (7.16)

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The following table shows weighted-average historical dilutive common share equivalents outstanding, which are not included in the above historical calculation, as the effect of their inclusion is anti-dilutive during each period.

	Years Ended December 31,			Nine Months Ended	
	2007	2008	2009	September 30, 2010	September 30, 2009 (unaudited)
Options to purchase common stock	103,322	539,234	932,544	749,613	526,102
Common stock subject to repurchase	261,649	230,028	110,079	52,612	121,542
Warrants to purchase common stock <sup>(1)</sup>		94,230 <sup>(1)</sup>	240,516 <sup>(1)</sup>	464,828	194,474
Convertible preferred stock (on an as-if-converted basis)	4,920,064	6,184,045	8,146,308		8,146,308
Restricted stock units				93,220	
	5,285,035	7,047,537	9,429,447	1,360,273	8,988,426

<sup>(1)</sup> These warrants expire at the earliest of (i) seven years after the issuance date, (ii) the closing of the Company's first initial public offering or (iii) upon consummation by the Company of any consolidation or merger. Each of the warrants contains a customary net issuance feature, which allows the warrant holder to pay the exercise price of the warrant by forfeiting a portion of the executed warrant shares with a value equal to the aggregate exercise

<sup>(2)</sup> These warrants expire at the earlier of July 2014 and September 2014 or upon the date of the sale of all or substantially of the Company's equity interests or assets. Each of the warrants contains a customary net issuance feature, which allows the warrant holder to pay the exercise price of the warrant by forfeiting a portion of the exercised warrant shares with a value equal to the aggregate exercise price.

***Stock-Based Compensation***

Effective January 1, 2006, the Company adopted the provisions of FASB ASC 718, *Compensation - Stock Compensation*, using the modified prospective method. Compensation costs related to all equity instruments granted after January 1, 2006 are recognized at the grant-date fair value of the awards. Additionally, the Company is required to include an estimate of the number of awards that will be forfeited in calculating compensation costs, which are recognized over the requisite service period of the awards on a straight-line basis. The Company estimates the fair value of its share-based payment awards on the date of grant using an option-pricing model.

The Company uses the Black-Scholes option-pricing model as the method for determining the estimated fair value of stock options. The Black-Scholes model requires the use of highly subjective and complex assumptions which

determine the fair value of share-based awards, including the option's expected term and the price volatility of the underlying stock.

***Expected Term*** The Company's expected term represents the period that the Company's stock-based awards are expected to be outstanding and is determined using the simplified method.

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***Expected Volatility*** Expected volatility is estimated using comparable public company volatility for similar terms.

***Expected Dividend*** The Black-Scholes valuation model calls for a single expected dividend yield as an input and the Company has never paid dividends and has no plans to pay dividends.

***Risk-Free Interest Rate*** The risk-free interest rate used in the Black-Scholes valuation method is based on the U.S. Treasury zero-coupon issues in effect at the time of grant for periods corresponding with the expected term of option.

***Estimated Forfeitures*** The estimated forfeiture rate is determined based on the Company's historical forfeiture rates to date. The Company will monitor actual expenses and periodically update the estimate.

Equity instruments issued to nonemployees are recorded at their fair value as determined in accordance with FASB ASC 505-50, *Equity*, and are periodically revalued as the equity instruments vest and are recognized as expense over the related service period.

***Recently Issued Accounting Standards***

In June 2009, the FASB issued FASB ASC 105, *Generally Accepted Accounting Principles*, which establishes the FASB Accounting Standards Codification as the sole source of authoritative generally accepted accounting principles. Pursuant to the provisions of FASB ASC 105, the Company has updated references to GAAP in its financial statements issued for the period ended December 31, 2009. The adoption of FASB ASC 105 did not impact the Company's financial position or results of operations.

In June 2008, the FASB issued FASB ASC 815-40, *Derivatives and Hedging*, that provides guidance on how to determine if certain instruments (or embedded features) are considered indexed to a company's own stock, including instruments similar to warrants to purchase the company's stock. FASB ASC 815-40 requires companies to use a two-step approach to evaluate an instrument's contingent exercise provisions and settlement provisions in determining whether the instrument is considered to be indexed to its own stock and therefore exempt from the application of FASB ASC 815. FASB ASC 815-40 became effective January 1, 2009. Any outstanding instrument at the date of adoption requires a retrospective application of the accounting through a cumulative effect adjustment to retained earnings upon adoption. The Company's adoption of this guidance did not have a material impact on either its financial position or results of operations.

**3. DEFERRED FINANCING COST**

At December 31, 2009, the Company capitalized and deferred \$1,922,183 of financing cost attributable to the Company's anticipated initial public offering, which will be charged against the proceeds once the initial public offering is completed.



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The deferred financing costs were charged against the proceeds upon the closing of the Company's IPO in March 2010.

**4. PROPERTY AND EQUIPMENT**

At December 31, 2008 and 2009 and September 30, 2010, property and equipment consist of the following:

	<b>December 31,</b>	<b>September 30,</b>	
	<b>2008</b>	<b>2009</b>	<b>2010</b>
			<b>(unaudited)</b>
Computers and software	\$ 64,925	\$ 66,548	\$ 77,319
Office equipment and furniture	16,730	16,730	16,730
Leasehold improvements			10,802
Total property and equipment	81,655	83,278	104,851
Less accumulated depreciation	(53,876)	(70,284)	(82,738)
Property and equipment, net	\$ 27,779	\$ 12,994	\$ 22,113

Depreciation expense for the years ended December 31, 2007, 2008 and 2009 and for the period from September 9, 2004 (Date of Inception) to December 31, 2009 was \$18,922, \$21,997, \$18,451 and \$72,327, respectively.

Depreciation expense for the nine months ended September 30, 2009 and 2010 and for the period from September 9, 2004 (Date of Inception) to September 30, 2010 was \$14,599, \$12,453 and \$84,780, respectively.

**5. COMMITMENTS AND CONTINGENCIES*****Leases***

The Company leases its office facilities under an operating lease that expires in September 2010. Rent expense for the years ended December 31, 2007, 2008 and 2009 and for the period from September 9, 2004 (Date of Inception) to December 31, 2009, were \$97,314, \$115,506, \$165,016 and \$398,025, respectively. Future minimum payments under the operating lease for the year ending December 31, 2010 are \$70,146.

Rent expense for the nine months ended September 30, 2009 and 2010, and for the period from September 9, 2004 (Date of Inception) to September 30, 2010, were \$117,609, \$77,787 and \$495,812, respectively.

In addition to the facility lease, the Company leases office equipment under operating lease agreements, which began in 2007 and ends in 2013. Rental expense for the years ended December 31, 2007, 2008 and 2009, and the period from September 9, 2004 (Date of Inception) to December 31, 2009, was

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\$2,910, \$15,216, \$17,129 and \$35,255, respectively. Future minimum payments under the operating lease for the years ending December 31, 2010, 2011, 2012 and 2013 are \$12,750, \$3,120, \$3,120 and \$1,560, respectively.

Rental expense for the nine months ended September 30, 2009 and 2010, and the period from September 9, 2004 (Date of Inception) to September 30, 2010, were \$12,730, \$12,640 and \$47,896, respectively.

***Other Commitments***

In July 2006, the Company entered into a license agreement with Shionogi & Co., Ltd. and Eli Lilly and Company, or Eli Lilly, to develop and commercialize certain sPLA<sub>2</sub> inhibitors for the treatment of inflammatory diseases. The agreement granted the Company commercialization rights to Shionogi & Co., Ltd. and Eli Lilly's sPLA<sub>2</sub> inhibitors, including varespladib and A-001. Under the terms of the agreement, the Company's license is worldwide, with the exception of Japan where Shionogi & Co., Ltd. has retained rights. Pursuant to this license agreement, the Company paid Shionogi & Co., Ltd. and Eli Lilly a one-time license initiation fee of \$250,000. Additionally, in consideration for the licensed technology, the Company issued 257,744 shares of Series A-2 convertible preferred stock, or Series A-2, at \$5.14 per share and 127,297 shares of Series B-1 convertible preferred stock at \$7.28 per share with a total aggregate value of \$2.3 million to Shionogi & Co., Ltd. and Eli Lilly. As there is no future alternative use for the technology and in accordance with the guidance of the Research and Development topic of the FASB ASC, the Company recorded the initiation and license fees in research and development expenses during the year ended December 31, 2006. There was no outstanding obligation pursuant to the license agreement in the years ended December 31, 2008 and 2009. The Company is obligated to make additional milestone payments upon the achievement of certain development, regulatory and commercial objectives, which includes a \$1.5 million milestone payment to each party upon the start of a Phase 3 clinical study. The Company amended the milestone payment terms in 2009 with each of Eli Lilly and Shionogi & Co., Ltd. to no later than 12 months from the enrollment of the first patient in a Phase 3 clinical study for varespladib. In consideration for the extension, the milestone payments increased to \$1.75 million to each party. (See Note 12).

The Company is also obligated to make additional milestone payments of up to \$5.0 million and pay tiered royalties, which increase as a percentage from the mid-single digits to the low double digits as net sales increase, of up to \$92.5 million on future net sales of products that are developed and approved as defined by this collaboration. The Company's obligation to pay royalties with respect to each licensed product in each country will expire upon the later of (a) 10 years following the date of the first commercial sale of such licensed product in such country, and (b) the first date on which generic version(s) of the applicable licensed product achieve a total market share, in the aggregate, of 25% or more of the total unit sales of wholesalers to pharmacies of licensed product and all generic versions combined in the applicable country.

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In December 2007, the Company entered into with Amgen Inc., or Amgen, a worldwide, exclusive license agreement, or the Amgen Agreement, to develop and commercialize A-623 for the treatment of systemic lupus erythematosus, or lupus. Under the terms of the Amgen Agreement, the Company was required to pay a nonrefundable, upfront license fee of \$6.0 million, payable in two installments with the first installment due within 90 days from the effective date of the agreement and the second installment due on the earlier of (i) termination of the agreement by the Company or (ii) February 1, 2009. As there is no future alternative use for the technology, the Company expensed the license fee in research and development expenses during the year ended December 31, 2007. The outstanding obligation pursuant to the license agreement was \$5.0 million as of December 31, 2008. Pursuant to the terms of the Amgen Agreement, if the Company fails to make any payment to Amgen under the agreement, interest will accrue on a daily basis equal to 2% above the then applicable prime rate. On October 16, 2009, the Company executed an amendment to the license agreement with Amgen to amend certain terms and conditions, including the terms and conditions on which technology transfer activities, support and assistance would be provided to the Company. Pursuant to the terms of this amendment, the Company paid off the license fee on October 19, 2009. Upon receipt of the license fee payment, \$297,383 of accrued interest was forgiven by Amgen.

Under the terms of the Amgen Agreement, the Company is obligated to make additional milestone payments to Amgen of up to \$33.0 million upon the achievement of certain development and regulatory milestones. The Company is also obligated to pay tiered royalties on future net sales of products, ranging from high single digits to the low double digits, that are developed and approved as defined by this collaboration. The Company's royalty obligations as to a particular licensed product will be payable, on a country-by-country and licensed product-by-licensed product basis, for the longer of (a) the date of expiration of the last to expire valid claim within the licensed patents that covers the manufacture, use or sale, offer to sell, or import of such licensed product by the Company or a sublicense in such country, or (b) 10 years after the first commercial sale of the applicable licensed product in the applicable country.

**6. CONVERTIBLE PROMISSORY NOTES AND EQUITY FINANCING**

In April 2006, the Company issued convertible promissory notes to a group of individuals, or Holders, in exchange for an aggregate principal amount of \$570,000, or Bridge Loan. The Bridge Loan was converted into Series A-2 convertible preferred stock at a discount of 25% resulting in a \$3.85 per share price in August 2006. The interest on these loans was 7% per annum and accrued interest of \$13,816 was paid out to the Holders upon closing of our Series A-2 convertible preferred stock. In connection with the conversion of the Bridge Loan, a beneficial conversion feature of \$190,000 representing the difference between the conversion price and the fair value of the preferred shares multiplied by the number of shares converted was recorded as non-cash interest expense and an increase in additional paid-in capital.

In June 2006, the Company issued two additional convertible promissory notes to two new investors for an aggregate principal amount of \$390,000. The notes were converted into Series A-2 convertible



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preferred stock at the issuance price of our Series A-2 convertible preferred stock, or \$5.14 per share, in August 2006. The interest on these loans was 8% per annum. A portion of accrued interest in the amount of \$1,751 was converted into Series A-2 convertible preferred stock and the remainder of accrued interest was paid out to the investors.

During February and May 2008, the Company issued convertible promissory notes to its existing investors in exchange for an aggregate principal amount of \$12.2 million. The interest on these loans was 4.2% per annum. The notes and accrued interest of \$155,630 were converted into Series B-2 convertible preferred stock at the issuance price of our Series B-2 convertible preferred stock, or \$5.46 per share, in August 2008. In connection with the terms of the convertible promissory notes, a charge for the beneficial conversion feature of \$4.1 million representing the difference between the conversion price and the fair value of the preferred shares multiplied by the number of shares converted was recorded as non-cash interest expense and an increase to additional paid-in capital.

On August 12, 2008, the Company issued 2,267,178 shares of its Series B-2 convertible preferred stock to certain of its existing investors in exchange for conversion of \$12.2 million of aggregate principal amount of and \$155,630 of aggregate interest accrued upon convertible promissory notes and 962,066 shares of its Series B-2 convertible preferred stock to two new investors in exchange for \$7.0 million of cash. In connection with the issuance of our Series B-2 convertible preferred stock, the Company issued warrants to purchase 240,516 shares of the Company's common stock to those investors purchasing shares for cash.

On July 17, 2009 and September 9, 2009, the Company sold (i) convertible promissory notes, or the 2009 notes, that are secured by a first priority security interest in all of the Company's assets, and (ii) warrants, or the 2009 warrants, to purchase shares of the Company's equity securities to certain of its existing investors for an aggregate purchase price of \$10.0 million. These transactions are collectively referred to as the 2009 bridge financing. The 2009 notes accrue interest at a rate of 8% per annum and have a maturity date of the earliest of (i) July 17, 2010, (ii) the date of the sale of all or substantially all of the Company's equity interests or assets or (iii) an event of default pursuant to the terms of the 2009 notes. The 2009 notes are automatically convertible into the securities that are sold in the next equity financing at a 25% discount to the price to which such securities are sold to other investors, or they are alternatively convertible into shares of the Company's Series B-2 convertible preferred stock in connection with a change of control of the Company. In addition, if a sale of all or substantially all of the equity interests or assets of the Company should occur prior to the next equity financing and any 2009 note has not been converted, the Company is obligated to pay such 2009 note holder an amount equal to the accrued interest and two times the outstanding principal amount on such note in conjunction with the closing of such sale.

On September 25, 2009, the Company executed a stock purchase agreement, which was amended to add an additional purchaser on November 3, 2009, with certain existing preferred stock holders for the sale of shares of the Company's common stock equal to \$20.5 million divided by the price per share at which shares of the Company's common stock are sold to the public in an initial public offering, minus



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any per-share underwriting discounts, commissions or fees. Pursuant to the terms of the stock purchase agreement, the investors deposited \$20.5 million into an escrow account for the purchase of the shares. Pursuant to the escrow agreement, the funds held in the escrow account will be released simultaneously with the closing of an initial public offering in which the aggregate net proceeds to the Company (after underwriting discounts, commissions and fees) are at least \$50.0 million.

On December 11, 2009, the Company entered into a note purchase agreement and amended the September 2009 stock purchase and escrow agreements. The agreements provided for the release of \$3.4 million of the \$20.5 million held in the escrow account. The Company issued convertible promissory notes, or the escrow notes, for the released amount to the investors. The escrow notes accrue interest at a rate of 8% per annum and have a maturity date of the earlier of (i) July 17, 2010 or (ii) an event of default pursuant to the terms of the escrow notes. The escrow notes are automatically convertible into shares of common stock upon the consummation of an initial public offering in which the aggregate net proceeds to the Company (after underwriting discounts, commissions and fees) are at least \$50.0 million, at the price per share at which shares are sold to the public, minus any per-share underwriting discounts, commissions or fees. However, if an initial public offering is not consummated by February 28, 2010, the escrow notes become exchangeable for exchange notes in the same principal amount plus any accrued interest thereon, which are automatically convertible into the securities that are sold in the next equity financing at a 25% discount to the price in which such securities are sold to other investors, or they are alternatively convertible into shares of the Company's Series B-2 convertible preferred stock in connection with a change of control of the Company. Furthermore, if a sale of all or substantially all of the equity interests or assets of the Company should occur prior to the next equity financing and any exchange note has not converted, the Company shall pay such exchange note holder an amount equal to the accrued interest and two times the outstanding principal amount on such note in conjunction with the closing of such sale.

**7. CAPITAL STRUCTURE***Common Stock*

At December 31, 2008 and 2009, the Company was authorized to issue 17,523,364 and 18,443,341 shares of common stock, respectively, and had reserved the following shares for future issuance:

	<b>December 31, 2008</b>	<b>December 31, 2009</b>
Conversion of Series A-1 convertible preferred stock	552,530	552,530
Conversion of Series A-2 convertible preferred stock	1,620,669	1,620,669
Conversion of Series B-1 convertible preferred stock	2,746,865	2,746,865
Conversion of Series B-2 convertible preferred stock	3,226,244	3,226,244

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Warrants for purchase of common stock	240,516	240,516
Common stock options outstanding	957,125	1,323,776

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	<b>December 31, 2008</b>	<b>December 31, 2009</b>
Common stock options available for future grant under stock option plan	405,311	19,571
Total	9,749,260	9,730,171

In November 2004, the Company issued 876,167 shares of restricted common stock to founders of the Company for \$0.001 per share. The restricted common stock vested over a three-year period ending December 31, 2007.

At September 30, 2010, the Company is authorized to issue 100,000,000 shares of capital stock, of which 95,000,000 shares are designated as common stock, par value \$0.001 per share. Holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders of the Company. Subject to the preferences that may be applicable to any outstanding shares of preferred stock, the holders of common stock are entitled to receive ratably such dividends, if any, as may be declared by the Board of Directors. No dividends have been declared to date.

At September 30, 2010, the Company had reserved the following shares for future issuance (unaudited):

Warrants for purchase of common stock	4,557,136
Common stock options outstanding	1,307,066
Restricted stock units outstanding	333,000
Common stock options available for future grant under stock option plan	24,314
Total	6,221,516

***Convertible Preferred Stock***

At December 31, 2008 and 2009, the Company was authorized to issue the following shares of preferred stock:

	<b>December 31, 2008</b>	<b>December 31, 2009</b>
Shares designated Series A convertible preferred stock		

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Shares designated Series A-1 convertible preferred stock	552,530	552,530
Shares designated Series A-2 convertible preferred stock	1,635,514	1,635,514
Shares designated Series B convertible preferred stock	5,081,775	
Shares designated Series B-1 convertible preferred stock	2,751,168	2,751,168
Shares designated Series B-2 convertible preferred stock	3,606,892	7,009,345
Total authorized shares of preferred stock	13,627,879	11,948,557

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The Series A-1 convertible preferred stock, Series A-2 convertible preferred stock, Series B convertible preferred stock, Series B-1 convertible preferred stock and Series B-2 convertible preferred stock are collectively referred to as series preferred. The holders of the series preferred have various rights and privileges. In fiscal year 2005, the Company issued 552,530 shares of Series A convertible preferred stock that was subsequently reclassified into Series A-1 convertible preferred stock, or Series A-1 preferred, at a ratio of 1:1 in fiscal year 2006. In fiscal year 2006, the Company issued 2,746,865 shares of Series B convertible preferred stock that was subsequently reclassified into Series B-1 convertible preferred stock, or Series B-1 preferred, at a ratio of 1:1 in fiscal year 2008. In fiscal 2008, the Company issued 3,226,244 shares of Series B-2 convertible preferred stock.

***Voting***

Each holder of shares of the series preferred is entitled to the number of votes equal to the number of shares of common stock into which such shares of series preferred could be converted and have equal voting rights and powers of the common stock.

***Dividend Rights***

Holders of series preferred, in preference to the holders of common stock, are entitled to receive, when and as declared by the board of directors, but only out of funds that are legally available, cash dividends at the rate of 7% of the original issuance price per annum on each outstanding share of series preferred. The original issuance prices for Series A-1 preferred, Series A-2 convertible preferred stock, or Series A-2 preferred, Series B-1 preferred and Series B-2 convertible preferred stock, or Series B-2 preferred, were \$1.47, \$5.14, \$7.28 and \$7.28 per share, respectively. Such dividends are payable only when, as and if declared by the board of directors and are noncumulative.

***Conversion***

Holders of series preferred are entitled, at any time, to cause their shares to be converted into fully paid and nonassessable shares of common stock. The conversion rate in effect at any time for conversion of each series of series preferred is determined by dividing (i) the original issuance price of the series preferred with respect to such series by (ii) the applicable series preferred conversion price. The conversion price of the series preferred is the original issue price for such series (subject to adjustment). Additionally, the preferred stock will automatically convert into shares of common stock based on the then-effective series preferred conversion price (i) at any time upon the affirmative election of the holders of at least two-thirds of the outstanding shares of preferred stock, or (ii) immediately upon the closing of a public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale of common stock for the account of the Company in which the valuation of the Company, before giving effect to such offering, is at least \$200.0 million and the aggregate proceeds to the Company (after underwriting discounts, commission and fees) are at least \$50.0 million. Upon such automatic conversion, any declared and unpaid dividends are payable in cash to the preferred shareholders.



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In connection with the completion of the Company's IPO on March 4, 2010, all of the Company's shares of preferred stock outstanding at the time of the offering were converted into an aggregate of 8,146,308 shares of common stock. As of September 30, 2010, no liquidation preference remained.

The Company's Fifth Amended and Restated Certificate of Incorporation designates 5,000,000 shares of the Company's capital stock as undesignated preferred stock.

***Liquidation***

Upon any liquidation, dissolution, or winding up of the Company, whether voluntary or involuntary, a Liquidation Event, before any distribution or payment is made to holders of common stock, the holders of series preferred are entitled to be paid, with equal priority and pro rata, out of the assets of the Company legally available for distribution, or the consideration received in such transaction, for each share of series preferred held by them, an amount equal to the original issuance price per share, plus all accrued or declared but unpaid dividends (appropriately adjusted for any stock dividend, stock split, recapitalization and the like). After payment of the full liquidation preference of the series preferred, the remaining assets of the Company, if any, shall be distributed ratably to the holders of the common stock, our Series A-2 preferred, Series B-1 preferred and Series B-2 preferred stockholders, on an as-converted-to-common-stock basis, until such time as such holders of Series A-2 preferred, Series B-1 preferred and Series B-2 preferred have received a distribution equal to three-and-a-half times the original issue price of such series. If there are still assets left to be distributed by the Company, then the remaining assets shall be distributed ratably to the holders of the common stock.

***Redemption***

Shares of series preferred are not redeemable by the Company.

***Warrants***

In August 2008, in connection with the issuance of Series B-2 preferred, the Company issued 240,516 warrants to two new investors for the purchase of common stock at \$1.34 per share. The warrants expire at the earliest of (i) seven years from the issuance date, (ii) the closing date of the Company's first initial public offering or (iii) upon consummation by the Company of any consolidation or merger. The Company valued the warrants using the Black-Scholes valuation model with the following assumptions: expected volatility of 72%, risk-free interest rate of 3.46% and expected term of seven years. The fair value of the warrants was calculated to be \$224,478 and recorded as issuance cost and an increase to additional paid-in capital. As of December 31, 2009, 240,516 warrants remain outstanding. Each of the warrants contains a net issuance feature, which allows the warrant holder to pay the exercise price of the warrant by forfeiting a portion of the exercised warrant shares with a value equal to the aggregate exercise. The warrants were exercised upon the closing of the Company's IPO on March 4, 2010.



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In connection with the issuance of the 2009 notes discussed in Note 6, the Company issued warrants to each note holder to purchase shares of equity securities. Each 2009 warrant is exercisable for the security into which each 2009 note is converted, at the price at which that security is sold to other investors. Depending on when the 2009 notes are converted, each 2009 warrant may be exercisable for a number of shares equal to the quotient obtained by dividing (x) (i) 25% of the principal amount of the accompanying 2009 notes, in the event the conversion occurs prior to April 1, 2010, or (ii) 50% of the principal amount of the accompanying 2009 notes, in the event the conversion occurs on or after April 1, 2010, by (y) the purchase price of the securities into which the note is ultimately converted. The Company accounts for the 2009 warrants in accordance with FASB ASC 480, which requires that a financial instrument, other than outstanding shares, that, at inception, is indexed to an obligation to repurchase the issuer's equity shares, regardless of the timing of the redemption feature, and may require the issuer to settle the obligation by transferring assets, be classified as liability. The Company measured the fair value of its warrant liability on the date of issuance of the 2009 notes using the Black-Scholes valuation model with the following assumptions: expected volatility of 78%, risk-free interest rate of 2.34% and expected term of five years. The Company then applied probability factors to the different possible conversion scenarios and calculated the fair value of the 2009 warrants to be \$320,000, which amount was recorded as a discount to the 2009 notes. The discount is amortized as interest expense over the terms of the 2009 notes. The Company will re-measure the fair value of its warrant liability at each subsequent reporting period until the number of shares underlying the warrants and the exercise price become known. Changes in the fair value of the 2009 warrants will be recognized as non-operating income or expense. For the year ended December 31, 2009, the Company re-measured the fair value of its warrant liability and adjusted the liability to \$319,285.

Upon conversion of the 2009 notes into shares of common stock at the completion of the Company's IPO, the fair value of the 2009 warrants was re-measured again by the Company and the aggregate fair value of \$1.5 million was recorded in non-operating expense during the three months ended March 31, 2010. Concurrent with the conversion of the 2009 notes, the Company calculated the number of warrant shares to be 357,136 based on 25% of the principal amount of the accompanying 2009 notes and the IPO price of the Company's common stock of \$7.00 per share. The warrant liability and unamortized discount were reclassified to additional paid-in-capital as a result of the conversion of the 2009 notes.

In connection with the issuance of the escrow notes, which are exchangeable for exchange notes, each exchange note that is issued will be accompanied by a warrant, which is exercisable for the security into which the accompanying exchange note, if any, is converted, at the price at which that security is sold to other investors. Depending on when the exchange notes are converted, each warrant may be exercisable for a number of shares equal to the quotient obtained by dividing (x) (i) 25% of the principal amount of the accompanying exchange notes, in the event the conversion occurs prior to April 1, 2010, or (ii) 50% of the principal amount of the accompanying exchange notes, in the event the conversion occurs on or after April 1, 2010, by (y) the purchase price of the securities into which the exchange note is ultimately converted. The Company accounts for the potential issuance of the warrants in accordance with FASB ASC 480, which requires that a financial instrument, other than



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outstanding shares, that, at inception, is indexed to an obligation to repurchase the issuer's equity shares, regardless of the timing of the redemption feature, and may require the issuer to settle the obligation by transferring assets, be classified as liability. The Company measured the fair value of its derivative using the Black-Scholes valuation model with the following assumptions: expected volatility of 78%, risk-free interest rate of 2.34% and expected term of five years. The Company then applied probability factors to the different possible exchange and conversion scenarios and calculated the fair value of the warrants to be \$86,845, which amount was recorded as a discount to the escrow notes. The discount is amortized as interest expense over the terms of the escrow notes. The Company will re-measure the fair value of its derivative at each subsequent reporting period until the number of shares of warrants and the exercise price become known. Changes in the fair value of the warrants will be recognized as non-operating income or expense.

The escrow notes were converted into shares of the Company's common stock upon the closing of its IPO. As a result of the conversion taking place prior to the exchange of the escrow notes into exchange notes, the Company's obligation to issue the warrants was eliminated. Consequently, the Company reclassified the unamortized discount into additional paid-in capital and reduced the fair value of the warrant liability to zero.

***Embedded Derivative***

The 2009 notes and the escrow notes discussed in Note 8 contained a contingent automatic redemption feature and a contingent put option that meet the definition of an embedded derivative as defined in the Derivatives and Hedging topic of FASB ASC 815 because these notes contain features with implicit or explicit terms that affect some or all of the cash flows or the value of other exchanges required by a contract in a manner similar to a derivative instrument. As a result, the Company evaluated these embedded derivative features under the guidance of FASB ASC 815 and determined that the embedded derivative features should be separated from the 2009 notes and escrow notes and recognized as derivative instruments. Pursuant to the guidance of FASB ASC 815, if a hybrid instrument contains more than one embedded derivative feature that would individually warrant separate accounting as a derivative instrument, those embedded derivative features shall be bundled together as a single, compound embedded derivative that shall then be bifurcated and accounted for separately from the host contract unless a fair value election is made. Since the Company may not make a fair value election, the contingent automatic redemption and the contingent put option should be bundled together as a single, compound embedded derivative and separated from the 2009 notes and escrow notes. The Company recognized the bundled embedded derivative as a derivative liability with initial and subsequent measurements at fair value and changes in fair value recorded in earnings. Upon conversion of the 2009 notes and escrow notes into shares of common stock at the completion of the Company's IPO, the Company re-measured the fair value of the embedded derivative and recorded a charge of \$2.5 million in non-operating expense during the nine months ended September 30, 2010.

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**8. STOCK OPTIONS**

***Option Plan***

The Company's 2005 Equity Incentive Plan, or the 2005 Equity Plan, was adopted by the board of directors in January 2005. The 2005 Equity Plan permits the granting of incentive and non-statutory stock options, restricted stock, stock appreciation rights, performance units, performance shares and other stock awards to eligible employees, directors and consultants. The Company grants options to purchase shares of common stock under the 2005 Equity Plan at no less than the fair market value of the underlying common stock as of the date of grant. Options granted under the 2005 Equity Plan have a maximum term of 10 years and generally vest over four years at the rate of 25% of total shares underlying the option. Selected grants vest immediately or over a shorter vesting period.

The 2005 Equity Plan allows the option holders to exercise their options prior to vesting. Unvested shares are subject to repurchase by the Company at the option of the Company. Unvested shares subject to repurchase have been excluded from the number of shares outstanding. Option activity in the table below includes options exercised prior to vesting. At December 31, 2008 and 2009 and September 30, 2010, 161,646, 69,424 and 38,747 shares were subject to repurchase with a corresponding liability of \$56,715, \$31,131, and \$34,814, respectively.

On February 1, 2010, the Company's board of directors adopted the 2010 Stock Option and Incentive Plan (the 2010 Plan) effective upon consummation of the IPO, which was also approved by the Company's stockholders. The Company initially reserved 233,644 shares of common stock for issuance under the 2010 Plan, plus 35,670 shares remaining available for grant under the Company's 2005 Equity Incentive Plan, plus any additional shares returned under the Company's 2005 Equity Incentive Plan (the 2005 Plan) as a result of the cancellation of options or the repurchase of shares issued pursuant to the 2005 Plan. On July 9, 2010, the Company's stockholders approved an increase to the aggregate number of shares initially available for grant under the 2010 Plan by 200,000 shares to 433,644 shares of common stock, plus 35,670 shares remaining available for grant under the 2005 Plan, plus any additional shares referred under the 2005 Plan as a result of the cancellation of options or repurchase of shares issued under the 2005 Plan. In addition, the 2010 Plan provides for annual increases in the number of shares available for issuance thereunder on the first day of each fiscal year, beginning with the 2011 fiscal year, equal to four percent (4%) of the outstanding shares of the Company's common stock on the last day of the immediately preceding fiscal year. The maximum aggregate number of shares of stock that may be issued in the form of incentive stock options shall not exceed the lesser of (i) the number of shares reserved and available for issuance under the Plan or (ii) 1,460,280 shares of stock, subject in all cases to adjustment including reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar change in the Company's capital stock. The 2010 Plan permits the granting of incentive and non-statutory stock options, restricted and unrestricted stock awards, restricted stock units, stock appreciation rights, performance share awards, cash-based awards and dividend equivalent rights to eligible employees, directors and consultants. The option exercise price of an option granted under the 2010 Plan may not



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be less than 100% of the fair market value of a share of the Company's Common Stock on the date the stock option is granted. Options granted under the 2010 Equity Plan have a maximum term of 10 years and generally vest over four years. In addition, in the case of certain large stockholders, the minimum exercise price of incentive options must equal 110% of fair market value on the date of grant and the maximum term is limited to five years.

The 2010 Plan does not allow the option holders to exercise their options prior to vesting.

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The following table summarizes stock option activity for the Company from inception to December 31, 2009:

	Shares Available for Grant	Number of Options	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Life in Years
Balance at September 9, 2004 (Date of Inception)				
Shares authorized	248,247			
Options granted	(187,202)	187,202	\$ 0.14	
Options exercised		(33,292)	\$ 0.14	
Balance at December 31, 2005				
Shares authorized	1,285,047	153,910	\$ 0.14	8.42
Options granted	(65,998)	65,998	\$ 0.14	
Options exercised		(125,581)	\$ 0.14	
Balance at December 31, 2006				
Shares authorized	1,280,094	94,327	\$ 0.14	6.89
Options granted	292,056			
Options granted	(1,339,655)	1,339,655	\$ 0.26	
Options exercised		(493,605)	\$ 0.25	
Options cancelled	92,642	(92,642)	\$ 0.24	
Balance at December 31, 2007				
Shares authorized	325,137	847,735	\$ 0.26	8.08
Options granted	350,467			
Options granted	(327,973)	327,973	\$ 1.34	
Options exercised		(179,886)	\$ 0.38	
Options cancelled	38,697	(38,697)	\$ 0.42	
Repurchase	18,983		\$ 0.26	
Balance at December 31, 2008				
Options granted	405,311	957,125	\$ 0.60	8.28
Options granted	(405,358)	405,358	\$ 1.69	
Options exercised		(19,089)	\$ 0.80	
Options cancelled	19,618	(19,618)	\$ 0.92	
Balance as of December 31, 2009				
	19,571	1,323,776	\$ 0.92	7.94

Ending Vested as of December 31, 2009	979,452	\$	0.78	7.71
Ending Vested and Expected to Vest as of December 31, 2009	1,323,776	\$	0.92	7.94

The grant date total fair value of employee options vested during the years ended December 31, 2007, 2008 and 2009 were \$95,439, \$113,166 and \$358,121, respectively. The total intrinsic value of options exercised during the years ended December 31, 2007, 2008 and 2009 was \$5,390, \$109,741 and \$13,550, respectively. Total proceeds received for options exercised during years ended December 31, 2008 and 2009 was \$68,105 and \$15,274, respectively.

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The grant date total fair value of employee options vested during the nine months ended September 30, 2009 and 2010, and for the period from September 9, 2004 (Date of Inception) to September 30, 2010, were \$316,453, \$145,294 and \$729,628, respectively. The total intrinsic value of options exercised during the years the nine months ended September 30, 2010 and for the period from September 9, 2004 (Date of Inception) to September 30, 2010, were \$667,566 and \$794,000, respectively. There were no options exercised during the nine months ended September 30, 2009.

Information about stock options outstanding, vested and expected to vest as of December 31, 2009, is as follows:

Exercise Price	Outstanding, Vested and Expected to Vest		Options Vested	
	Number of Shares	Weighted-Average Remaining Contractual Life (in Years)	Exercise Price	Number of Shares
\$0.14	33,584	6.22	\$ 0.14	31,637
\$0.26	603,162	7.15	\$ 0.26	577,354
\$1.34	300,776	8.16	\$ 1.34	146,231
\$1.51	374,572	9.14	\$ 1.51	212,548
\$7.70	11,682	9.78	\$ 7.70	11,682
	1,323,776	7.94		979,452

The following table summarizes stock option activity during the nine months ended September 30, 2010 (unaudited):

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life in Years	Aggregate Intrinsic Value
Balance as of December 31, 2009	1,323,776	\$ 0.92	7.94	\$ 17,312,745
Options granted	112,000	\$ 4.82		

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Options exercised	(118,878)	\$	0.75		
Options cancelled	(9,832)	\$	1.50		
Balance as of September 30, 2010	1,307,066	\$	1.27	6.85	\$ 3,932,101
Ending Vested Stock Options as of September 30, 2010	1,012,144	\$	0.90	7.01	\$ 3,374,209
Ending Vested and Expected to Vest Stock Options as of September 30, 2010	1,307,066	\$	1.27	6.85	\$ 3,932,101

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As of September 30, 2010, there are 24,314 shares available for grant under the 2010 Plan.

Information about stock options outstanding, vested and expected to vest as of September 30, 2010 (unaudited), is as follows:

Range of Exercise Price		Outstanding, Vested and Expected to Vest		Options Vested	
		Number of Shares	Weighted-Average Remaining Contractual Life (in Years)	Weighted-Average Exercise Price	Number of Shares
\$0.14	\$0.14	4,672	5.55	\$ 0.14	4,672
\$0.26	\$0.26	567,161	6.40	\$ 0.26	555,351
\$1.34	\$1.34	266,352	7.41	\$ 1.34	183,771
\$1.51	\$1.51	345,199	8.40	\$ 1.51	242,168
\$4.19	\$7.70	123,682	3.48	\$ 5.76	26,182
		1,307,066	6.85	\$ 0.90	1,012,144

***Restricted Stock Units***

During 2010, the Company granted restricted stock unit awards under its 2010 Plan representing an aggregate of 273,000 shares of common stock. The restricted stock units granted represent a right to receive shares of common stock at a future date determined in accordance with the participant's award agreement. An exercise price and monetary payment are not required for receipt of restricted stock units or the shares issued in settlement of the award. Instead, consideration is furnished in the form of the participant's services to the Company. Substantially all of the restricted stock units vest over four years. Compensation cost for these awards is based on the closing price of the Company's common stock on the date of grant and recognized as compensation expense on a straight-line basis over the requisite service period. Compensation expense recognized was \$176,933 for the nine months ended September 30, 2010. At September 30, 2010, the unrecognized compensation cost related to these awards was \$1.54 million, which is expected to be recognized on a straight-line basis over 2.96 years.

***Early Exercise of Employee Options***

Stock options granted under the Company's stock option plan provide employee option holders the right to elect to exercise unvested options in exchange for restricted common stock. Unvested shares, which amounted to 161,646 and 69,424 at December 31, 2008 and 2009, respectively, were subject to a repurchase right held by the Company at the original issuance price in the event the optionees' employment is terminated either voluntarily or involuntarily. For exercises of employee options, this right lapses 25% on the first anniversary of the vesting start date and in 36 equal monthly amounts thereafter. These repurchase terms are considered to be a forfeiture provision and do not result in variable accounting. The shares purchased by the employees pursuant to the early exercise of stock

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options are not deemed to be outstanding until those shares vest. In addition, cash received from employees for exercise of unvested options is treated as a refundable deposit shown as a liability in the Company's financial statements. For the periods ended December 31, 2008 and 2009, cash received for early exercise of options totaled to \$30,953 and \$6,615, respectively. As the shares vest, the shares and liability are released into common stock and additional paid-in capital.

The activity of unvested shares for the year ended December 31, 2009 as a result of early exercise of options granted to employees is as follows:

<b>Unvested Shares</b>	<b>Shares</b>	<b>Weighted-Average Grant Price</b>
Balance as of December 31, 2007	289,824	\$ 0.24
Early exercise of options	59,191	\$ 0.62
Vested	(168,386)	\$ 0.22
Repurchases	(18,983)	\$ 0.26
Balance as of December 31, 2008	161,646	\$ 0.34
Early exercise of options	4,381	\$ 1.51
Vested	(96,603)	\$ 0.35
Balance as of December 31, 2009	69,424	\$ 0.45

During the nine months ended September 30, 2010, cash received for early exercise of options totaled \$24,714. The activity of unvested shares for the period ended September 30, 2010 as a result of early exercise of options granted to employees is as follows (unaudited):

<b>Unvested Shares</b>	<b>Shares</b>	<b>Weighted-Average Grant Price</b>
Balance as of December 31, 2009	69,424	\$ 0.45
Early exercise of options	18,011	\$ 1.37
Vested	(42,421)	\$ 0.34
Repurchases	(6,267)	\$ 0.26

Balance as of September 30, 2010	38,747	\$	1.11
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***2010 Employee Stock Purchase Plan***

On July 9, 2010, the Company's stockholders approved the Anthera Pharmaceuticals, Inc. 2010 Employee Stock Purchase Plan (the "2010 ESPP"). The Company has reserved 100,000 shares of common stock for issuance thereunder plus on January 1, 2011 and each January 1 thereafter, the

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number of shares of stock reserved and available for issuance under the Plan shall be cumulatively increased by the lesser of (i) one percent (1%) of the number of shares of common stock issued and outstanding on the immediately preceding December 31 or (ii) 250,000 shares of common stock.

Under the 2010 ESPP, eligible employees of the Company and certain designated subsidiaries of the Company may authorize the Company to deduct amounts from their compensation, which amounts are used to enable the employees to purchase shares of the Company's common stock. The purchase price per share will be 85% of the fair market value of the common stock as of the first date or the ending date of the applicable semi-annual purchase period, whichever is less (the Look-Back Provision). The 15% discount and the Look-Back Provision make the 2010 ESPP compensatory under ASC 718-50-25-2, *Compensation Stock Compensation Employee Share Purchase Plans Recognition*. The Black-Scholes option pricing model was used to value the employee stock purchase rights. For the nine months ended September 30, 2010 and the period from September 9, 2004 (Inception Date) through September 30, 2010, the following weighted-average assumptions were used in the valuation of the stock purchase rights:

	<b>Three Months Ended September 30, 2010</b>	<b>Nine Months Ended September 30, 2010</b>	<b>Period from September 9, 2004 (Date of Inception) to September 30, 2010</b>
Expected Volatility	67%	67%	67%
Dividend Yield	0%	0%	0%
Risk-Free Interest Rate	0.16%	0.16%	0.16%
Expected Term (years)	0.33	0.33	0.33

The Company received \$14,433 in contribution from participants during the three and nine months ended September 30, 2010. Compensation expense recognized for the three and nine months ended September 30, 2010 was \$5,139. As of September 30, 2010, no shares have been issued and 100,000 shares were available for future purchase under the 2010 ESPP.

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*Stock-Based Compensation Expense*

Total employee stock-based compensation expense recognized under FASB ASC 718 was as follows:

	Years Ended December 31,			Period from September 9, 2004 (Date of Inception) to December 31, 2009	Nine Months Ended September 30, 2010      2009 (unaudited)		Period from September 9, 2004 (Date of Inception) to September 30, 2010 (unaudited)
	2007	2008	2009				
Research and development	\$ 44,066	\$ 45,544	\$ 101,395	\$ 194,002	\$ 114,476	\$ 83,712	\$ 308,478
General and administrative	30,795	97,862	152,569	282,877	229,991	119,503	512,868
Total stock-based compensation	\$ 74,861	\$ 143,406	\$ 253,964	\$ 476,879	\$ 344,467	\$ 203,215	\$ 821,346

As of December 31, 2007, 2008 and 2009, total compensation cost related to unvested stock options not yet recognized was \$161,996, \$330,381 and \$456,288, which is expected to be allocated to expenses over a weighted-average period of 2.25, 2.33 and 2.25 years, respectively.

As of September 30, 2010, total compensation cost related to unvested stock options not yet recognized was \$629,035, which is expected to be allocated to expenses over a weighted-average period of 1.49 years.

The assumptions used in the Black-Scholes option-pricing model are as follows:

Period from September 9,	Period from September 9,
--------------------------------	--------------------------------

	<b>Years Ended December 31,</b>			<b>2004 (Date of Inception) to December 31, 2009</b>	<b>Nine Months Ended September 30, 2010</b>		<b>2004 (Date of Inception) to September 30, 2010</b>
	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2009</b>	<b>2010</b>	<b>2009</b>	<b>2010</b>
Expected Volatility	81%	81%	74%	80%	69%	74%	79%
Dividend Yield	0%	0%	0%	0%	0%	0%	0%
Risk-Free Interest Rate	4.54%	3.08%	2.10%	3.96%	1.91%	2.10%	3.86%
Expected Term (years)	6.25	6.25	6.25	6.25	6.25	6.25	6.25

The weighted-average grant date fair values of stock options granted during the years ended December 31, 2007, 2008 and 2009, and for the period from September 9, 2004 (Date of Inception) to December 31, 2009 were \$0.17, \$0.96, \$1.01 and \$0.44 per share, respectively.

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The weighted-average grant date fair values of stock options granted during the nine months ended September 30, 2009 and 2010, and for the period from September 9, 2004 (Date of Inception) to September 30, 2010 were \$1.01, \$3.10 and \$0.57 per share, respectively.

*Nonemployee Stock-Based Compensation*

The Company accounts for stock options granted to nonemployees as required by the Equity Topic of the FASB ASC. In connection with stock options granted to consultants, the Company recorded \$12,489, \$51,874, \$88,382 and \$157,945 for nonemployee stock-based compensation during the years ended December 31, 2007, 2008 and 2009, and for the period from September 9, 2004 (Date of Inception) to December 31, 2009, respectively. These amounts were based upon the fair value of the vested portion of the grants.

In connection with stock options granted to consultants, the Company recorded \$2,899, \$8,399 and \$166,344 for nonemployee stock-based compensation during the nine months ended September 30, 2009 and 2010, and for the period from September 9, 2004 (Date of Inception) to September 30, 2010, respectively.

The assumptions used in the Black-Scholes option-pricing model are as follows:

	Years Ended December 31,			Period from September 9, 2004 (Date of Inception) to		Nine Months Ended		Period from September 9, 2004 (Date of Inception) to	
	2007	2008	2009	December 31, 2009	September 30, 2009	September 30, 2010	September 30, 2010	September 30, 2010	September 30, 2010
					(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)
Expected Volatility	98%	98%	98%	98%	98%	98%	98%	98%	98%
Dividend Yield	0%	0%	0%	0%	0%	0%	0%	0%	0%
Risk-Free Interest Rate	4.40%	3.67%	3.57%	3.69%	3.13%	3.16%	3.16%	3.67%	3.67%
Expected Term (years)	10.00	9.26	9.94	9.71	9.09	7.86	7.86	9.63	9.63

Amounts expensed during the remaining vesting period will be determined based on the fair value at the time of vesting.

**9. EMPLOYEE BENEFIT PLAN**

The Company maintains a defined contribution 401(k) plan, or the 401(k) Plan. Employee contributions are voluntary and are determined on an individual basis, limited by the maximum amounts allowable under federal tax regulations. The Company has made no contributions to the 401(k) Plan since its inception.

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**10. INCOME TAXES**

The Company has incurred net operating losses since inception. The Company has not reflected any benefit of such net operating loss carryforwards in the accompanying financial statements and has established a full valuation allowance against its deferred tax assets.

Deferred income taxes reflect the net tax effects of (a) temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, and (b) operating losses and tax credit carryforwards.

The significant components of the Company's deferred tax assets for the years ended December 31, 2008 and 2009 are as follows:

	<b>December 31,</b>	
	<b>2008</b>	<b>2009</b>
Deferred tax assets:		
Net operating loss carryforwards	\$ 15,550,186	\$ 20,254,375
Tax credits	2,158,679	2,378,197
Intangible assets	3,545,262	3,279,699
Accrued bonus	46,226	61,040
Accrued liabilities	133,486	91,529
Stock-based compensation	12,913	68,439
Other	1,366	5,828
Total deferred tax assets	21,448,118	26,139,107
Deferred tax liabilities		
Valuation allowance	(21,448,118)	(26,139,107)
Net deferred tax asset	\$	\$

A reconciliation of the statutory tax rates and the effective tax rates for the years ended December 31, 2007, 2008 and 2009 is as follows:

**2007                  2008                  2009**

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Statutory rate	34%	34%	34%
State tax	7%	5%	6%
Tax credit	5%	2%	1%
Beneficial conversion feature	0%	(8)%	0%
Other	0%	0%	(3)%
Valuation allowance	(46)%	(33)%	(38)%
Effective tax rates	0%	0%	0%

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Realization of the future tax benefits is dependent on the Company's ability to generate sufficient taxable income within the carryforward period. Because of the Company's recent history of operating losses, management believes that the deferred tax assets arising from the above-mentioned future tax benefits are currently not likely to be realized and, accordingly, has provided a full valuation allowance. The net valuation allowance increased by \$5,935,955 and \$4,690,989 for the years ended December 31, 2008 and 2009, and \$26,139,107 for the period from September 9, 2004 (Date of Inception) to December 31, 2009.

Net operating losses and tax credit carryforwards as of December 31, 2009, are as follows:

	<b>Amount</b>	<b>Expiration Years</b>
Net operating losses - federal	\$ 50,815,735	Beginning 2024
Net operating losses - state	\$ 51,025,382	Beginning 2014
Tax credits - federal	\$ 2,396,967	Beginning 2024
Tax credits - state	\$ 1,172,671	Not applicable

Utilization of the net operating loss carryforwards and credits may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended, or the IRC, and similar state provisions. The Company has not performed a detailed analysis to determine whether an ownership change under Section 382 of the IRC has occurred. The effect of an ownership change would be the imposition of an annual limitation on the use of net operating loss carryforwards attributable to periods before the change.

The Company accounts for income taxes in accordance with FASB ASC 740, *Income Taxes*, and adopted the provisions of FASB ASC 740-10 on January 1, 2007. As a result of the implementation of FASB ASC 740-10, the Company did not record any changes to the liability for unrecognized tax benefits related to tax positions taken in prior periods, and no corresponding change in accumulated deficit was recorded. At the adoption date of January 2, 2007, the Company had \$80,000 unrecognized tax benefits, none of which would affect its income tax expense if recognized to the extent the Company continues to maintain a full valuation allowance against its deferred tax assets.

As of December 31, 2009, the Company had unrecognized tax benefits of \$892,410, all of which would not currently affect the Company's effective tax rate if recognized due to the Company's deferred tax assets being fully offset by a valuation allowance. The Company did not anticipate any significant

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change to the unrecognized tax benefit balance as of December 31, 2009. A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	<b>Amount</b>
Balance as January 1, 2007	\$ 79,855
Additions based on tax positions related to current year	566,326
Balance as December 31, 2007	646,181
Additions based on tax positions related to current year	162,381
Balance as of December 31, 2008	808,562
Additions based on tax positions related to current year	83,848
Balance as of December 31, 2009	892,410

The Company would classify interest and penalties related to uncertain tax positions in income tax expense, if applicable. There was no interest expense or penalties related to unrecognized tax benefits recorded through December 31, 2009. The tax years 2004 through 2009 remain open to examination by one or more major taxing jurisdictions to which the Company is subject.

The Company does not anticipate that total unrecognized net tax benefits will significantly change prior to the end of 2009.

## **11. RELATED PARTY TRANSACTIONS**

For the years ended December 31, 2007, 2008 and 2009, and for the period from September 9, 2004 (Date of Inception) to December 31, 2009, the Company paid \$71,100, \$22,200, \$38,274 and \$131,574, respectively, for clinical management services rendered by an outside organization where one of the founders is employed.

For the nine months ended September 30, 2010, and the period from September 9, 2004 (Date of Inception) to September 30, 2010, the Company paid \$489,670, and \$621,203, respectively. There was no payment made to this organization for the nine months ended September 30, 2009.

## **12. EVENTS SUBSEQUENT TO DECEMBER 31, 2009**

On January 28, 2010, Eli Lilly and the Company entered into an agreement in which the parties agreed that the \$1.75 million milestone payment due to Eli Lilly no later than 12 months from the enrollment of the first patient in a Phase 3 clinical study for varespladib will be paid in the form of shares of the Company's common stock issued at the price per share at which shares are sold to the public in an initial public offering, minus any per-share underwriting discounts, commissions or fees. The Company is obligated to issue such shares to Eli Lilly within 10 business days after the closing of an initial public offering.

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**ANTHERA PHARMACEUTICALS, INC.**  
**(A Development Stage Company)**

**NOTES TO FINANCIAL STATEMENTS (Continued)**  
**FOR THE YEARS ENDED DECEMBER 31, 2007, 2008 AND 2009, AND FOR THE**  
**PERIOD FROM SEPTEMBER 9, 2004 (DATE OF INCEPTION) TO DECEMBER 31, 2009 (AUDITED)**

**FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2009 AND 2010, AND FOR THE**  
**PERIOD FROM SEPTEMBER 9, 2004 (DATE OF INCEPTION) TO SEPTEMBER 30, 2010 (UNAUDITED)**

On November 8, 2009, the Company's board of directors approved a 1-for-1.712 reverse split of the Company's common stock that was effected on February 22, 2010. The financial statements for the period from September 9, 2004 (Date of Inception) to December 31, 2009 give retroactive effect to the reverse split.

On February 24, 2010, Shionogi & Co., Ltd. and the Company entered into an agreement in which the parties agreed that the \$1.75 million milestone payment due to Shionogi & Co., Ltd. no later than 12 months from the enrollment of the first patient in a Phase 3 clinical study for varespladib will be paid in the form of shares of the Company's common stock issued at the price per share at which shares are sold to the public in the initial public offering, minus any per-share underwriting discounts, commissions or fees. The shares will be issued within 10 business days after the closing of this offering.

On February 24, 2010, the Company amended the September 2009 stock purchase agreement and escrow agreement to provide that the \$17.1 million of funds held in the escrow account will be released simultaneously with the closing of an initial public offering in which the aggregate net proceeds to the Company (after underwriting discounts, commissions and fees) are at least \$20.0 million.

On February 24, 2010, the holders of escrow notes issued in December 2009 waived their right to exchange the escrow notes for exchange notes and warrants unless an initial public offering is not consummated by March 31, 2010. In addition, on February 24, 2010, the Company amended the December 2009 note purchase agreement to provide that the escrow notes are automatically convertible into shares of common stock upon the consummation of an initial public offering in which the aggregate net proceeds to the Company (after underwriting discounts, commissions and fees) are at least \$20.0 million.

### 13. CASH EQUIVALENTS AND INVESTMENTS

The Company's cash equivalents and short-term investments as of September 30, 2010 are as follows (unaudited):

	Amortized Cost	Gross Unrealized Gain/(Losses)	Fair Value
Cash	\$ 625,961	\$	\$ 625,961
Money market funds	50,582,760		50,582,760
Certificates of deposit	12,851,000	(11,276)	12,839,724
Corporate bonds	9,074,163	(34,998)	9,039,165
Total	\$ 73,133,884	\$ (46,274)	\$ 73,087,610

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Less amounts classified as cash and cash equivalents	(51,208,720)		(51,208,720)
Total	\$ 21,925,164	\$ (46,274)	\$ 21,878,890

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**PERIOD FROM SEPTEMBER 9, 2004 (DATE OF INCEPTION) TO DECEMBER 31, 2009 (AUDITED)**

**FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2009 AND 2010, AND FOR THE**  
**PERIOD FROM SEPTEMBER 9, 2004 (DATE OF INCEPTION) TO SEPTEMBER 30, 2010 (UNAUDITED)**

There were no realized gains or losses recorded for the three months ended September 30, 2009 and immaterial realized losses recorded for the nine months ended September 30, 2009.

The contractual maturities of investments are less than one year at September 30, 2010.

**14. FAIR VALUE OF INSTRUMENTS**

As of September 30, 2010, the Company held \$21.9 million short-term investments, which consisted of certificates of deposit and FDIC insured corporate bonds. These securities were classified as short-term based on their maturity terms being less than one year. The Company included any unrealized gains and losses on short-term investments in stockholders' equity as a component of other comprehensive income (loss). Individual securities with a fair value below the cost basis at September 30, 2010 were evaluated to determine if they were other-than-temporarily impaired.

The following table presents the Company's fair value hierarchy for its financial assets measured at fair value on a recurring basis as of September 30, 2010 (unaudited):

	<b>Estimated Fair Value</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
Cash	\$ 625,961	\$ 625,961	\$	\$
Money market funds	50,582,760	50,582,760		
Certificates of deposit	12,839,724	12,839,724		
Corporate bonds	9,039,165	9,039,165		
Total Investments	\$ 73,087,610	\$ 73,087,610	\$	\$

The Company did not have any financial liabilities, non-financial assets or non-financial liabilities that were required to be measured at fair value as of September 30, 2010.

**15. EVENTS SUBSEQUENT TO FEBRUARY 24, 2010 (Unaudited)**

On February 26, 2010, the Company's Registration Statement on Form S-1 was declared effective for its initial public offering (IPO), pursuant to which the Company sold 6,000,000 shares of its common stock at a public offering price of \$7.00 per share. The Company received gross proceeds of approximately \$42.0 million from this transaction, before underwriting discounts and commissions. Concurrent with the closing of the IPO, the Company received an aggregate of \$17.1 million from the issuance of 2,598,780 shares of its common stock to certain of its investors pursuant to a common stock purchase agreement.

On April 6, 2010, the Company sold 604,492 shares of common stock to the underwriters of its IPO pursuant to the underwriters' exercise of their over-allotment option and received net proceeds of approximately \$4.0 million.

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PERIOD FROM SEPTEMBER 9, 2004 (DATE OF INCEPTION) TO DECEMBER 31, 2009 (AUDITED)**

**FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2009 AND 2010, AND FOR THE  
PERIOD FROM SEPTEMBER 9, 2004 (DATE OF INCEPTION) TO SEPTEMBER 30, 2010 (UNAUDITED)**

On July 9, 2010, the Company's stockholders approved the Anthera Pharmaceuticals, Inc. 2010 Employee Stock Purchase Plan (the "2010 ESPP"). The Company has reserved 100,000 shares of common stock for issuance thereunder plus on January 1, 2011 and each January 1 thereafter, the number of shares of stock reserved and available for issuance under the Plan shall be cumulatively increased by the lesser of (i) one percent (1%) of the number of shares of common stock issued and outstanding on the immediately preceding December 31 or (ii) 250,000 shares of common stock. Under the 2010 ESPP, eligible employees of the Company and certain designated subsidiaries of the Company may authorize the Company to deduct amounts from their compensation, which amounts are used to enable the employees to purchase shares of the Company's common stock. The purchase price per share will be 85% of the fair market value of the common stock as of the first date or the ending date of the applicable semi-annual purchase period, whichever is less. The purpose of the 2010 ESPP is to attract and retain key personnel, and encourage stock ownership by the Company's employees.

On September 24, 2010, the Company closed a private placement transaction with certain accredited investors pursuant to which the Company sold an aggregate of 10,500,000 units at a purchase price of \$3.00 per unit, with each unit consisting of one share of common stock and a Warrant to purchase an additional 0.40 shares of common stock. Each Warrant is exercisable in whole or in part at any time until September 24, 2015 at a per share exercise price of \$3.30, subject to certain adjustments as specified in the Warrant. The Company received gross proceeds of \$31.5 million pursuant to the transaction.

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**6,741,733 Shares**

**of Common Stock**

**PROSPECTUS**

**November 18, 2010**