

Anthera Pharmaceuticals Inc  
Form S-1/A  
February 23, 2010

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**As filed with the Securities and Exchange Commission on February 23, 2010**

**Registration No. 333-161930**

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**Amendment No. 5  
to  
Form S-1**

**REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

**Anthera Pharmaceuticals, Inc.**

*(Exact name of registrant as specified in its charter)*

**Delaware**

*(State or other jurisdiction of  
incorporation or organization)*

**2834**

*(Primary Standard Industrial  
Classification Code Number)*

**20-1852016**

*(I.R.S. Employer  
Identification No.)*

**Anthera Pharmaceuticals, Inc.  
25801 Industrial Boulevard, Suite B  
Hayward, California 94545  
(510) 856-5600**

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

**Paul F. Truex  
President and Chief Executive Officer  
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(510) 856-5600**

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

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**Approximate date of commencement of proposed sale to public:** as soon as practicable after this Registration Statement is declared effective.

**If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.**

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

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

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

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

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

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

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The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

**Subject To Completion, Dated February 23, 2010**

**PROSPECTUS**

**4,607,142 Shares  
Common Stock**

We are offering 4,607,142 shares of common stock in this initial public offering. Prior to this offering, there has been no public market for our common stock. We anticipate that the initial public offering price of the common stock will be between \$13.00 and \$15.00 per share. Our common stock has been approved for listing on The NASDAQ Global Market under the symbol ANTH.

**Investing in our common stock involves risks. See Risk Factors 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.**

	<b>Per Share</b>	<b>Total</b>
Public offering price	\$	\$
Underwriting discounts and commissions	\$	\$
Proceeds, before expenses, to Anthera Pharmaceuticals, Inc.	\$	\$

The underwriters have a 30-day option to purchase up to 691,071 additional shares of common stock from us at the public offering price less the underwriting discount to cover over-allotments, if any.

Delivery of the shares of common stock will be made on or about \_\_\_\_\_, 2010.

**Deutsche Bank Securities**

**Piper Jaffray**

**Cowen and Company**

**Merriman Curhan Ford**

The date of this prospectus is \_\_\_\_\_, 2010.

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**You should rely only on the information contained in this document and any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not, and the underwriters 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.**

**Dealer Prospectus Delivery Obligation**

**Until \_\_\_\_\_, 2010 (25 days after the commencement of this offering), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to unsold allotments or subscriptions.**

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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 ready clinical program, A-002, and two Phase 2 clinical programs, A-623 and A-001. A-002 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 ready product candidate, A-623, targets elevated levels of B-lymphocyte stimulator, or BLYS, 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.

**A-002 for Short-Term (16-week) Treatment of Acute Coronary Syndrome**

We are preparing to begin a pivotal Phase 3 clinical study named VISTA-16 (Vascular Inflammation Suppression to Treat Acute Coronary Syndrome - 16 Weeks) for our lead product candidate, A-002, an oral sPLA<sub>2</sub> inhibitor, in combination with HMG-CoA reductase inhibitor, or statin, therapy 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 symptoms related to acute myocardial ischemia, or heart muscle damage.

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Patients experiencing an acute coronary syndrome suffer from significant inflammatory activity and abnormal lipid profiles. sPLA<sub>2</sub> enzymes act to directly amplify inflammation and abnormally modify lipids. A-002, 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 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 A-002 treated patients as compared to those on 80 mg of atorvastatin alone. The percent decrease in CRP at week two in our Phase 2b clinical study was nearly two-fold greater among A-002 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 A-002 in combination with statins for the prevention of secondary major adverse coronary events in patients who have recently experienced an acute coronary syndrome. This VISTA-16 study is expected to enroll up to 6,500 patients with similar characteristics to patients in our Phase 2b acute coronary syndrome clinical study. Patients will be randomized within 96 hours of an acute coronary syndrome and will receive 16 weeks of either once-daily of A-002 or placebo in addition to a dose of atorvastatin. We plan to initiate this Phase 3 clinical study after completion of this offering and complete the clinical study within 18 months of initiation. Similar to our Phase 2b clinical study, changes in sPLA<sub>2</sub>, CRP and LDL-C will be measured at baseline, 24 hours, 48 hours and at weeks one, two, four, eight and 16. The Data Safety Monitoring Board, or DSMB, will conduct an independent data review of these biomarkers after at least 1,000 patients have completed treatment. This DSMB biomarker futility analysis is designed to confirm that our biomarkers have met pre-specified reductions from baseline at various time-points that were established based on results from our earlier Phase 2 clinical studies. Survival status will be obtained for patients six months after the completion of dosing.

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.

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

We have reached agreement with the U.S. Food and Drug Administration, or FDA, on a Special Protocol Assessment, or 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.



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

BLYS has been associated with a wide range of B-cell mediated autoimmune diseases, including systemic lupus erythematosus. The role of BLYS in lupus has been clinically validated in recent studies with another BLYS antagonist. We intend to advance the development of our BLYS targeting molecule, A-623, a selective peptibody, to exploit its broad clinical utility in autoimmune diseases. A peptibody is a novel fusion protein that is distinct from an antibody. We are actively pursuing a partnership 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 107 lupus patients have already been completed. Results from these studies demonstrated A-623 generated anti-BLYS activity and showed statistically significant reductions in B-cells among lupus patients ( $p < 0.001$ ). We believe A-623 may offer a number of potential differentiations over other BLYS antagonists as well as other novel B-cell directed therapies given subcutaneous dosing opportunities. In addition, A-623 may confer improved pharmacodynamic benefits since it binds to both membrane bound and soluble forms of BLYS, as well as potential manufacturing benefits and lower cost of goods based on an *escherichia coli* production process.

Based on these positive results among 107 lupus patients in our Phase 1a and 1b clinical studies, we are currently finalizing plans for a Phase 2b clinical study in lupus patients. Our current study design would enroll approximately 120 patients with serologically active lupus, as defined by Safety of Estrogen in Lupus Erythematosus National Assessment, or SELENA, and Systemic Lupus Erythematosus Disease Activity Index, or SLEDAI, with scores of equal to and greater than six, and positive levels of autoantibody or positive levels of double-stranded DNA. Patients in the clinical study will be randomized to one of three subcutaneous administration treatment groups of A-623 or placebo. All patients enrolled will be treated with A-623 plus physician-directed standard of care, or placebo plus physician-directed standard of care, for at least four months, followed by a two-month safety follow-up following the treatment period.

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The primary endpoint of the study is designed to evaluate percent changes in B-cell populations, including total B-cells and memory B-cells, as well as other relevant immunological biomarkers, such as changes in double-stranded DNA, immunoglobulin G and immunoglobulin M levels. Secondary endpoints would include evaluating the clinical efficacy of A-623 compared to placebo based on a systemic lupus erythematosus responder index, as defined by 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.

**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 associated with sickle cell disease, 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 A-002 through Phase 3;

advancing clinical development of A-623 and A-001;

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 year ended December 31, 2009, we had net losses of approximately \$12.2 million, and as of December 31, 2009, we had an accumulated deficit of approximately \$65.2 million and negative working capital of approximately \$14.3 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, A-002, 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> 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.

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**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*. 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**

Common stock offered by us	4,607,142 shares (or 5,298,213 shares if the underwriters exercise their over-allotment option in full)
Common stock to be outstanding after this offering	17,297,081 shares (or 17,988,152 shares if the underwriters exercise their over-allotment option in full)
Use of proceeds	We plan to use the net proceeds of this offering to fund continued clinical development of varespladib methyl (A-002), A-623 and varespladib sodium (A-001) and for general corporate purposes, such as general and administrative expenses, capital expenditures, working capital, prosecution and maintenance of our intellectual property and the potential investment in technologies or products that complement our business. For a more complete description of our intended use of proceeds from this offering, see Use of Proceeds.
Risk factors	You should read the Risk Factors section of, and all of the other information set forth in, this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
NASDAQ Global Market symbol	ANTH

The number of shares of our common stock to be outstanding after the closing of this offering is based on 9,781,931 shares of our common stock outstanding as of December 31, 2009 and excludes:

1,323,776 shares of common stock issuable upon exercise of stock options outstanding and having a weighted-average exercise price of \$0.92 per share;

233,644 shares of common stock reserved for future issuance under our 2010 Stock Option and Incentive Plan, which will become effective upon the completion of this offering (plus an additional 19,571 shares of common stock reserved for issuance under our 2005 Equity Incentive Plan, which shares will be added to the shares reserved for future issuance under our 2010 Stock Option and Incentive Plan upon effectiveness of our 2010 Stock Option and Incentive Plan); and

178,564 shares of common stock issuable upon the exercise of warrants outstanding issued in connection with convertible promissory notes issued in July and September 2009 and having an exercise price of \$14.00 per share, assuming an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus.



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Unless otherwise indicated, the information in this prospectus assumes the following:

the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, which will occur immediately prior to the closing of this offering;

a 1 -for- 1.712 reverse split of our common stock to be effected immediately prior to the closing of this offering;

conversion of all of our shares of preferred stock into 8,146,308 shares of common stock, which we expect to occur immediately prior to the closing of this offering;

the issuance of 217,496 shares of common stock upon the cashless exercise of warrants outstanding and having an exercise price of \$1.34 per share, which we expect to occur prior to the closing of this offering;

the issuance of 980,468 shares of common stock upon the conversion of convertible promissory notes issued in July and September 2009 and associated accrued interest, which we expect to occur concurrently with the closing of this offering, assuming an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus;

the issuance of 1,313,358 shares of common stock to certain of our investors pursuant to a common stock purchase agreement, which we expect to occur concurrently with the closing of this offering, assuming an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus;

the issuance of 262,278 shares of common stock upon the conversion of convertible promissory notes issued in December 2009 and associated accrued interest, which we expect to occur concurrently with the closing of this offering, assuming an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus;

the issuance of 134,408 shares of common stock issuable to Eli Lilly and Company, one of our licensors, in satisfaction of a \$1.75 million milestone payment, which we expect to occur within 10 business days after the closing of this offering, assuming an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus; and

no exercise by the underwriters of their over-allotment option.



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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 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>2007</b>	<b>2008</b>	<b>2009</b>
<b>Statement of Operations Data:</b>			
<b>Operating expenses</b>			
Research and development	\$ 23,921,932	\$ 10,882,322	\$ 8,415,414
General and administrative	2,468,607	2,980,170	3,425,690
Total operating expenses	(26,390,539)	(13,862,492)	(11,841,104)
<b>Other income (expense)</b>			
Interest and other income	696,962	178,129	23,534
Interest and other expense		(296,303)	(385,922)
Beneficial conversion feature		(4,118,544)	
Total other income (expense)	696,962	(4,236,718)	(362,388)
Net loss	\$ (25,693,577)	\$ (18,099,210)	\$ (12,203,492)
Net loss per share-basic and diluted (1)	\$ (28.15)	\$ (13.47)	\$ (8.06)
Weighted-average number of shares used in share calculation-basic and diluted (2)	912,668	1,343,420	1,513,598

- (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 do not include weighted-average shares of unvested stock of 261,649, 230,028 and 110,079, respectively. These shares are subject to a risk of repurchase by us until such shares are vested. See Note 8 to our financial statements for more information.

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	<b>As of December 31, 2009</b>		
	<b>Actual</b>	<b>Pro Forma</b>	<b>Pro Forma As Adjusted</b>
<b>Balance Sheet Data:</b>			
Cash and cash equivalents	\$ 3,803,384	\$ 3,803,384	\$ 80,012,384
Working capital	(14,344,436)	(14,344,436)	75,710,489
Total assets	5,888,789	5,888,789	80,045,203
Indebtedness	18,167,645	18,167,645	4,321,720
Convertible preferred stock	52,123,859		
Deficit accumulated during the development stage	(65,229,952)	(65,229,952)	(72,139,165)
Total stockholders (deficit) equity	(12,278,856)	(12,278,856)	75,723,483

The December 31, 2009 pro forma balance sheet data reflects the following: (i) the conversion of all outstanding shares of preferred stock into an aggregate of 8,146,308 shares of common stock, which we expect to occur immediately prior to the closing of this offering; (ii) the filing of an amended and restated certificate of incorporation to authorize 95,000,000 shares of common stock and 5,000,000 shares of undesignated preferred stock; and (iii) the issuance of 217,496 shares of common stock upon the cashless exercise of warrants outstanding and having an exercise price of \$1.34 per share, which we expect to occur prior to the closing of this offering.

The December 31, 2009 pro forma as adjusted balance sheet data further reflects the following, all of which assume an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus: (i) the sale of 4,607,142 shares of common stock in this offering, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us; (ii) the issuance of 980,468 shares of common stock and a beneficial conversion charge, upon the conversion of convertible promissory notes issued in July and September 2009 and associated accrued interest, which we expect to occur concurrently with the closing of this offering; (iii) the issuance of 1,313,358 shares of common stock to certain of our investors pursuant to a common stock purchase agreement for an aggregate purchase price of \$17.1 million, which we expect to occur concurrently with the closing of this offering; (iv) the issuance of 262,278 shares of common stock and a beneficial conversion charge, upon the conversion of convertible promissory notes issued in December 2009 and associated accrued interest, which we expect to occur concurrently with the closing of this offering; and (v) the issuance of 134,408 shares of common stock and the associated charge, issuable to Eli Lilly and Company, one of our licensors, in satisfaction of a \$1.75 million milestone payment, which we expect to occur within 10 business days after the closing of this offering. The above table does not reflect any exercise by the underwriters of their over-allotment option.

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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 five years of operating history. We have focused primarily on developing our three product candidates, varespladib methyl (A-002), A-623 and varespladib sodium (A-001). We have financed our operations exclusively through private placements of preferred stock and 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 and \$12.2 million in 2009. As of December 31, 2009, we had an accumulated deficit of approximately \$65.2 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 planned pivotal Phase 3 clinical study named VISTA-16 for A-002, our planned Phase 2b clinical study for A-623, our ongoing Phase 2 clinical study for A-001 and our other product candidates. 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, A-002, 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



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- launching and completing a Phase 2b clinical study in patients with systemic lupus erythematosus, or lupus;
- 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 A-002, 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: A-002, 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.***

As of December 31, 2009, we had negative working capital of approximately \$14.3 million. 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 planned VISTA-16 study for A-002, our planned Phase 2b clinical study for A-623 and our ongoing Phase 2 clinical study for A-001;

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;

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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 the net proceeds of this offering and the common stock to be issued to certain of our investors concurrently with this offering, and interest earned thereon, together with 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 A-002 and A-001, and our achievement of certain significant corporate, clinical and financial events. For A-002, we are required to pay up to \$3.5 million upon achievement of certain clinical development milestones and up to \$32.0 million upon achievement of certain approval and post-approval sales milestones. Such milestone payments include a payment of \$1.75 million to each of Eli Lilly and Shionogi & Co., Ltd., which payments are due no later than 12 months from the enrollment of the first patient in the Phase 3 clinical study for A-002. The \$1.75 million milestone payment to Eli Lilly will be paid in the form of shares of our common stock issued at the price per share at which shares are sold to the public in this offering, minus any per-share underwriting discounts, commissions or fees, which would result in the issuance of 134,408 shares, assuming an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus. We are obligated to issue such shares to Eli Lilly within 10 business days after the closing of this offering. 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



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certain technology and compounds relating to A-623. 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, A-002, 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, A-002, 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 A-002, 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 A-002. We plan to initiate the VISTA-16 study for A-002 after completion of this offering.

Our next product candidate is A-623, which has completed Phase 1 clinical studies and for which we expect to commence a Phase 2b clinical study in the second half of 2010 after we reactivate the IND that was transferred from Amgen. In order to reactivate the IND, we will need to submit a protocol amendment and additional information necessary to support our proposed Phase 2 clinical study to the FDA, and if the FDA does not have any comments on such protocol amendment, we will be able to begin enrollment in our clinical study 30 days after the FDA receives our submission.

Our third product candidate is A-001, which is currently in a Phase 2 clinical study. 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

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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 A-002 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;

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;

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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 Data Safety Monitoring Board, or DSMB, may recommend that we stop our planned VISTA-16 study for A-002 if certain biomarkers of inflammation and lipid profiles fail to meet pre-specified reductions in 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 planned VISTA-16 study for A-002 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 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 A-002 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 A-002



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does not ensure that later clinical studies, such as our planned 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 A-002.

***Because the results of preclinical testing or earlier clinical studies are not necessarily predictive of future results, A-002, 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 A-002, 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 A-002, 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 could result in our loss of exclusive rights and may lead to a complete termination of our product development and any commercialization efforts for A-002, 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



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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 BLYS 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 BLYS/APRIL antagonist fusion protein, Ataccept, 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.

***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



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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.

***We have reached agreement with the FDA on an SPA for our planned VISTA-16 study of A-002 for the potential treatment of acute coronary syndrome, which 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



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scientific concerns regarding product safety or efficacy arise or if the sponsor company fails to comply with the agreed upon clinical study protocols. We have reached agreement with the FDA on an SPA for our planned VISTA-16 clinical study of A-002 for the potential short-term (16-week) treatment of acute coronary syndrome. However, 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 A-002 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 planned 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 A-002, if any, may include restrictions on use. Further, the FDA has indicated that long-term safety data on A-002 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

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 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

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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 FDA Amendments Act of 2007, 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 A-002 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;

availability of alternative treatments, including, in the case of A-002, 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.

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***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. James E. Pennington, our Executive Vice President and Chief Medical Officer, Dr. Colin Hislop, our Senior Vice President of Cardiovascular Products and the other principal members of our executive team listed under Management on page 101. 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.

***Legislative 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. Congress is considering a number of proposals that are intended to reduce or limit the growth of health care costs and which could significantly transform the market for pharmaceuticals and biological products. 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. 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 provided authority for limiting 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





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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 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.

***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, with a \$5.0 million annual aggregate coverage limit, for our clinical studies may not be sufficient to reimburse us for any 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

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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.

***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.

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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 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

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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 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 85, we hold a total of five 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 16 other countries. We have also entered into 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, 17 non-EP foreign patents and five pending non-EP foreign patent applications relating to A-002 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, eight issued non-EP foreign patents and three pending non-EP foreign patent applications relating to new sPLA<sub>2</sub> compounds including A-003; and (iii) one U.S. patent, one pending U.S. non-provisional patent application, one EP patent, one pending EP patent application, eight non-EP foreign patents and 17 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.

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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;

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 for the exclusive and worldwide rights to develop and commercialize A-623, a novel BLYS inhibitor. We may enter into additional licenses to third-party intellectual property in the future.

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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 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 terms for drug compounds for a period of up to five years to compensate for time spent in development. 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 A-002'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 A-002's European new chemical entity patents until 2020 and to A-623's European new chemical entity patents until 2027. In addition, since A-002 has not been previously approved in the United States, A-002 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 accepting any generic competition following NDA approval independent of the patent status of A-002. Similarly, a recent directive in the European Union provides that companies who receive regulatory approval for a new compound will have a 10-year period of market exclusivity for that compound (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

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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 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



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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, 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 This Offering, the Securities Markets and Investment in Our Common Stock**

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

Following the completion of this offering, the market price for our common stock is likely to be volatile, in part because our shares have not been previously traded publicly. 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 A-002, 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;

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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.

An active public market for our common stock may not develop or be sustained after the completion of this offering. We will negotiate and determine the initial public offering price with representatives of the underwriters and this price may not be indicative of prices that will prevail in the trading market. As a result, you may not be able to sell your shares of common stock at or above the offering price.

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 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.

***Management has discretion in allocating the net proceeds from this offering and may do so in ways that you and other stockholders may not approve.***

We expect to use the net proceeds from this offering to fund further clinical development of our current product candidates and for general corporate purposes, such as general and administrative expenses, capital expenditures, working capital, prosecution and maintenance of our intellectual property and the potential investment in technologies or products that complement our business. Because of the number and variability of factors that will determine our use of the proceeds from this offering, their ultimate use may vary substantially from their currently intended use. As such, our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not necessarily improve our operating results or enhance the value of our common stock. For a further description of our intended use of the proceeds of the offering, see the section entitled "Use of Proceeds" beginning on page 36.

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

Following the completion of this offering, our executive officers, directors and greater than 5% stockholders, in the aggregate, will own approximately 63.8% of our outstanding common stock, without giving effect to the purchase of shares by any person in this offering. 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.***

Upon completion of this offering, there will be 17,297,081 shares of our common stock outstanding. Of these, 4,607,142 shares are being sold in this offering (or 5,298,213 shares, if the underwriters exercise their over-allotment option in full) and will be freely tradable immediately after this offering (except for shares purchased by affiliates) and

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remaining 12,689,939 shares may be sold upon expiration of lock-up agreements 180 days after the date of this prospectus (subject in some cases to volume limitations). In addition, as of December 31, 2009, we had outstanding options to purchase 1,323,776 shares of common stock that, if exercised, will result in these additional shares becoming available for sale upon expiration of the lock-up agreements. 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 also intend to register all common stock that we may issue under our 2005 Equity Incentive Plan and 2010 Stock Option and Incentive Plan. Effective upon the completion of this offering, an aggregate of 233,644 shares of our common stock will be reserved for future issuance under this plan, plus any shares reserved and unissued under our 2005 Equity Incentive Plan. Once we register these shares, which we plan to do shortly after the completion of this offering, they 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 144 for a more detailed description of sales that may occur in the future.

***You will suffer immediate and substantial dilution in the net tangible book value of the common stock you purchase.***

The initial public offering price of our common stock is substantially higher than the net tangible book value per share of our outstanding common stock immediately after the completion of this offering. Purchasers of common stock in this offering will experience immediate dilution of approximately \$9.62 per share in net tangible book value of the common stock. In addition, investors purchasing common stock in this offering will contribute approximately 43% of the total amount invested by stockholders since inception, but will only own approximately 27% of the shares of common stock outstanding. In the past, we issued restricted stock and options to acquire common stock at prices significantly below the initial public offering price. To the extent these outstanding options are ultimately exercised, investors purchasing common stock in this offering will sustain further dilution. See the section entitled *Dilution* on page 41 for a more detailed description of the dilution to new investors in this offering.

***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 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.

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***We will incur significant increased costs as a result of operating as a public company, and our management will be required to divert attention from product development to devote substantial time to new compliance initiatives.***

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, 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, have imposed various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal controls for financial reporting and disclosure. In particular, commencing in fiscal year 2011, we must perform system and process evaluation and testing of our internal controls over financial reporting to allow management and our independent registered public accounting firm to report on the effectiveness of our internal controls over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. Our testing, or the subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses. We expect to incur significant expenses and devote substantial management effort toward ensuring compliance with Section 404. We currently do not have an internal audit function, and we will need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge. Moreover, if we are not able to comply with the requirements of Section 404 in a timely manner, or if we or our independent registered public accounting firm identifies deficiencies in our internal controls that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by The NASDAQ Global Market, the SEC or other regulatory authorities, which would entail expenditure of additional financial and management resources.

***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;

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- 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;
- 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. In addition, the number of shares of common stock that we issue in connection with this offering may be sufficient, taking into account prior or future shifts in our ownership over a three-year period, to 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 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.

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**

We estimate that the net proceeds of the sale of the common stock that we are offering will be approximately \$57.2 million, or \$66.2 million if the underwriters exercise their over-allotment option in full, assuming an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses that we must pay.

A \$1.00 increase (decrease) in the assumed initial public offering price of \$14.00 per share would increase (decrease) the net proceeds to us from this offering by approximately \$4.3 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to obtain additional working capital to fund anticipated operating expenses, establish a public market for our common stock and facilitate future access to the public markets. In addition, we will receive \$17.1 million from the issuance of shares of our common stock to certain of our investors pursuant to a common stock purchase agreement, which we expect to occur concurrently with the closing of this offering.

We estimate that we will use the proceeds of this offering and the concurrent common stock issuance as follows:

approximately \$55.0 million of these net proceeds to fund the continued clinical development of A-002, including our planned initiation after completion of this offering of the VISTA-16 study;

approximately \$10.0 million of these net proceeds to fund the continued clinical development of A-623, including completing preparatory work for the initiation of a Phase 2b clinical study;

approximately \$1.0 million of these net proceeds to fund the continued clinical development of A-001, currently in a Phase 2 clinical study; and

approximately \$8.3 million for general corporate purposes, such as general and administrative expenses, capital expenditures, working capital, prosecution and maintenance of our intellectual property and the potential investment in technologies or products that complement our business.

We have no current understandings, commitments or agreements with respect to any acquisition of or investment in any technologies or products.

Although we currently anticipate that we will use the net proceeds as described above, there may be circumstances where a reallocation of funds may be necessary, or the proceeds may not be sufficient to complete our Phase 3 clinical study for A-002, a Phase 2b clinical study for A-623 and a Phase 2 clinical study for A-001. The amounts and timing of our actual expenditures will depend upon numerous factors, including the progress of our development and commercialization efforts, the progress of our clinical studies, whether or not we enter into strategic collaborations or partnerships and our operating costs and expenditures. Accordingly, our management will have significant flexibility in applying these net proceeds.

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The costs and timing of drug development and regulatory approval, particularly conducting clinical studies, are highly uncertain, are subject to substantial risks and can often change. Accordingly, we may change the allocation of use of these proceeds as a result of contingencies such as the progress and results of our clinical studies and other development activities, the establishment of collaborations, our manufacturing requirements and regulatory or competitive developments. In addition, assuming our current clinical programs proceed further to the next stage of clinical development, we do not expect our existing capital resources and the net proceeds from this offering and the concurrent common stock issuance to be sufficient to enable us to fund the completion of all such clinical development programs through commercial introduction. Accordingly, we expect we will need to raise additional funds.

Pending use of the proceeds as described above or otherwise, we intend to invest the net proceeds in short-term interest-bearing, investment-grade securities.

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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.

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**CAPITALIZATION**

The following table sets forth our capitalization as of December 31, 2009:

on an actual basis;

on a pro forma basis to give effect to the following: (i) the conversion of all outstanding shares of our preferred stock into an aggregate of 8,146,308 shares of our common stock, which we expect to occur immediately prior to the closing of this offering; (ii) the filing of an amended and restated certificate of incorporation to authorize 95,000,000 shares of common stock and 5,000,000 shares of undesignated preferred stock; and (iii) the issuance of 217,496 shares of common stock upon the cashless exercise of warrants outstanding and having an exercise price of \$1.34 per share, which we expect to occur prior to the closing of this offering; and

on a pro forma as adjusted basis to give further effect to the following, all of which assume an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus: (i) the receipt by us of net proceeds of \$57.2 million from the sale of 4,607,142 shares of common stock offered by us in this offering at an assumed initial public offering price of \$14.00 per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us; (ii) the issuance of 980,468 shares of common stock and a beneficial conversion charge, upon the conversion of convertible promissory notes issued in July and September 2009 and associated accrued interest, which we expect to occur concurrently with the closing of this offering; (iii) the issuance of 1,313,358 shares of common stock to certain of our investors pursuant to a common stock purchase agreement for an aggregate purchase price of \$17.1 million, which we expect to occur concurrently with the closing of this offering; (iv) the issuance of 262,278 shares of common stock and a beneficial conversion charge, upon the conversion of convertible promissory notes issued in December 2009 and associated accrued interest, which we expect to occur concurrently with the closing of this offering; and (v) the issuance of 134,408 shares of common stock and the associated charge, issuable to Eli Lilly and Company, one of our licensors, in satisfaction of a \$1.75 million milestone payment, which we expect to occur within 10 business days after the closing of this offering.

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.

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	<b>As of December 31, 2009</b>		
	<b>Actual</b>	<b>Pro Forma</b>	<b>Pro Forma As Adjusted</b>
Cash, cash equivalents and short-term investments	\$ 3,803,384	\$ 3,803,384	\$ 80,012,384
Series A-1 convertible preferred stock, \$0.001 par value, 552,530 shares authorized, issued and outstanding (aggregate liquidation value of \$813,508 as of December 31, 2009), actual; 0 shares authorized and outstanding pro forma and pro forma as adjusted	552		
Series A-2 convertible preferred stock, \$0.001 par value, 1,635,514 shares authorized; 1,620,669, shares issued and outstanding (aggregate liquidation value of \$8,323,782 as of December 31, 2009), actual; 0 shares authorized and outstanding pro forma and pro forma as adjusted	1,621		
Series B-1 convertible preferred stock, \$0.001 par value, 2,751,168 shares authorized; 2,746,865 shares issued and outstanding (aggregate liquidation value of \$19,986,220 as of December 31, 2009), actual; 0 shares authorized and outstanding pro forma and pro forma as adjusted	2,747		
Series B-2 convertible preferred stock, \$0.001 par value, 6,089,369 shares authorized; 3,226,244 shares issued and outstanding (aggregate liquidation value of \$23,474,182 as of December 31, 2009), actual; 0 shares authorized and outstanding pro forma and pro forma as adjusted	3,226		
Common stock, \$0.001 par value, 18,443,341 shares authorized; 1,566,199 shares issued and outstanding; 95,000,000 shares authorized and 9,930,003 shares outstanding pro forma; 95,000,000 shares authorized and 17,227,657 shares outstanding pro forma as adjusted	1,566	9,930	17,228
Preferred stock, \$0.001 par value, 0 shares authorized, issued and outstanding, actual; 5,000,000 shares authorized and 0 shares outstanding pro forma and pro forma as adjusted			
Additional paid-in capital	52,941,384	52,941,166	147,845,420
Deficit accumulated during the development stage	(65,229,952)	(65,229,952)	(72,139,165)
Total stockholders (deficit) equity	(12,278,856)	(12,278,856)	75,723,483
Total capitalization	\$ (12,278,856)	\$ (12,278,856)	\$ 75,723,483

**Table of Contents****DILUTION**

If you invest in our common stock, your interest will be diluted immediately to the extent of the difference between the initial offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock after this offering and the issuance of common stock prior to and concurrently with the closing of this offering as described below. Our pro forma net tangible book value as of December 31, 2009 was \$16.6 million, or \$1.31 per share of common stock. Pro forma net tangible book value per share represents the amount of our total tangible assets less our total liabilities, divided by the number of shares of common stock outstanding as of December 31, 2009, after giving effect to the following: (i) the conversion of all of our preferred stock into 8,146,308 shares of our common stock, which we expect to occur immediately prior to the closing of this offering; (ii) the issuance of 217,496 shares of common stock upon the cashless exercise of warrants outstanding and having an exercise price of \$1.34 per share, which we expect to occur prior to the closing of this offering; and (iii) the issuance of the following shares, all of which assume an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus:

980,468 shares of common stock upon the conversion of convertible promissory notes issued in July and September 2009 and associated accrued interest, which we expect to occur concurrently with the closing of this offering;

1,313,358 shares of common stock to certain of our investors pursuant to a common stock purchase agreement for an aggregate purchase price of \$17.1 million, which we expect to occur concurrently with the closing of this offering;

262,278 shares of common stock upon the conversion of convertible promissory notes issued in December 2009 and associated accrued interest, which we expect to occur concurrently with the closing of this offering; and

134,408 shares of common stock issuable to Eli Lilly and Company, one of our licensors, in satisfaction of a \$1.75 million milestone payment, which we expect to occur within 10 business days after the closing of this offering.

After giving effect to the sale by us of 4,607,142 shares of common stock in this offering at an assumed initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus, and the issuance of common stock concurrently with the closing of this offering as described above and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of December 31, 2009 would have been approximately \$75.7 million, or approximately \$4.38 per share. This amount represents an immediate increase in pro forma net tangible book value of \$3.07 per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately \$9.62 per share to new investors purchasing shares of common stock in this offering at the assumed initial public offering price.

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

Assumed initial public offering price per share	\$ 14.00
Pro forma net tangible book value per share as of December 31, 2009	1.31

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Increase per share attributable to new investors	3.07	
Pro forma net tangible book value per share after this offering		4.38
Dilution per share to new investors		\$ 9.62

A \$1.00 increase (decrease) in the assumed initial public offering price of \$14.00 per share would increase (decrease) our adjusted net tangible book value per share after this offering by approximately \$0.25 and would increase (decrease) dilution per share to new investors by



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approximately \$0.75, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. In addition, to the extent any outstanding options or warrants are exercised, you will experience further dilution.

The following table summarizes, as of December 31, 2009, the number of shares purchased from us, the total consideration paid or to be paid to us, and the average price per share paid or to be paid to us by existing stockholders and new investors purchasing shares of our common stock in this offering at an assumed offering price of \$14.00 per share, which is the midpoint of the price range listed on the cover page of this prospectus, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average
	Number	Percent	Amount	Percent	Price per Share
			(in millions)		
Existing stockholders	12,689,939	73%	\$ 81.1	57%	\$ 6.39
New Investors	4,607,142	27%	60.0	43%	\$ 13.02
Total	17,297,081	100%	141.1	100%	\$ 8.16

A \$1.00 increase (decrease) in the assumed initial public offering price of \$14.00 per share would increase (decrease) the total consideration paid by new investors by \$4.3 million and increase (decrease) the percent of total consideration paid by new investors by 2% assuming that the number of shares offered by us, as set forth on the cover of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Assuming the underwriters' over-allotment option is exercised in full, sales by us in this offering will reduce the percentage of shares held by existing stockholders to 71% and will increase the number of shares held by our new investors to 5,298,213, or 29%.

The number of shares of our common stock to be outstanding after this offering is based on 9,781,931 shares of our common stock outstanding as of December 31, 2009 and excludes:

1,323,776 shares of common stock issuable upon exercise of stock options outstanding and having a weighted-average exercise price of \$0.92 per share;

233,644 shares of common stock reserved for future issuance under our 2010 Stock Option and Incentive Plan, which will become effective upon the completion of this offering (plus an additional 19,571 shares of common stock reserved for issuance under our 2005 Equity Incentive Plan, which shares will be added to the shares reserved for future issuance under our 2010 Stock Option and Incentive Plan upon effectiveness of our 2010 Stock Option and Incentive Plan); and

178,564 shares of common stock issuable upon the exercise of warrants outstanding issued in connection with convertible promissory notes issued in July and September 2009 and having an exercise price of \$14.00 per share, assuming an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on

the cover page of this prospectus.

**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 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.

	Years Ended December 31,					Period from September 9, 2004 (Date of Inception) to December 31, 2009
	2005	2006	2007	2008	2009	2009
<b>Statement of Operations Data:</b>						
Operating expenses						
Research and development	\$ 345,208	\$ 7,759,106	\$ 23,921,932	\$ 10,882,322	\$ 8,415,414	\$ 51,323,981
General and administrative	205,527	822,732	2,468,607	2,980,170	3,425,690	9,917,567
Total operating expenses	(550,735)	(8,581,838)	(26,390,539)	(13,862,492)	(11,841,104)	(61,241,548)
<b>Other Income (Expense)</b>						
Interest and other income	11,148	109,987	696,962	178,129	23,534	1,019,760
Interest and other expense		(17,395)		(296,303)	(385,922)	(699,620)
Beneficial conversion feature		(190,000)		(4,118,544)		(4,308,544)

Total other income (expense)	11,148	(97,408)	696,962	(4,236,718)	(362,388)	(3,988,404)
Net loss	\$ (539,587)	\$ (8,679,246)	\$ (25,693,577)	\$ (18,099,210)	\$ (12,203,492)	\$ (65,229,952)
Net loss per share basic and diluted (1)	\$ (1.38)	\$ (13.82)	\$ (28.15)	\$ (13.47)	\$ (8.06)	
Weighted-average number of shares used in per share calculation basic and diluted (2)	390,279	627,904	912,668	1,343,420	1,513,598	
Pro forma net loss per share basic and diluted (1)					\$ (1.24)	
Pro forma weighted-average number of shares used in per share calculation basic and diluted (2)					9,877,402	

- (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 do not include weighted-average shares of unvested stock of 478,799, 297,596, 261,649, 230,028 and 110,079, respectively. These shares are subject to a risk of repurchase by us until such shares are vested. See Note 8 to our financial statements for more information.

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	2005	2006	As of December 31, 2007	2008	2009
<b>Balance Sheet Data:</b>					
Cash and cash equivalents	\$ 381,964	\$ 20,781,916	\$ 152,744	\$ 7,895,113	\$ 3,803,384
Short-term investments			5,825,000		
Working capital	232,136	19,629,639	(2,907,995)	(495,836)	(14,344,436)
Total assets	404,091	20,856,892	6,193,213	8,034,154	5,888,789
Indebtedness	150,790	1,174,621	12,058,184	8,494,417	18,167,645
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)
Total stockholders (deficit) equity	253,301	19,682,271	(5,864,971)	(460,263)	(12,278,856)

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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 ready clinical program, A-002, and two Phase 2 clinical programs, A-623 and A-001. Two of our product candidates, A-002 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 ready product candidate, A-623, targets elevated levels of B-lymphocyte stimulator, 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 December 31, 2009, we had an accumulated deficit of approximately \$65.2 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 private placements of preferred stock and convertible debt, raising an aggregate of approximately \$58.6 million through those private placements. 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-



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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 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 anticipated Phase 3 clinical study named VISTA-16 for A-002, 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, and for the period from September 9, 2004 (Date of Inception) through December 31, 2009:

	<b>Years Ended December 31,</b>			<b>For the Period September 9, 2004 (Date of Inception) to December 31, 2009</b>
	<b>2007</b>	<b>2008</b>	<b>2009</b>	
Allocated costs:				
A-001	\$ 2,302,454	\$ 456,633	\$ 192,979	\$ 6,520,046
A-002	12,053,943	7,370,850	5,535,529	27,860,645
A-623	6,004,667 (1)	100,851	34,179	6,143,417 (1)
Unallocated costs	3,560,868	2,953,988	2,652,727	10,799,873
Total development	\$ 23,921,932	\$ 10,882,322	\$ 8,415,414	\$ 51,323,981



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

We expect our research and development expenses to increase significantly as we continue to develop our product candidates. We expect to initiate the VISTA-16 study of A-002 for the treatment of patients experiencing acute coronary syndrome after completion of this

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offering, which we expect to fund with proceeds we raised from existing investors and from the proceeds raised in this offering.

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.

### ***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. After completion of this offering, we anticipate incurring a significant increase in general and administrative expenses as we operate as a public company. These increases will likely include

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increased costs for insurance, costs related to the hiring of additional personnel and payment to outside consultants, lawyers and accountants. We also expect to incur significant costs to comply 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 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



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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 \$74,861 in 2007, \$143,406 in 2008, and \$253,964 in 2009, respectively. As of December 31, 2009, we had \$456,288 in total unrecognized compensation cost related to non-vested employee stock-based compensation arrangements, which we expect to recognize over a weighted-average period of approximately 2.25 years. The intrinsic value of all outstanding vested and non-vested stock-based compensation arrangements, based on an assumed initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus, is \$17.3 million, based on 1,323,776 shares of our common stock issuable upon exercise of stock-based compensation arrangements outstanding at December 31, 2009 at a weighted-average exercise price of \$0.92 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, 2008 and 2009, the weighted-average assumptions used in the Black-Scholes model were 6.25 years for the expected terms, 81% and 74% for the expected volatility, 3.08% 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 2008 and 2009 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 2008 and 2009 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. The fair value of our common stock was determined by our board of directors. Prior to this offering, there has been no public market for our common stock. 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 relative to our common stock;

our performance and stage of development;

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

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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 Series B-1 and Series B-2 preferred stock has a liquidation preference equal to the price per share at which such share was sold, and in addition, participates with the common stock on proceeds available for distribution in a buy-out or sale of our company until such preferred shares receive three-and-one-half times the original price per share. As a result of these participation rights and preferences, the preferred shareholders would receive 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 are 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 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



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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 this offering as well as the risk that this offering will 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 A-002 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 A-002.

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 this prospectus 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

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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 is primarily the result of an increase in the estimated enterprise value of the company from \$34.0 million to \$60.6 million, and reflects 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 reflects 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.

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.

As a result of the preliminary analysis conducted by us and the underwriters, it is currently estimated that the initial public offering price of our common stock will be between \$13.00 to \$15.00 per share. This increase between the estimated fair value of our common stock of \$7.70 per share in October 2009 and the projected initial public offering price range takes 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 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 December 31, 2009, 1,323,776 shares of our common stock were issuable upon exercise of stock options.

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**Results of Operations**

*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 A-002 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 A-002. In 2007, we initiated and completed two Phase 2 clinical studies for A-002, while in 2008, we initiated a single Phase 2b clinical study for A-002.

*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.

*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.



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*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 and convertible debt. As of December 31, 2009, we had received net proceeds of approximately \$32.2 million from the sale of equity securities, and net proceeds of approximately \$26.5 million from the issuance of convertible promissory notes, of which \$12.2 million have been converted into preferred stock. As of December 31, 2009, we had cash and cash equivalents of approximately \$3.8 million. In addition, in September 2009, we entered into a stock purchase agreement, as amended to add an additional purchaser in November 2009, with certain existing holders of our preferred stock for the sale of shares of our common stock for an aggregate purchase price of \$20.5 million. The \$20.5 million currently held in an escrow account will be released upon the completion of an initial public offering in which the aggregate net proceeds to us are at least \$50.0 million (after underwriting discounts, commissions and fees). On December 11, 2009, we entered into a note purchase agreement and amended the September 2009 stock purchase and escrow agreements with such holders of our preferred stock. The agreements provided for the release of \$3.4 million of the \$20.5 million currently held in the escrow account. We issued convertible promissory notes, or escrow notes, for the released amount to the investors.

### *Cash Flows*

#### *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 this offering.

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*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.

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.

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The following table summarizes our long-term contractual obligations and commitments as of December 31, 2009:

	Total	Payments Due by Period			After 5 Years
		Less than 1 Year	1-3 Years	4-5 Years	
Operating lease obligations (1)	\$ 90,696	\$ 82,896	\$ 7,800	\$	\$
Convertible promissory notes (2)	13,400,000	13,400,000			
Total	\$ 13,490,696	\$ 13,482,896	\$ 7,800	\$	\$

- (1) Operating lease obligations reflect our obligation to make payments in connection with a sublease that commenced in October 2008 and will expire on September 30, 2010 for approximately 7,800 square feet of office space and office equipment leases that commenced in October 2007 and will expire in June 2013.
- (2) Reflects convertible promissory notes issued in July and September 2009 and escrow notes issued in December 2009 to certain of our existing investors. The notes are convertible upon the occurrence of certain events and mature on the earlier 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 under the terms of the notes.

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, including milestone payments of \$1.75 million to each of Eli Lilly and Shionogi & Co., Ltd. due no later than 12 months from the enrollment of the first patient in a Phase 3 clinical study for A-002. The \$1.75 million milestone payment to Eli Lilly may be paid in the form of shares of our common stock issued at the price per share at which shares are sold to the public in this offering, minus any per-share underwriting discounts, commissions or fees, which would result in the issuance of 134,408 shares, assuming an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus. We are obligated to issue such shares to Eli Lilly within 10 business days after the closing of this offering. 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 or a sublicensee in such country, or (b) 10 years after the first commercial sale of the applicable licensed product in the applicable country.

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*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:

- initiate the Phase 3 VISTA-16 study for A-002;
- continue clinical development of A-623 and A-001;
- 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 the proceeds of this offering, together with 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 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 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

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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 and money market funds, we do not believe we are subject to any material market risk exposure. We do not have any foreign currency or any other 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 ready clinical program, A-002, and two Phase 2 clinical programs, A-623 and A-001. Two of our product candidates, A-002 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 ready product candidate, A-623, targets elevated levels of B-lymphocyte stimulator, or BLyS, 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.

**Table of Contents*****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, which validate the effect of our sPLA<sub>2</sub> inhibitors on sPLA<sub>2</sub> concentration and activity, both of which 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 methyl, A-002 (a prodrug of A-001), is a Phase 3 ready oral broad-spectrum inhibitor of sPLA<sub>2</sub> enzymes and is being developed initially 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 symptoms related to acute myocardial ischemia, including unstable angina, or UA. A-002, 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 as part of physician-directed standard of care. Through its novel mechanism of action, A-002 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 plan to initiate a Phase 3 clinical study in patients with acute coronary syndrome after completion of this offering.

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 A-002 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 A-002 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 A-002 was equivalent to the marketed immunosuppressant Elidel in resolving inflammation. In a sheep model of allergen-induced asthma, inhaled A-002 and 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>



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breaks down phospholipids that result in the formation of fatty acids such as 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, A-002, can be distinguished from other PLA<sub>2</sub> enzyme inhibitors such as those targeted at inhibiting Lp-PLA<sub>2</sub> because A-002 treatment:

- is synergistic with HMG-CoA reductase inhibitors, or statins, 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 otherwise healthy red blood cells. Patients with sickle cell





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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 BLYS Antagonism Portfolio***

BLYS 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 BLYS in lupus has recently been clinically validated in multiple clinical studies with other BLYS antagonists. We intend to advance the development of our BLYS targeting 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 plan to initiate a Phase 2b clinical study in lupus in the second half of 2010 after we reactivate the IND that was transferred from Amgen.

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

dosing flexibility with both subcutaneous and intravenous routes of delivery;

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

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

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 an *escherichia coli* production process;

differentiated intellectual property as a peptibody circumventing existing antibody, antibody-fragment and other related patents; and

potential safety and manufacturing advantages.

**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>				
A-002-varespladib methyl with atorvastatin, also known as Lipitor in the United States	Phase 3 ready	Anthera (1)	Orally administered sPLA <sub>2</sub> inhibitor  Indicated for the prevention of secondary MACE following an acute coronary syndrome (16-week treatment)	Initiate patient enrollment in the Phase 3 VISTA-16 study after completion of this offering
A-623	Phase 2 ready	Anthera	Selective peptibody antagonist of BLYS cytokine being developed for the treatment of B-cell mediated autoimmune diseases  Indicated for systemic lupus erythematosus	FDA review of Phase 2b study protocol amendment in connection with the IND reactivation  Initiate Phase 2b clinical study in the second half of 2010
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 hospitalized patients with sickle cell disease	Initiate Phase 2b clinical study

**Additional Programs**

A-002-varespladib methyl		Anthera (1)		
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	Phase 2 investigator study		Orally administered sPLA <sub>2</sub> inhibitor to reduce inflammatory markers in patients undergoing interventional cardiovascular procedures	Enrollment complete. Data publication targeted in 2010
A-002-varespladib methyl with niacin	Phase 2 ready	Anthera (1)	Orally administered sPLA <sub>2</sub> inhibitor to improve lipid profiles and reduce flushing in cardiovascular patients on niacin therapy	Initiate initial prospective Phase 2 clinical study to explore safety and efficacy
A-003	Preclinical	Anthera (1)	Under development as a second generation sPLA <sub>2</sub> inhibitor  Indicated for cardiovascular diseases	Continue preclinical development  Initiate IND enabling studies

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

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**A-002**

A-002 is an orally administered pro-drug of A-001, which is a broad-spectrum, once-daily inhibitor of the IIa, V and X 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 plan to initiate the Phase 3 VISTA-16 study to evaluate A-002 in combination with statin therapy for the short-term (16-week) treatment of acute coronary syndrome after completion of this offering. We have reached 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. An SPA is not a guarantee of an approval of a product candidate or any permissible claims about the product candidate.

To date, a total of 1,107 patients and healthy volunteers in at least 15 clinical studies have been exposed to A-002. The administration of A-002 was generally well-tolerated in studies where patients were exposed to a maximum of 48 weeks of therapy. A-002 has been studied in combination with 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 A-002, except in Japan where Shionogi & Co., Ltd. retains rights. We originally licensed our sPLA<sub>2</sub> inhibitor portfolio, including A-002 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%.

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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.

### *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 A-002 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 atorvastatin or placebo. 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, 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 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



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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.

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 A-002 is one of only a few novel drugs in development with the potential to offer, through a unique mechanism, anti-inflammatory activity, as measured by reductions in sPLA<sub>2</sub>, CRP and IL-6, 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 A-002 can provide synergistic anti-inflammatory and lipid-lowering benefits. Additionally, we have preliminary data to suggest that A-002 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 A-002 during our end of Phase 2 meeting. As a result of that meeting and the results from our recently completed Phase 2b acute coronary syndrome study, we had been in discussions with the FDA to finalize an SPA agreement for the Phase 3 VISTA-16 study of A-002 for the acute and short-term (16-week) treatment of patients who have recently experienced an acute coronary syndrome. We have 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.

A DSMB will continually evaluate the performance of the VISTA-16 study over time to ensure patient safety and to review certain blinded laboratory data from the VISTA-16 study. After a minimum of 1,000 patients have completed the 16-week treatment in the VISTA-16 study, the DSMB will conduct a biomarker futility 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,



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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. Other than being informed by the DSMB to continue or stop the clinical study, we will remain blinded to all clinical study data, including the biomarker results.

Pursuant to our discussions with the FDA, our planned 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 395 adjudicated endpoint events as described in the protocol have occurred. 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 either 500 mg once-daily of A-002 or placebo in addition to a dose of atorvastatin. The dose of atorvastatin may be adjusted after eight weeks based on the subjects' LDL-C measurement. Upon completion of a planned animal combination study, the Phase 3 protocol may be amended to allow the use of simvastatin, a broadly available generic statin, as an alternative to atorvastatin. Patients will be treated with A-002 or placebo and a dose of atorvastatin for 16 weeks and 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, 48 hours and weeks one, two, four, eight and 16. Randomization will be 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 40% of the total patient population.

The primary endpoint of the VISTA-16 study will be to determine whether 16 weeks of once-daily treatment with A-002 plus a dose of atorvastatin is superior to placebo plus atorvastatin in 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.

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*Components of VISTA-16 Primary Endpoint*

Cardiovascular Death

Non-Fatal Myocardial Infarction

Non-Fatal Stroke

Documented UA with Objective Evidence of Ischemia Requiring Hospitalization

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.

A secondary endpoint for the VISTA-16 study is to determine whether A-002 plus a dose of atorvastatin is superior to placebo plus 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 A-002 in acute coronary syndrome patients with high levels of inflammation and dislipidemia. The clinical study was designed to evaluate the safety and efficacy of A-002 when co-administered with the highest dose (80 mg) of atorvastatin. The clinical study randomized all patients to a minimum of 24 weeks of treatment with either 500 mg once-daily of A-002 or placebo in combination with 80 mg 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 A-002 with the highest available dose of 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 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

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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 A-002 treated patients versus those treated with 80 mg 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

Treatment with A-002 resulted in more subjects with LDL-C levels less than 70 mg/dL than those on placebo (80 mg 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 A-002 treatment helps patients achieve their LDL-C target levels more quickly and maintain them longer than with high-dose statin (80 mg atorvastatin) therapy alone.

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Figure 2: Percentage of Patients Achieving LDL-C < 70 mg/dL

Secondary endpoints measured effects of A-002 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 atorvastatin) therapy alone. While our first sPLA<sub>2</sub> measurement in this clinical study occurred at two weeks, data from previous clinical studies utilizing A-002 or A-001 demonstrated reductions in sPLA<sub>2</sub> as early as two days following treatment.

Figure 3: 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 A-002 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 A-002 and 80 mg atorvastatin treated patients than those treated with placebo and 80 mg 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, A-002 treated patients had numerically reduced levels of CRP versus patients treated with placebo.

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Figure 4: Median Percentage Change in CRP Concentration from Baseline

The percent decrease in IL-6 in patients on A-002 at week two was more than three times the reduction in IL-6 in patients on placebo (-18% versus -5.1%,  $p = 0.18$ ).

Figure 5: Median Percentage Change in IL-6 Concentration from Baseline

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 3 mg/L. As indicated in the figure below, results demonstrated that more patients treated with A-002 and 80 mg atorvastatin achieved these dual goals than those treated with placebo and 80 mg atorvastatin alone at all time points in the clinical study with statistically significantly greater percentages of patients achieving these levels at week four and week 16 ( $p = 0.0025$  and  $p = 0.005$ ).

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Figure 6: Percentage of Patients Achieving Combined Targets of CRP < 3.0 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 13 (4.2%) MACE in the A-002 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 A-002 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, A-002 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 A-002 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 A-002, 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 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.

We anticipate publishing detailed results from the FRANCIS study in 2010 at a scientific conference and in a scientific journal.

*Phase 2 Stable Coronary Artery Disease Study PLASMA (Phospholipase Levels and Serological Markers of Atherosclerosis): A-002 Twice-Daily Versus Placebo*

Our Phase 2 PLASMA study was designed to confirm the safety and effect of A-002 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 A-002 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 A-002 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

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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 A-002, 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 A-002 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 A-002, 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 A-002, 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 A-002 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 A-002.

A-002 was generally well-tolerated among all patients treated. In general, adverse effects were mild or moderate with no imbalance of adverse events in the A-002 groups as compared to placebo. The most common adverse effects seen in the A-002 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 A-002.

### *Phase 2 Stable Coronary Artery Disease Study PLASMA-2 (Phospholipase Levels and Serological Markers of Atherosclerosis -2): Once-Daily of A-002 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 A-002 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 A-002 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 doses of A-002 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 A-002 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 A-002 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

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with A-002 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 A-002 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 A-002.

The adverse effect profile for A-002 was consistent with earlier studies and there was no imbalance of adverse events among the A-002 groups and placebo. A-002 was generally well-tolerated. The most common effects seen in the A-002 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 A-002.

Table 7: Placebo-corrected Percent Decrease from Baseline to Week Eight in Biomarkers

	<b>sPLA<sub>2</sub></b>	<b>LDL Cholesterol</b>	<b>Total Cholesterol</b>	<b>Non-HDL Cholesterol</b>	<b>Oxidized LDL-C</b>
PLASMA (All doses A-002)	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 A-002)*	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

*Ongoing Investigator-Sponsored Phase 2 Percutaneous Intervention Study SPIDER-PCI (sPLA<sub>2</sub> Inhibition to Decrease Enzyme Release after PCI): A-002 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 A-002 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 A-002 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 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 A-002, there were numerical reductions in CRP from baseline versus placebo at three to five days (-82.1%, p = 0.23).



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

Eli Lilly and Shionogi & Co., Ltd. previously conducted a series of clinical studies evaluating A-002 and A-001 in various inflammatory conditions. In total, at least 17 Phase 1 and Phase 2 clinical studies evaluated A-002 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 A-002 and A-001 with more than 1,000 healthy volunteers and subjects receiving treatment.

Throughout these studies, A-002 was generally well-tolerated.

*Non-Clinical Studies with A-002 and A-001*

Approximately 150 preclinical pharmacology and toxicology studies have been completed with A-002 and A-001, including two-year rat and mouse carcinogenicity studies, one-year primate study and three-month rat study in combination with atorvastatin.

**A-623**

A-623 is a selective peptibody antagonist of the BLYS 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 107 lupus patients have already been completed. Results from these studies demonstrated A-623 generated anti-BLYS activity and showed statistically significant reductions in B-cells among lupus patients ( $p < 0.001$ ). We believe A-623 may offer a number of potential differentiations over other BLYS antagonists as well as other novel B-cell directed therapies given subcutaneous dosing opportunities. In addition, A-623 may confer improved pharmacodynamic benefits since it binds to both membrane bound and soluble forms of BLYS as well as potential manufacturing benefits and lower cost of goods based on an *escherichia coli* production process. We expect to initiate a Phase 2b clinical study for lupus during the second half of 2010. 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.

We intend to advance the development of our BLYS targeting molecule, A-623, a selective peptibody, to exploit its broad clinical utility in autoimmune diseases. A-623, as a peptibody directed against BlyS, 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-BLYS compounds, as well as other novel B-cell directed therapies, including:

both subcutaneous and intravenous dosing, which may offer dosing convenience and flexibility;

selective modulation and reduction of B-cell subsets that are relevant in lupus patients, which may offer safety and efficacy benefits;

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

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non-glycosylated protein that is produced in *escherichia coli*, which may reduce the potential to be immunogenic, and may provide manufacturing benefits and lower cost of goods.

*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 BLYS plays an important role in this disease process. In preclinical studies, transgenic mice created to over-express BLYS begin to exhibit symptoms similar to lupus. In addition, treatment of these same mice with BLYS antagonists appears to ameliorate the disease.

*Phase 2b Clinical Study in Patients with Lupus*

Based on positive results among 107 lupus patients in our Phase 1a and 1b clinical studies, we are currently finalizing plans for a Phase 2b clinical study in lupus patients. We have completed the transfer of the IND for A-623 from Amgen and are in the process of reactivating the IND, which we expect to have active by mid-2010. In order to reactivate the IND, we will need to submit a protocol amendment and additional information necessary to support our proposed Phase 2 clinical study to the FDA, and if the FDA does not have any comments on such protocol amendment, we will be able to begin enrollment in our clinical study 30 days after the FDA receives our submission. Our current study design would enroll at least 120 patients with serologically active lupus, as defined by Safety of Estrogen in Lupus Erythematosus National Assessment, or SELENA, and Systemic Lupus Erythematosus Disease Activity Index, or SLEDAI, with scores of equal to and greater than six, and positive levels of autoantibody or positive levels of double-stranded DNA. Patients in the clinical study will be randomized to one of three subcutaneous administration treatment groups of A-623 or placebo. All patients enrolled will be treated with A-623 plus physician-directed standard of care, or placebo plus physician-directed standard of care, for at least four months, followed by a two-month safety follow-up following the treatment period.

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The primary endpoint of the study is designed to evaluate percent changes in B-cell populations, including total B-cells and memory B-cells, as well as other relevant immunological biomarkers, such as changes in double-stranded DNA, immunoglobulin G and immunoglobulin M levels. Secondary endpoints would include evaluating the clinical efficacy of A-623 compared to placebo based on a systemic lupus erythematosus responder index, as defined by 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.

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

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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 8: 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 normal that are consistent with findings in the pre-Phase 1 clinical study.

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 pending further data from competitor studies, we expect to initiate a Phase 2b clinical study evaluating A-623 in lupus patients during the second half of 2010.



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### **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 associated with sickle cell disease 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 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.



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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 <sup>3</sup> 5.0 mg/L 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 30<sup>th</sup> patient completed treatment to examine safety and adjust dosing schedules. The interim data was 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

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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 9: 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.

<b>48-Hour sPLA<sub>2</sub> Activity as a Percentage of Baseline</b>	<b>0.0% &lt; 25.0%</b>	<b><sup>3</sup> 25% &lt; 50%</b>	<b><sup>3</sup> 50% &lt; 75%</b>	<b><sup>3</sup> 75%</b>
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 A-002 through Phase 3.*

Inflammatory processes and lipid abnormalities are central to the onset of acute coronary syndrome and the development of CAD. A-002 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 A-002 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 A-002 in chronic indications such as CAD.

*Advancing clinical development of A-623 and A-001.*

We intend to advance the development of A-623 to exploit the broad potential clinical utility of BLYS antagonism. We plan to internally develop this compound beginning with a Phase 2b clinical study in lupus as resources permit. 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 BLYS 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 the further 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 BLYS-specific antagonist in multiple large, late-stage clinical studies, we believe that A-623 could be an attractive product candidate for pharmaceutical companies interested in exploiting

opportunities in autoimmune diseases directed at lupus, as well as to other B-cell related autoimmune diseases.

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We are developing 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 advanced technologies become available. Finally, the development of new

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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, A-002, 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 A-002 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 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 A-002.

*Approved Categories of Drugs*

*Statins* Treatment with A-002 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 A-002.

*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. A-002 has demonstrated LDL-C lowering benefits



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when tested as monotherapy and in combination with statin therapy. To the extent acute coronary syndrome patients need additional LDL-C lowering, A-002 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 BLYS for the treatment of lupus. These product candidates include Benlysta (bellimumab) from Human Genome Sciences, Inc., 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 BLYS; 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 safety and manufacturing advantages and lower cost of goods based on an *escherichia coli* production process.

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<b>Compound</b>	<b>Stage</b>	<b>Company</b>	<b>Indications</b>	<b>Notes</b>
Benlysta	Phase 3	Human Genome Sciences, Inc.	Lupus	Monoclonal antibody against BLYS, an agent that demonstrated partial reduction in B-cells Positive results reported in first of two Phase 3 clinical studies
Atacicept	Phase 3	ZymoGenetics Inc.	Lupus, LN	Fusion protein against BLYS and APRIL; Phase 3 clinical study in LN stopped due to safety issues Phase 3 clinical study in lupus on-going
Epratuzumab	Phase 2b	Immunomedics, Inc.	Lupus, Non-Hodgkin's Lymphoma	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
Ocrelizumab	Phase 3	F. Hoffman - La Roche Ltd./Biogen Idec Inc.	LN	Monoclonal antibody against CD-20 that leads to rapid and profound depletion of circulating B-cells Phase 3 clinical study in lupus halted
Lupuzor	Phase 2b	Cephalon, Inc./ImmuPharma PLC	Lupus	Modulates CD4 T cells 125 patient Phase 2b clinical study stopped early

*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

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

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*A-002 and A-001*

As of the date of this prospectus, our licensed A-002 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;

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

Five pending non-EP foreign patent applications in Brazil, Canada, China, India 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 A-002 and A-001 compositions of matter and to various methods of making and using A-002 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 A-002 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 16 other countries (Australia, Brazil, Canada, China, 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-002 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 licensed U.S. patents;

One licensed pending U.S. non-provisional patent application (also listed above as covering A-002 and A-001);

Five licensed EP patents (two also listed above as covering A-002 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;

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One licensed pending EP patent application (also listed above as covering A-002 and A-001);

Eleven licensed non-EP foreign patents (four also listed above as covering A-002 and A-001) in Argentina, Australia, Canada, China, Mexico, South Korea and Taiwan; and

Five licensed pending non-EP foreign patent applications (three also listed above as covering A-002 and A-001) in Argentina, Brazil, Canada, China and India.

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:

Four U.S. non-provisional patent applications (all also listed above as covering A-002 and A-001);

Two pending U.S. provisional patent applications (both also listed above as covering A-002 and A-001);

Two pending PCT patent applications (both also listed above as covering A-002 and A-001); and

National phase applications in the European Patent Office, the Eurasian Patent Organization and 16 other countries (Australia, Brazil, Canada, China, 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 and three EP patents not listed above as covering A-001, A-002 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.

*A-623*

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

One U.S. patent;

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;

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One pending EP patent application;

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

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

We hold exclusive worldwide licenses from Amgen to all of these patents and patent applications.

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 A-002, 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.

## **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 A-002, 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

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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 A-002. 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 will be paid in the form of shares of our common stock issued at the price per share at which shares are sold to the public in this offering, minus any per-share underwriting discounts, commissions or fees, which would result in the issuance of 134,408 shares, assuming an initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus. We are obligated to issue such shares to Eli Lilly within 10 business days after the closing of this offering. 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 A-002, 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 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.

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### *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.

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 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.

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 current good manufacturing practices, or 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

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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 A-002 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 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 A-002, 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.

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### **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.

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

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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 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





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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.

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



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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 product development and 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 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 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.

Pediatric exclusivity is another type of exclusivity in the United States. Pediatric exclusivity, if granted, provides 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

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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.

### *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



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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.

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.

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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 A-002 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 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.

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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, 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.

The passage of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the MMA, imposes new requirements for the distribution and pricing of prescription drugs for Medicare beneficiaries, and includes 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



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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.

In addition, Congress is considering a number of legislative and regulatory proposals which are intended to reduce or limit the growth of health care costs and which could significantly transform the market for pharmaceuticals and biological products. Legislative and regulatory proposals under consideration include health care reform initiatives, such as private health insurance expansion or the creation of competing public health insurance plans. Further, Congress is considering passing legislation that would allow Medicare to negotiate directly with pharmaceutical companies. 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. 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. 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 December 31, 2009, we had 14 employees, seven of which 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 September 30, 2010. 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 December 31, 2009.

<b>Name</b>	<b>Age</b>	<b>Position</b>
Paul F. Truex	41	Chief Executive Officer, President and Director
Christopher P. Lowe	42	Chief Financial Officer and Vice President of Administration
James E. Pennington, M.D.	66	Chief Medical Officer and Executive Vice President
Colin Hislop, M.D.	52	Senior Vice President, Cardiovascular Products
Debra Odink, Ph.D.	46	Vice President, Pharmaceutical Research and Development
Joaquim Trias, Ph.D.	49	Senior Vice President, Preclinical Development
Stephen Lau	38	Vice President, Corporate and Business Development
Ursula Fritsch, Pharm. D	49	Vice President, Global Regulatory and Compliance
Christopher S. Henney, Ph.D. (1)	68	Chairman of the Board of Directors
Annette Bianchi (1)	51	Director
James I. Healy, M.D., Ph.D. (2)	44	Director
A. Rachel Leheny, Ph.D. (3)	46	Director
Donald J. Santel (2) (3)	49	Director
Daniel K. Spiegelman (2)	51	Director
David E. Thompson (1) (3)	62	Director

(1) Member of nominating and corporate governance committee.

(2) Member of audit committee.

(3) 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.

*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

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State University, San Luis Obispo and an M.B.A. from Saint Mary's University, Texas. Mr. Lowe is a director of Hansen Medical Corporation, a medical device company.

*James E. Pennington, M.D.* Dr. Pennington has served as our Executive Vice President and Chief Medical Officer since March 2007. Dr. Pennington came to Anthera from CoTherix, Inc. where, since February 2004, he served as Executive Vice President and Chief Medical Officer, focusing on licensing and developing and commercializing therapeutic products for the treatment of cardiovascular diseases. He holds a B.A. in General Science from the University of Oregon and an M.D. from the University of Oregon School of Medicine and is board certified in internal medicine and infectious disease.

*Colin Hislop, M.D.* Dr. Hislop has 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 has 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.

*Joaquim Trias, Ph.D.* Dr. Trias has served as our Senior Vice President of Preclinical Development since December 2004. From July 1996 until July 2004, Dr. Trias was Vice President of Drug Discovery Research at Vicuron Pharmaceuticals Inc. where he directed internal discovery projects, from concept to clinical candidate, and participated in its clinical development programs. Dr. Trias holds a B.S. in Biology and a Ph.D. in microbiology from the University of Barcelona and completed his training at the University of California at Berkeley.

*Stephen Lau.* Mr. Lau has served as our Vice President of Corporate and Business Development since February 2008. From October 2003 until February 2008, Mr. Lau managed and negotiated in- and out-licensing opportunities at Amgen Inc., a biopharmaceutical company. From March 2001 until September 2003, Mr. Lau was an investment banker at Adams, Harkness & Hill. Prior to that, Mr. Lau was a management consultant at Strategic Decisions Group and Deloitte Consulting. Mr. Lau holds a B.A. in microbiology and an M.S. in immunology from the University of California at Davis, and a Master's degree in health care management from Harvard University.

*Ursula Fritsch, Pharm.D.* Dr. Fritsch has served as our Vice President, Global Regulatory and Compliance since April 2005. Prior to joining the company, from 2003 to 2005, Dr. Fritsch was Senior Director of Regulatory Affairs at Peninsula Pharmaceuticals, Inc., where she oversaw both early and late stage regulatory strategy and operations for their antibiotic portfolio. Prior to Peninsula, Dr. Fritsch held various management positions and oversaw several new drug application approvals at Genentech, Inc. and Oclassen Pharmaceuticals, Inc. and was head of regulatory at Onyx Pharmaceuticals, Inc. Dr. Fritsch holds a B.A. from the University of Nebraska and a Pharm. D. from Creighton University.

*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.



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Dr. Henney served as Chairman and Chief Executive Officer of Dendreon Corporation, a biotechnology company he co-founded, from 1997 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 is currently the Chairman and a director of Oncothyreon, Inc., is vice-chairman and a director of Cyclacel Pharmaceuticals, Inc., and is a director of AVI BioPharma Inc.

*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. 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.

*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 Partner 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.

*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.

*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 November 2006 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.

*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

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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 publicly traded biopharmaceutical companies. Mr. Spiegelman holds a B.A. in economics from Stanford University and an M.B.A. from the Stanford Graduate School of Business.

*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.

## **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 13<sup>th</sup> 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.

*Robert S. Rosenson M.D., FACC, FACP, FAHA.* Dr. Rosenson is a member of the Phase 3 Steering Committee for our VISTA-16 study. Dr. Rosenson has been Professor of Medicine at the State University of New York at the Downstate Campus in Brooklyn, New York, where Dr. Rosenson is the Chief in the Division of Endocrinology, Diabetes and Metabolism and serves as a Senior Cardiologist. Dr. Rosenson holds a medical degree from Tulane University and completed his internship and residency in medicine at Brigham and Women's Hospital, a teaching affiliate of Harvard Medical School. Dr. Rosenson later completed a fellowship in cardiology at the University of Chicago. Dr. Rosenson has been involved in numerous grant-



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supported research investigations studying the effects of lipid-lowering therapy, hypoglycemic therapy and antihypertensive agents in inflammation, thrombogenesis and rheology. Dr. Rosenson is a Diplomate of the American Board of Internal Medicine, with a subspecialty in cardiovascular disease, the National Board of Medical Examiners and National Lipid Association. Currently Dr. Rosenson serves as a member of the Program Committee and Expert Document Committee for the American College of Cardiology. Dr. Rosenson is a Fellow of the American Heart Association Council on Epidemiology and Prevention and Fellow of the American Heart Association Council on Arteriosclerosis, Thrombosis and Vascular Biology.

**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 13<sup>th</sup> 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.

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Council on Epidemiology and Prevention and Fellow of the American Heart Association Council on Arteriosclerosis, Thrombosis and Vascular Biology.

*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.

## **Board Composition**

Upon completion of this offering, our board of directors will consist of eight directors, seven of whom will qualify as independent directors according to the rules and regulations of The NASDAQ Global Market. Our amended and restated certificate of incorporation, which will be effective upon the completion of this offering, will provide 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. Mr. Santel and Mr. Thompson have been designated Class I directors whose terms will expire at the 2010 annual meeting of stockholders. 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.

Our amended and restated certificate of incorporation will also provide 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 will further provide 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.

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.



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### **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 will comply 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. Santel 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. Mr. Spiegelman, Mr. Santel and Dr. Healy are independent directors as defined under the applicable rules and regulations of the SEC and The NASDAQ Global Market. The audit committee will operate under a written charter that will satisfy 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.

#### *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;

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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.

**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.

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**COMPENSATION**

**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



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deliberations about executive compensation matters. However, Mr. Truex does not participate in the deliberation or determination of his own compensation.

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 us 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

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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 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 A-002, while our 2009 corporate goals focused on the continued clinical development of our product candidates, including completion of our Phase 2b clinical study for A-002.

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.

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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.

*Cash Bonuses.* We do not currently 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. Our compensation committee has not made a determination or approved the payment of any bonuses based on corporate goals in 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, Dr. Odink and Mr. Lau, in recognition of their efforts in connection with certain business development efforts. We expect that our compensation committee will put a formal cash incentive program into place in the future, and that our named executive officers will participate in that program.

*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.



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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 362,147 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 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.

Equity incentive grants to our named executive officers and other employees are currently 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 considers the grant guidelines it has established for each position, along with the equity incentives already provided to an employee. Our compensation committee also considers 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.

Under the 2005 Equity Plan, we may grant equity incentive awards in the form of stock options, restricted stock awards or stock appreciation rights. 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

224,882 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

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options to purchase a total of 214,073 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 takes 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 and Mr. Lau, whose grants of 122,663 and 102,219 options to purchase shares of our common stock, respectively, were made in connection with their 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, Dr. Odink and Mr. Lau each received grants of equity awards based upon the management team's contributions to our 2008 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 and Mr. Lau each received grants of equity awards in April 2009, which grants were based on Dr. Hislop's contributions to our FRANCIS study and Mr. Lau's contributions to our business development activities. 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 is 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 this offering, we expect that all stock options will 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 will be 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 pursuant to the 2005 Equity Plan. In addition, we have also granted options to purchase

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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 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 entitled *Potential Payments Upon Termination or Change in Control* for a discussion of the change in control provisions related to restricted stock.

We plan to adopt an equity award grant policy that will formalize how we grant equity-based awards to officers and employees after this offering. We anticipate that 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 grant date.

Under our equity award grant policy, equity awards will typically be made on a regularly scheduled basis, as follows:

grants made in conjunction with the hiring of a new employee or the promotion of an existing employee will be made on the first trading day of the month following the later of (i) the hire date or the promotion date or (ii) the date on which such grant is approved; and

grants made to existing employees other than in connection with a promotion will be made, if at all, on an annual basis.

*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 Termination or Change in Control*, we have an agreement with our Chief Medical Officer, Dr. Pennington, providing certain benefits to him upon termination of his employment and, for all other named executive officers, 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





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change of control. Dr. Pennington's severance agreement provides benefits in the event of termination of his employment, whether or not based on a change of control. Our compensation committee recommended and our board of directors agreed that Dr. Pennington should be provided severance benefits regardless of whether a change of control occurred because of his critical role in our success. 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 four 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 (\$) (1)</b>	<b>Total (\$)</b>
Paul F. Truex President, Chief Executive Officer, and Director	2009	\$ 281,837		\$ 41,627	\$ 323,464
	2008	\$ 300,000		\$ 25,956	\$ 325,956
Christopher P. Lowe Chief Financial Officer and Vice President of Administration	2009	\$ 241,174		\$ 37,033	\$ 278,207
	2008	\$ 250,000		\$ 26,832	\$ 276,832
James E. Pennington, M.D. Executive Vice President and Chief Medical Officer	2009	\$ 228,845		\$ 14,313	\$ 243,158
	2008	\$ 290,000		\$ 7,029	\$ 297,029
Colin Hislop, M.D. Senior Vice President, Cardiovascular Products	2009	\$ 259,621	\$ 1,247	\$ 19,900	\$ 280,768
	2008	\$ 270,000		\$ 9,573	\$ 279,573
Debra Odink, Ph.D. Vice President, Pharmaceutical Research and Development	2009	\$ 158,580	\$ 3,996	\$ 11,684	\$ 174,260
	2008	\$ 200,000		\$ 4,787	\$ 204,787
Stephen Lau Vice President, Corporate and Business Development	2009	\$ 189,621	\$ 1,682	\$ 32,014	\$ 223,317
	2008	\$ 180,303(2)		\$ 21,232	\$ 201,535

(1) This column reflects the compensation expense recognized in 2009 or 2008 and 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.

(2) Mr. Lau joined the Company on February 7, 2008.

**Grants of Plan-Based Awards 2009**

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>All Other Option Awards: Number of Securities</b>	<b>Exercise or Base Price of</b>	<b>Grant Date Fair Value of Stock and</b>
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<b>Name</b>	<b>Grant Date</b>	<b>Underlying Options (1)</b>	<b>Option Awards (\$/sh)</b>	<b>Option Awards (\$) (2)</b>
Paul F. Truex	2/18/2009	66,376	\$ 1.51	\$ 66,761
	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 (3)	5,257	\$ 1.51	\$ 5,295
Debra Odink, Ph.D.	2/18/2009	29,205	\$ 1.51	\$ 29,375
Stephen Lau	2/18/2009	11,682	\$ 1.51	\$ 11,750
	4/15/2009 (3)	4,380	\$ 1.51	\$ 4,412

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- (1) 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.
- (2) The grant date fair value of each equity owned award is computed 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.
- (3) These options vest immediately on the grant date.

**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	Number of Securities Underlying	Option Awards			Stock Awards		
		Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)*	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)(1)	Market Value of Shares or Units of Stock That Have Not Vested (\$)(2)
Paul. F. Truex	21,417		1,947 (3)	\$ 0.14	4/6/2016		
	362,826			\$ 0.26	1/23/2017		
	44,252		22,124 (4)	\$ 1.51	2/18/2019		
	14,161		7,079 (5)	\$ 1.51	2/18/2019		
Christopher P. Lowe	2,920 (12)			\$ 0.14	3/6/2016		
	39,004		35,882 (6)	\$ 1.34	2/21/2018		
	24,884		22,893 (7)	\$ 1.34	2/21/2018		
	15,540		7,824 (4)	\$ 1.51	2/18/2019		
James E. Pennington, M.D.	26,103		11,864 (8)	\$ 0.26	10/24/2017		
	19,471		9,734 (4)	\$ 1.51	2/18/2019		
Colin Hislop, M.D.						32,857	\$ 252,999
	145,130			\$ 0.26	1/23/2017		
	15,577		7,787 (4)	\$ 1.51	2/18/2019		
Debra Odink, Ph.D.	5,257			\$ 1.51	4/15/2019		
	19,471		9,734 (4)	\$ 1.51	2/18/2019		
Stephen Lau	34,323		40,563 (9)	\$ 1.34	2/21/2018		
	12,528		14,805 (10)	\$ 1.34	2/21/2018		
	7,786		3,896 (4)	\$ 1.51	2/18/2019		
	4,380 (11)			\$ 1.51	4/15/2019		

\*

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 contain an early exercise feature subject to the Company's right of repurchase pursuant to the 2005 Equity Plan.

- (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.

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- (9) The vesting commencement date of this incentive stock option is February 7, 2008.
- (10) The vesting commencement date of this non-statutory stock option is February 7, 2008.
- (11) This incentive stock option vested immediately on grant date.
- (12) 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.

**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.

<b>Name</b>	<b>Stock Awards</b>	
	<b>Number of Shares Acquired on Vesting (#)</b>	<b>Value Realized on Vesting (\$)(3)</b>
Paul F. Truex		
Christopher P. Lowe		
James E. Pennington, M.D.	26,285 (1)	195,560
Colin Hislop, M.D.		
Debra Odink, Ph.D.	18,141 (2)	134,969
Stephen Lau		

- (1) 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.
- (2) 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.
- (3) 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 have 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



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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 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 has determined not to grant any further awards under the 2005 Equity Plan after the completion of this offering. We have adopted the 2010 Equity Plan to be effective upon the consummation of an initial public offering, under which we expect to make all future awards.

*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. The 2010 Equity Plan is effective upon the consummation of our initial public offering and will replace the 2005 Equity Plan, as our board of directors has determined not to make additional awards under that plan once the 2010 Equity Plan is 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 have initially reserved 233,644 shares of our common stock for the issuance of awards under the 2010 Equity Plan plus an additional 19,571 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. 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 will be 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 will be added back to the shares of common stock available for issuance under the 2010 Equity Plan.

The 2010 Equity Plan will be administered by our compensation committee. Our compensation committee will have 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 compensation committee may delegate to our Chief Executive Officer the authority to grant options to certain individuals. Persons eligible to participate in the 2010 Equity Plan will be those full or part-time officers, employees, non-employee directors and other key persons (including consultants and prospective employees) of the Company and its subsidiary as selected from time to time by our compensation committee in its discretion.

The 2010 Equity Plan will permit 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



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value of the common stock on the date of grant. The 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 compensation committee may award stock appreciation rights subject to such conditions and restrictions as our compensation committee 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 compensation committee 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 compensation committee 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 compensation committee 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 compensation committee 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 compensation committee 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 will provide 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. No awards under the 2010 Equity Plan have been made prior to the date hereof.

*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.

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### **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 Agreements**

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.

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.



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*Paul F. Truex*

On October 15, 2009, we entered into an amended and restated change in control agreement with Mr. Truex, our President and Chief Executive Officer. 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, our Chief Financial Officer and Vice President of Administration. 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, our Executive Vice President and Chief Medical Officer, 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 dependants, 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.

*Colin Hislop, M.D.*

On October 15, 2009, we entered into an amended and restated change in control agreement with Dr. Hislop, our Senior Vice President, Cardiovascular Products. 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.

**Table of Contents***Debra Odink, Ph.D.*

On October 15, 2009, we entered into an amended and restated change in control agreement with Dr. Odink, our Vice President, Pharmaceutical Research and Development. 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.

*Stephen Lau*

On October 16, 2009, we entered into an amended and restated change in control agreement with Mr. Lau, our Vice President, Corporate and Business Development. Upon the occurrence of a change in control or within 12 months thereafter, if we terminate Mr. Lau's employment for any reason other than for cause or if there is a constructive termination, in either case, Mr. Lau 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 Mr. Lau and his covered dependants, if any, for a period of six months pursuant to COBRA. In addition, Mr. Lau 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.

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 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 Termination or Change in Control**

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 (1)*

<b>Name</b>	<b>Involuntary Termination (2)</b>	<b>Involuntary Termination within One Year of Change in Control (3)</b>
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
Stephen Lau		\$ 105,207

- (1) 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.



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- (2) Includes continuation of base salary determined as of December 31, 2009 and health, dental and vision benefits for 12 months for Dr. Pennington.
- (3) 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 (1)*

<b>Name</b>	<b>Number of Shares of Accelerated Stock and Value upon Involuntary Termination and in Connection with a Change in Control (2)</b>	<b>Number of Shares of Accelerated Stock and Value upon Involuntary Termination and not in Connection with a Change in Control (3)</b>
Paul F. Truex	\$ 163,751 (4)	
Christopher P. Lowe	\$ 423,753 (5)	
James E. Pennington, M.D.	\$ 537,151 (6)	\$ 537,151 (6)
Colin Hislop, M.D.	\$ 18,235 (7)	
Debra Odink, Ph.D.	\$ 22,794 (8)	
Stephen Lau	\$ 170,875 (9)	

- (1) 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 assumed initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus, 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.
- (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.
- (9) 13,507 of Mr. Lau's options would accelerate upon involuntary termination and in connection with a change of control.

### **Director Compensation**

In June 2008, our 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. Pursuant to this program, the current chairman of our board of directors, Dr. Henney, receives a \$20,000 annual retainer fee plus an additional \$60,000 as consideration for his services as chairman. Pursuant to this program, each of our independent board members, Mr. Santel and Mr. Thompson, receives 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). All members of our board of directors are eligible to receive full reimbursement for travel expenses arising from their attendance of our board meetings.

Under the director compensation program, each independent member of our board of directors initially receives (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 each such option shall vest upon the completion of one year of continuous service by such director following the date of commencement of the vesting of such option; the

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remaining three quarters of the shares issuable pursuant to each such option shall vest 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. All of these options have an exercise price equal to the fair market value of our common stock on the date of the grant.

In January 2010, our board of directors approved changes to the current director compensation program, which would apply to new independent directors and following the consummation of our initial public offering, our current independent directors. Each independent member of our board of directors shall receive a \$40,000 annual retainer fee instead of per-meeting fees. In consideration for their services, the chairman of our board of directors shall receive an additional \$40,000, the chairman of our audit committee shall receive an additional \$15,000 and the chairman of our compensation committee shall receive an additional \$10,000, each on an annual basis.

In addition, after completion of our initial public offering, each independent member of our board of directors shall receive (i) a non-qualified stock option to purchase 25,000 shares of our common stock upon election and (ii) each year thereafter an additional non-qualified stock option to purchase 12,000 shares of our common stock. The chairman of our board of directors shall receive (i) a non-qualified stock option to purchase 45,000 shares of our common stock upon election and (ii) each year thereafter an additional non-qualified stock option to purchase 15,000 shares of our common stock.

**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.

Name	Fees Earned or Paid in Cash (\$)	Option Awards (\$)(1)	Total (\$)
Christopher S. Henney, Ph.D. (Chairman)	\$ 80,000	\$ 8,938(2)	\$ 88,938
Annette Bianchi		\$ 5,006(3)	\$ 5,006
James I. Healy, M.D., Ph.D.		\$ 5,006	\$ 5,006
A. Rachel Leheny, Ph.D		\$ 3,652(4)	\$ 3,652
Donald J. Santel	\$ 35,000	\$ 2,143(5)	\$ 37,143
Daniel K. Spiegelman (6)			
David E. Thompson	\$ 34,000	\$ 4,593(7)	\$ 38,593

(1) This column reflects the compensation expense recognized in 2009 and 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.

(2) Dr. Henney held 40,887 shares underlying stock options as of December 31, 2009.

(3) Ms. Bianchi held 20,443 shares underlying stock options as of December 31, 2009.

(4) Dr. Leheny held 14,602 shares underlying stock options as of December 31, 2009.

(5) Mr. Santel held 20,443 shares underlying stock options as of December 31, 2009.

- (6) Mr. Spiegelman joined our board of directors on February 2, 2010.
- (7) 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. The following discussion assumes a 1-to-1.712 reverse split of our common stock to be effected immediately prior to the closing of this offering, but does not give effect to the conversion of our preferred stock into shares of common stock in connection with this offering.

**Private Placements of Securities***2008 Note Financing*

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:

Name	Aggregate Consideration Paid	Series B-2 Convertible Preferred Shares Issued Upon Conversion of Principal of Notes
VantagePoint Venture Partners IV, L.P. and affiliated entities, or VantagePoint	\$ 5,652,174(1)	1,035,765
Sofinnova Venture Partners VI, L.P. and affiliated entities, or Sofinnova	\$ 4,662,056(2)	854,326
A.M. Pappas Life Science Ventures III, L.P. and affiliated entities, or Pappas	\$ 1,290,512(3)	236,487
TOTAL:	\$ 11,604,742	2,126,578

- (1) 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

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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.

- (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*

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:

<b>Name</b>	<b>Aggregate Consideration Paid</b>	<b>Shares of Series B-2 Convertible Preferred Stock</b>	<b>Shares of Common Stock Issuable Upon the Exercise of 2008 Warrants</b>
VantagePoint	\$ 5,727,421(1)	1,049,554	
Sofinnova	\$ 4,719,515(2)	864,855	
Pappas	\$ 1,306,155(3)	239,353	
Caxton Advantage Life Sciences Fund, L.P. (4)	\$ 3,500,003	481,033	120,258
HBM BioCapital, L.P. and affiliated entities, or HBM BioCapital (5)	\$ 3,500,003	481,033	120,258

TOTAL:	\$ 18,753,097	3,115,828	240,516
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- (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 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.



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- (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 Bridge Financing*

In July and September 2009, we sold convertible promissory notes, or the 2009 notes, that are 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 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 our 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 our 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 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 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. In addition, if a sale of all or substantially all of our equity interests or assets should occur prior to our next equity financing and any 2009 note has not been converted, we are 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.

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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:

<b>Name</b>	<b>Aggregate Consideration Paid</b>	<b>Warrant Coverage Amount Prior to April 1, 2010</b>	<b>Warrant Coverage Amount After April 1, 2010</b>
VantagePoint	\$ 4,569,675(1)	\$ 1,142,419	\$ 2,284,839
Sofinnova	\$ 2,951,720(2)	\$ 737,930	\$ 1,475,860
Pappas	\$ 770,225(3)	\$ 192,556	\$ 385,111
Caxton Advantage Life Sciences Fund, L.P.	\$ 854,190(4)	\$ 213,548	\$ 427,095
HBM BioCapital	\$ 854,190(5)	\$ 213,547	\$ 427,095
<b>TOTAL:</b>	<b>\$ 10,000,000</b>	<b>\$ 2,500,000</b>	<b>\$ 5,000,000</b>

- (1) 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.
- (2) 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.
- (3) 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.
- (4) 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.
- (5) 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 are sold to the public in an 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 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 issue such investors convertible promissory notes for the released 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 will be released

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simultaneously with the closing of an IPO in which the aggregate net proceeds to us (after underwriting discounts, commissions and fees) are at least \$50.0 million.

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:

<b>Name</b>	<b>Aggregate Consideration to be Paid upon Closing of the 2009 Equity Financing</b>
VantagePoint	\$ 7,586,035 (1)
Sofinnova	\$ 4,898,784 (2)
Pappas	\$ 1,279,265 (3)
Caxton Advantage Life Sciences Fund, L.P.	\$ 1,417,958
HBM BioCapital	\$ 1,417,958 (4)
<b>TOTAL:</b>	<b>\$ 16,600,000</b>

- (1) 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.
- (2) Includes \$5,902,150 to be paid by Sofinnova Venture Partners VI, L.P.
- (3) 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.
- (4) 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, has also committed \$0.5 million to our 2009 equity financing.

*2009 Escrow Notes*

On December 11, 2009, we sold convertible promissory notes, or the escrow notes, that are 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 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 common stock upon the consummation of an IPO in which the aggregate net proceeds to us (after underwriting discounts, commissions and fees) are at least \$50.0 million, at the price per share in which shares are sold to the public, minus any per-share underwriting discounts, commissions or fees. However, if an IPO 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 our 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 our Series B-2 convertible preferred stock in connection with a change of control of the Company. In addition, 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.

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Furthermore, if a sale of all or substantially all of our equity interests or assets should occur prior to our next equity financing and any exchange note has not converted, we 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.

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	Warrant Coverage Amount Prior to April 1, 2010 (1)	Warrant Coverage Amount After April 1, 2010 (1)
VantagePoint	\$ 1,553,766 (2)	\$ 388,442	\$ 776,883
Sofinnova	\$ 1,003,366	\$ 250,841	\$ 501,683
Pappas	\$ 262,018 (3)	\$ 65,505	\$ 131,008
Caxton Advantage Life Sciences Fund, L.P.	\$ 290,425	\$ 72,606	\$ 145,213
HBM BioCapital	\$ 290,425 (4)	\$ 72,606	\$ 145,213
<b>TOTAL:</b>	<b>\$ 3,400,000</b>	<b>\$ 850,000</b>	<b>\$ 1,700,000</b>

(1) Warrants issued only if escrow notes are exchanged for exchange notes.

(2) 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.

(3) 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.

(4) 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.

**Transactions with Our Executive Officers, Directors and Beneficial Owners***Indemnification Agreements*

We have entered into indemnification agreements with each of our directors and certain of our executive officers. These agreements require us to indemnify these individuals and, in certain cases, affiliates of such individuals, to the fullest extent permitted under Delaware law against liabilities that may arise by reason of their service to us, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified.

*Registration Rights*

Certain of our directors, executive officers and Beneficial Owners are party to agreements providing for rights to register under the Securities Act certain shares of our capital stock. For more information regarding the registration rights granted pursuant to these agreements, see the section entitled *Description of Capital Stock Registration Rights*.

*Change in Control and Severance Agreements*

We have entered into change in control agreements and severance agreements with certain of our officers, which provide for severance benefits and acceleration of the vesting of awards. For more information regarding these agreements, see the sections entitled *Compensation Severance and Change in Control Agreements* and *Compensation Potential Payments Upon Termination or Change in Control*.



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*Restricted Stock and Stock Option Awards*

For more information regarding restricted stock and stock option awards granted to our named executive officers and directors, see the sections entitled *Compensation Outstanding Equity Awards at Year End* and *Compensation Director Compensation*.

**Review, Approval and Ratification of Transactions with Related Parties**

Our board of directors reviews and approves transactions with directors, officers and Beneficial Owners, each, a related party. Prior to this offering, before our board of directors' consideration of a transaction with a related party, the material facts as to the related party's relationship or interest in the transaction have been disclosed to our board of directors, and the transaction has not been considered approved by our board of directors unless a majority of the directors who are not interested in the transaction approve the transaction. Following this offering, such transactions must be approved by our audit committee or another independent body of our board of directors.

**Table of Contents****PRINCIPAL STOCKHOLDERS**

The following table sets forth information with respect to the beneficial ownership of our common stock, as of January 31, 2010, the most recent practicable date, and as adjusted to reflect the sale of common stock offered by us 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 January 31, 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 prior to this offering are based on 9,781,931 shares outstanding as of January 31, 2010, assuming the conversion of all of the outstanding convertible preferred stock. Percentage ownership calculations for beneficial ownership after this offering are based on 17,328,344 shares outstanding after this offering, assuming no exercise of the underwriters' over-allotment option, which includes 2,939,271 additional shares we expect to issue in connection with the closing of this offering pursuant to warrant exercises, the conversion of certain convertible notes and associated interest and the issuance of common stock to certain of our existing investors. 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 January 31, 2010. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person. Shares beneficially owned prior to this offering reflects our planned 1-for-1.712 reverse stock split to be effected immediately prior to the closing of this offering. Shares beneficially owned after this offering reflects an assumed initial public offering price of \$14.00 per share, which is the midpoint of the range listed on the cover page of this prospectus, and accrued interest on all outstanding convertible promissory notes through January 31, 2010.

	<b>Percentage of Common Stock Beneficially Owned Before</b>	<b>Shares Beneficially Owned After</b>	<b>Percentage of Common Stock Beneficially Owned After</b>
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<b>Name of Beneficial Owner</b>	<b>Offering</b>	<b>Offering</b>	<b>Offering</b>	<b>Offering</b>
<b>5% or Greater Stockholders:</b>				
VantagePoint Venture Partners IV, L.P. and affiliated entities, or VantagePoint (1)	3,227,113	32.96%	4,463,023 (2)	25.62%
Sofinnova Venture Partners VI, L.P. and affiliated entities, or Sofinnova (3)	2,077,353	21.24%	2,875,553 (4)	16.54%
Caxton Advantage Life Sciences Fund, L.P. (5)	604,181	6.10%	835,198 (6)	4.81%

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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
HBM BioCapital, L.P. and affiliated entities (7)	601,291	6.07%	832,305 (8)	4.80%
A.M. Pappas Life Science Ventures III, L.P. and affiliated entities (9)	542,475	5.55%	750,843(10)	4.33%
All 5% or greater stockholders as a group	7,052,413	70.27%	9,756,922	55.69%
<b>Named Executive Officers and Directors:</b>				
Paul F. Truex (11)	1,139,106	11.14%	1,139,106	6.41%
Christopher P. Lowe (12)	198,882	2.01%	198,882	1.14%
James E. Pennington, M.D. (13)	153,999	1.57%	153,999	*
Colin Hislop, M.D. (14)	172,535	1.73%	172,535	*
Debra Odink, Ph.D. (15)	116,311	1.19%	116,311	*
Stephen Lau (16)	65,771	*	65,771	*
Christopher S. Henney, Ph.D. (17)	83,689	*	83,689	*
Annette Bianchi (18)	10,222	*	10,222	*
James I. Healy, M.D., Ph.D. (3) (19)	2,097,796	21.45%	2,895,996 (4)	16.66%
A. Rachel Leheny, Ph.D. (5) (20)	607,071	6.13%	838,088 (6)	4.83%
Donald J. Santel (21)	11,134	*	11,134	*
Daniel K. Spiegelman (22)				
David E. Thompson (23)	25,310	*	25,310	*
All named executive officers and directors as a group (13 persons)	4,681,826	43.33%	5,711,043	31.21%

\* Represents beneficial ownership of less than 1% of the shares of common stock.

- (1) Includes (i) 622,161 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock, 1,341,448 shares of common stock issuable upon conversion of Series B-1 convertible preferred stock and 950,897 shares of common stock issuable upon conversion of Series B-2 convertible preferred stock all owned of record by VantagePoint Venture Partners IV (Q), L.P., (ii) 62,285 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock, 134,292 shares of common stock issuable upon conversion of Series B-1 convertible preferred stock and 95,194 shares of common stock issuable upon conversion of Series B-2 convertible preferred stock all owned of record by VantagePoint Venture Partners IV, L.P., (iii) 2,265 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock, 4,886 shares of common stock issuable upon conversion of Series B-1 convertible preferred stock and 3,463 shares of common stock issuable upon conversion of Series B-2 convertible preferred stock all owned of record by VantagePoint Venture Partners IV Principals Fund, L.P., and (iv) options to purchase an additional 10,222 shares of common stock that are exercisable within 60 days of January 31, 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)(a) 164,563 shares of common stock issuable upon conversion of a convertible promissory note issued on July 17, 2009, with a principal amount of \$1,656,051 and \$71,868 in accrued interest thereon at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (b) 244,045 shares of common stock issuable conversion of a convertible promissory note issued on September 9, 2009, with a principal amount of \$2,484,076 and \$78,402 in accrued interest thereon, at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (c) 29,572 shares of common stock issuable upon exercise of a warrant issued on July 17, 2009 and 44,358 shares of common stock issuable upon exercise of a warrant issued on September 9, 2009, (d) 527,876 shares of common stock to be issued upon closing of this offering from funds held in an escrow account and (e) 109,327 shares of common stock issuable upon conversion of a convertible promissory note issued on December 11, 2009, with a principal amount of \$1,407,712 and \$15,736 in accrued interest thereon at a conversion price of \$14.00, or 100% of the assumed initial public offering price of our common stock, minus any per-share underwriting discounts, commissions or fees, all owned of record by VantagePoint Venture

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Partners IV (Q), L.P., (ii)(a) 16,474 shares of common stock issuable upon conversion of a convertible promissory note issued on July 17, 2009, with a principal amount of \$165,788 and \$7,195 in accrued interest thereon at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (b) 24,431 shares of common stock issuable upon conversion of a convertible promissory note issued on September 9, 2009, with a principal amount of \$248,681 and \$7,849 in accrued interest thereon, at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (c) 2,960 shares of common stock issuable upon exercise of a warrant issued on July 17, 2009 and 4,440 shares of common stock issuable upon exercise of a warrant issued on September 9, 2009, (d) 52,845 shares of common stock to be issued upon the closing of this offering from funds held in an escrow account and (e) 10,944 shares of common stock issuable upon conversion of a convertible promissory note issued on December 11, 2009 with a principal amount of \$140,927 and \$1,575 in accrued interest thereon at a conversion price of \$14.00, or 100% of the assumed initial public offering price of our common stock, minus any per-share underwriting discounts, commissions or fees, each for the account of VantagePoint Venture Partners IV, L.P. and (iii)(a) 599 shares of common stock issuable upon conversion of a convertible promissory note issued on July 17, 2009, with a principal amount of \$6,031 and \$262 in accrued interest thereon at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (b) 888 shares of common stock issuable upon conversion of a convertible promissory note issued on September 9, 2009, with a principal amount of \$9,047 and \$286 in accrued interest thereon, at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (c) 107 shares of common stock issuable upon exercise of a warrant issued on July 17, 2009 and 161 shares of common stock issuable upon exercise of a warrant issued on September 9, 2009, (d) 1,922 shares of common stock to be issued upon closing of this offering from funds held in an escrow account and (e) 398 shares of common stock issuable upon conversion of a convertible promissory note issued on December 11, 2009, with a principal amount of \$5,127 and \$57 in accrued interest thereon at a conversion price of \$14.00, or 100% of the assumed initial public offering price of our common stock, minus any per-share underwriting discounts, commissions or fees, each for the account of VantagePoint Venture Partners IV Principals Fund, L.P.

- (3) Includes 384,175 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock, 828,323 shares of common stock issuable upon conversion of Series B-1 convertible preferred stock and 864,855 shares of common stock issuable upon conversion of Series B-2 convertible preferred stock all owned of record by Sofinnova Venture Partners 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 holds 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.
- (4) Includes (a) 117,326 shares of common stock issuable upon conversion of a convertible promissory note with a principal amount of \$1,180,688 issued on July 17, 2009 and \$51,239 in accrued interest thereon at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (b) 173,993 shares of common stock issuable upon conversion of a convertible promissory note with a principal amount of \$1,771,032 issued on September 9, 2009 and \$55,897 in accrued interest thereon, at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (c) 21,083 shares of common stock issuable upon exercise of a warrant issued on July 17, 2009 and 31,625 shares of common stock issuable upon exercise of a warrant issued on September 9, 2009, (d) 376,249 shares of common stock to be issued upon closing of this offering from funds held in an escrow account and (e) 77,924 shares of common stock issuable upon conversion of a convertible promissory note with a principal amount of \$1,003,366 issued on December 11, 2009 and \$11,216 in accrued interest thereon at a conversion price of \$14.00, or 100% of the assumed initial public offering price of our common stock, minus any per-share underwriting discounts, commissions or fees, all owned

of record by Sofinnova Venture Partners VI, L.P.

- (5) Includes (i) 481,033 shares of common stock issuable upon conversion of Series B-2 convertible preferred stock and 120,258 shares of common stock issuable upon exercise of outstanding warrants all owned of record by Caxton Advantage Life Sciences Fund, L.P. and (ii) options to purchase an additional 2,890 shares of common stock that are exercisable within 60 days of January 31, 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

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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.

- (6) Includes (a) 33,952 shares of common stock issuable upon conversion of a convertible promissory note issued on July 17, 2009, with a principal amount of \$341,676 and \$14,828 in accrued interest thereon at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (b) 50,351 shares of common stock issuable upon conversion of a convertible promissory note issued on September 9, 2009, with a principal amount of \$512,514 and \$16,176 in accrued interest thereon, at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (c) 6,101 shares of common stock issuable upon exercise of a warrant issued on July 17, 2009 and 9,152 shares of common stock issuable upon exercise of a warrant issued on September 9, 2009, (d) 108,906 shares of common stock to be issued upon closing of this offering from funds held in an escrow account and (e) 22,555 shares of common stock issuable upon conversion of a convertible promissory note issued on December 11, 2009, with a principal amount of \$290,425 and \$3,246 in accrued interest thereon at a conversion price of \$14.00, or 100% of the assumed initial public offering price of our common stock, minus any per-share underwriting discounts, commissions or fees, all owned of record by Caxton Advantage Life Sciences Fund, L.P.
- (7) Includes (i) 408,878 shares of common stock issuable upon conversion of Series B-2 convertible preferred stock and 102,220 shares of common stock issuable upon exercise of outstanding warrants all owned of record by HBM BioCapital (EUR) L.P. and (ii) 72,155 shares of common stock issuable upon conversion of Series B-2 convertible preferred stock and 18,038 shares of common stock issuable upon exercise of outstanding warrants 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.
- (8) Includes (i)(a) 28,859 shares of common stock issuable upon conversion of a convertible promissory note issued on July 17, 2009 with a principal amount of \$290,424 and \$12,604 in accrued interest thereon at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (b) 42,798 shares of common stock issuable upon conversion of a convertible promissory note issued on September 9, 2009, with a principal amount of \$435,637 and \$13,749 in accrued interest thereon, at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (c) 5,186 shares of common stock issuable upon exercise of a warrant issued on July 17, 2009 and 7,779 shares of common stock issuable upon exercise of a warrant issued on September 9, 2009, (d) 92,570 shares of common stock to be issued upon closing of this offering from funds held in an escrow account and (e) 19,172 shares of common stock issuable upon conversion of a convertible promissory note issued on December 11, 2009 with a principal amount of \$246,861 and \$2,759 in accrued interest thereon at a conversion price of \$14.00, or 100% of the assumed initial public offering price of our common stock, minus any per-share underwriting discounts, commissions or fees, all owned of record by HBM BioCapital (EUR) L.P. and (ii)(a) 5,092 shares of common stock issuable upon conversion of a convertible promissory note issued on July 17, 2009, with a principal amount of \$51,252 and \$2,224 in accrued interest thereon at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (b) 7,552 shares of common stock issuable upon conversion of a convertible promissory note issued on September 9, 2009, with a principal amount of \$76,877 and \$2,426 in accrued interest thereon, at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (c) 915 shares of common stock issuable upon exercise of a warrant issued on July 17, 2009 and 1,372 shares of common stock issuable upon exercise of a warrant issued on September 9, 2009, (d) 16,336 shares of common stock to be issued upon closing of this



offering from funds held in an escrow account and (e) 3,383 shares of common stock issuable upon conversion of a convertible promissory note issued on December 11, 2009, with a principal amount of \$43,564 and \$487 in accrued interest thereon at a conversion price of \$14.00, or 100% of the assumed initial public offering price of our common stock, minus any per-share underwriting discounts, commissions or fees, all owned of record by HBM BioCapital (USD) L.P.

- (9) Includes (i) 90,422 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock, 194,959 shares of common stock issuable upon conversion of Series B-1 preferred stock and 225,344 shares of common stock issuable upon conversion of Series B-2 convertible preferred stock all owned of record by A. M. Pappas Life Science Ventures III, L.P. and (ii) 5,621 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock, 12,120 shares of common stock issuable upon conversion of Series B-1 convertible preferred stock and 14,009 shares of common stock issuable upon conversion of Series B-2 convertible preferred stock 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.
- (10) Includes (i)(a) 28,823 shares of common stock issuable upon conversion of a convertible promissory note issued on July 17, 2009, with a principal amount of \$290,058 and \$12,588 in accrued interest thereon at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (b) 42,744 shares of common stock issuable upon conversion of a convertible promissory note issued on September 9, 2009, with a principal amount of \$435,086 and \$13,732 in accrued interest thereon, at a

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conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (c) 5,179 shares of common stock issuable upon exercise of a warrant issued on July 17, 2009 and 7,769 shares of common stock issuable upon exercise of a warrant issued on September 9, 2009, (d) 92,505 shares of common stock to be issued upon closing of this offering from funds held in an escrow account and (e) 19,158 shares of common stock issuable upon conversion of a convertible promissory note issued on December 11, 2009, with a principal amount of \$246,690 issued and \$2,758 in accrued interest thereon at a conversion price of \$14.00, or 100% of the assumed initial public offering price of our common stock, minus any per-share underwriting discounts, commissions or fees, all owned of record by A.M. Pappas Life Science Ventures III, L.P. and (ii)(a) 1,791 shares of common stock issuable upon conversion of a convertible promissory note issued on July 17, 2009, with a principal amount of \$18,032 and \$783 in accrued interest thereon at a conversion price of \$10.50, or 75% of the assumed initial public offering of our common stock, (b) 2,657 shares of common stock issuable upon conversion of a convertible promissory note issued on September 9, 2009, with a principal amount of \$27,049 and \$854 in accrued interest thereon, at a conversion price of \$10.50, or 75% of the assumed initial public offering price of our common stock, (c) 322 shares of common stock issuable upon exercise of a warrant issued on July 17, 2009 and 483 shares of common stock issuable upon exercise of a warrant issued on September 9, 2009, (d) 5,747 shares of common stock to be issued upon closing of this offering from funds held in an escrow account and (e) 1,190 shares of common stock issuable upon conversion of a convertible promissory note issued on December 11, 2009, with a principal amount of \$15,328 and \$171 in accrued interest thereon at a conversion price of \$14.00, or 100% of the assumed initial public offering price of our common stock, minus any per-share underwriting discounts, commissions or fees, all owned of record by PV III CEO Fund, L.P.

- (11) Includes 662,967 shares of common stock subject to vesting pursuant to the terms of Mr. Truex's restricted stock agreement, all of which has vested, options to purchase an additional 446,853 shares of common stock that are exercisable within 60 days of January 31, 2010, 20,719 shares of common stock issuable upon conversion of Series A-1 convertible preferred stock and 8,567 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock all owned of record by Paul F. Truex.
- (12) Includes (i) options to purchase 90,725 shares of common stock that are exercisable within 60 days of January 31, 2010 and 17,523 shares of common stock issuable upon conversion of Series A-1 convertible preferred stock owned of record by Mr. Lowe, (ii) 80,997 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock owned of record by BioVest III and (iii) options to purchase 9,637 shares of common stock that are exercisable within 60 days of January 31, 2010 owned of record by Dina Gonzalez, Mr. Lowe's spouse. 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.
- (13) Includes 105,140 shares of common stock 26,285 shares of which are subject to the Company's right of repurchase, and options to purchase an additional 48,859 shares of common stock that are exercisable within 60 days of January 31, 2010 owned of record by Dr. Pennington.
- (14) Includes 5,841 shares of common stock and options to purchase an additional 166,694 shares of common stock that are exercisable within 60 days of January 31, 2010 owned of record by Dr. Hislop.
- (15) Includes 78,405 shares of common stock, options to purchase an additional 20,383 shares of common stock that are exercisable within 60 days of January 31, 2010 and 17,523 shares of common stock issuable upon conversion of Series A-1 convertible preferred stock all owned of record by the Debra Odink Living Trust, for which Dr. Odink serves as trustee.

- (16) Includes options to purchase 65,771 shares of common stock that are exercisable within 60 days of January 31, 2010 owned of record by Mr. Lau.
- (17) Includes 14,602 shares of common stock, options to purchase an additional 22,147 shares of common stock that are exercisable within 60 days of January 31, 2010, 33,960 shares of common stock issuable upon conversion of Series A-1 convertible preferred stock and 12,980 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock all owned of record by Dr. Henney.
- (18) Includes options to purchase 10,222 shares of common stock that are exercisable within 60 days of January 31, 2010 owned of record by Ms. Bianchi. VantagePoint has sole voting and investment power with respect to these shares, and Ms. Bianchi disclaims beneficial ownership thereof except to the extent of her pecuniary interest in the shares of common stock issuable upon exercise of the option.
- (19) Includes 20,443 shares of common stock owned of record by Dr. Healy, 10,221 shares of which are subject to the Company's right of repurchase.
- (20) Includes options to purchase 5,780 shares of common stock that are exercisable within 60 days of January 31, 2010 owned of record by Dr. Leheny. Caxton Advantage Life Sciences Fund, L.P. may be deemed to hold voting power with respect to 2,890 of these shares.
- (21) Includes options to purchase 11,134 shares of common stock that are exercisable within 60 days of January 31, 2010 owned of record by the Mr. Santel.
- (22) Mr. Spiegelman joined our board of directors on February 2, 2010.
- (23) Includes 20,443 shares of common stock and options to purchase an additional 4,867 shares of common stock that are exercisable within 60 days of January 31, 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 to be in effect at the closing of this offering, 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.

Upon completion of this offering, our authorized capital stock will consist 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 will be undesignated.

As of December 31, 2009, 9,781,931 shares of our common stock were outstanding and held by 65 stockholders of record. This amount assumes the conversion of all outstanding shares of our preferred stock into common stock, which will occur immediately prior to the closing of this offering. In addition, as of December 31, 2009, we had outstanding options to purchase 1,323,776 shares of our common stock under our 2005 Stock Option Plan at a weighted-average exercise price of \$0.92 per share, all of which were exercisable, and outstanding warrants to purchase 240,516 shares of our common stock. 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.

**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 to be issued by us in this offering 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



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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 December 31, 2009, warrants exercisable for an aggregate of up to 240,516 shares of our common stock were outstanding. Of these, warrants exercisable for 240,516 shares of our common stock were issued in connection with a preferred stock financing, are immediately exercisable at an exercise price of \$1.34 per share and will expire upon the earlier of (i) August 12, 2015, (ii) an authorized warrant cancellation in accordance with the terms of the warrants, (iii) the closing of this offering or (iv) the sale of a majority of our equity interests or assets.

Warrants were issued in connection with a bridge financing arrangement, are exercisable for shares issued in our next equity financing or, alternatively shares of our Series B-2 convertible preferred stock in connection with a change in control of our company, at an exercise price of the price per share of such securities and will expire upon the earlier of July 2014 and September 2014 or upon the date of the sale of all or substantially of our 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.

### **Registration Rights**

Holders of approximately 11,527,952 shares of our common stock, after giving effect to the conversion of our outstanding preferred stock into common stock upon completion of this offering, 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 the earlier of (i) 180 days following the effective date of this registration statement or (ii) July 17, 2012, 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, such as during the period starting with the date of filing of and ending on the date 180 days following the effective date of this offering 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.



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*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.

*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.

*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 on the seventh anniversary of the completion of this offering.

## **Anti-Takeover Effects of Delaware Law and Provisions of Our Certificate of Incorporation and Bylaws**

Upon completion of this offering, our certificate of incorporation and bylaws will include 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.

*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.





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*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 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.

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### **Section 203 of the Delaware General Corporation Law**

Upon completion of this offering, we will be 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 or transfer by the corporation of any stock of the corporation to the interested stockholder;

subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; 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 has been approved for listing on The NASDAQ Global Market under the trading symbol ANTH.

**Transfer Agent and Registrar**

The transfer agent and registrar for our common stock will be American Stock Transfer & Trust Company, LLC.

**Table of Contents****SHARES ELIGIBLE FOR FUTURE SALE**

Immediately prior to this offering, there was no public market for our common stock. Future sales of substantial amounts of common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our common stock. Although our common stock has been approved for listing on The NASDAQ Global Market, we cannot assure you that there will be an active public market for our common stock.

Upon completion of this offering and based on 9,781,931 shares outstanding as of December 31, 2009, we will have outstanding an aggregate of 17,297,081 shares of common stock, assuming no exercise of the underwriters over-allotment option and no exercise of outstanding stock options. Of these shares, the 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. The remaining 12,689,939 shares of common stock held by existing stockholders will be restricted securities as that term is defined in Rule 144 under the Securities Act. Restricted securities may be sold in the public market only if registered or if they qualify for exemption under Rules 144 or 701 under the Securities Act, which rules are summarized below, or another exemption.

As a result of the lock-up agreements described below and the provisions of Rule 144 and Rule 701 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 date of this prospectus	965,731
90 days after the date of this prospectus	978,979
180 days after the date of this prospectus, or longer if the lock-up period is extended, although a portion of such shares will be subject to volume limitations pursuant to Rule 144	12,689,939

**Stock Plans**

We intend to file one or more registration statements on Form S-8 under the Securities Act to register shares of our common stock issued or reserved for issuance under our stock option plans. The first such registration statement is expected to be filed soon after the date of this prospectus and will automatically become effective upon filing with the SEC. Accordingly, shares registered under such registration statement will be available for sale in the open market, unless such shares are subject to vesting restrictions with us or the lock-up restrictions described above.

**Lock-Up Agreements**

Each of our officers and directors, and greater than 3% stockholders, have agreed not to 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 this offering or common stock issuable upon exercise of options or warrants held by these persons for a period of 180 days after the effective date of the registration statement of which this prospectus is a part without the prior written consent of Deutsche Bank

Securities Inc. This 180-day period may be extended if (i) during the last 17 days of the 180-day period we issue an earnings release or material news or a material event relating to us occurs; or (ii) prior to the

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expiration of the 180-day period, we announce that we will release earnings results during the 16-day period following the last day of the 180-day period. The period of such extension will be 18 days, beginning on the issuance of the earnings release or the occurrence of the material news or material event. Deutsche Bank Securities Inc. may, in its sole discretion as representative of the underwriters, and at any time without notice release some or all of the shares subject to lock-up agreements prior to the expiration of the 180-day period. When determining whether or not to release shares from the lock-up agreements, Deutsche Bank Securities Inc. will consider, among other factors, the stockholder's reasons for requesting the release, the number of shares for which the release is being requested and market conditions at the time.

Transfers can be made during the lock-up period in the case of (a) shares of common stock acquired in open market transactions after the completion of this offering, (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) 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 2005 Equity Incentive Plan, or 2005 Equity Plan, and 2010 Stock Option and Incentive Plan, or 2010 Equity Plan, or pursuant to a net exercise or cashless exercise by the stockholder of outstanding equity awards pursuant to our 2005 Equity Plan and 2010 Equity Plan, or (ii) 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 clause (c)(i) above, no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made in connection with such transactions.

**Rule 144**

In general, under Rule 144, beginning 90 days after the date of this prospectus, 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.

In addition, under Rule 144, a person may sell shares of our common stock acquired from us immediately upon the closing of this offering, without regard to volume limitations or the availability of public information about us, if:

the person is not our affiliate and has not been our affiliate at any time during the preceding three months; and

the person has beneficially owned the shares to be sold for at least one year, including the holding period of any prior owner other than one of our affiliates.

Beginning 90 days after the date of this prospectus, 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 172,971 shares immediately after this offering; and

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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.

**Rule 701**

In general, under Rule 701, any of our employees, directors, officers, consultants or advisors who purchase shares from us in connection with a compensatory stock or option plan or other written agreement before the effective date of this offering is entitled to sell such shares 90 days after the effective date of this offering in reliance on Rule 144, without having to comply with the holding period and notice filing requirements of Rule 144 and, in the case of non-affiliates, without having to comply with the public information, volume limitation or notice filing provisions of Rule 144. The SEC has indicated that Rule 701 will apply to typical stock options granted by an issuer before it becomes subject to the reporting requirements of the Exchange Act, as amended, along with the shares acquired upon exercise of such options, including exercises after the date of this prospectus.

**Registration Rights**

Upon completion of this offering, the holders of at least approximately 11,527,952 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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**MATERIAL 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 that is treated as a partnership for U.S. federal income tax purposes) that is not a U.S. holder.

If a partnership (or an entity 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 particularly 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.

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

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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 to U.S. holders that are corporate stockholders, constituting dividends for U.S. federal income tax purposes, 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 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 should be capital gain or loss if the U.S. holder holds the common stock as a capital asset, and should 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, 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



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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, corporations and 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 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.



Table of Contents**UNDERWRITING**

Subject to the terms and conditions of the underwriting agreement, the underwriters named below, through their representative Deutsche Bank Securities Inc., have severally agreed to purchase from us the following respective numbers of shares of common stock at a public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus:

<b>Underwriters</b>	<b>Number of Shares</b>
<b>Deutsche Bank Securities Inc.</b>	
<b>Piper Jaffray &amp; Co.</b>	
<b>Cowen and Company, LLC</b>	
<b>Merriman Curhan Ford &amp; Co.</b>	
Total	4,607,142

The underwriting agreement provides that the obligations of the several underwriters to purchase the shares of common stock offered hereby are subject to certain conditions precedent and that the underwriters will purchase all of the shares of common stock offered by this prospectus, other than those covered by the over-allotment option described below, if any of these shares are purchased.

We have been advised by Deutsche Bank Securities Inc., as representative of the underwriters, that the underwriters propose to offer the shares of common stock to the public at the public offering price set forth on the cover of this prospectus and to dealers at a price that represents a concession not in excess of \$     per share under the public offering price. The underwriters may allow, and these dealers may re-allow, a concession of not more than \$     per share to other dealers. After the initial public offering, Deutsche Bank Securities Inc., as representative of the underwriters, may change the offering price and other selling terms.

We have granted to the underwriters an option, exercisable not later than 30 days after the date of this prospectus, to purchase up to 691,071 additional shares of common stock at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus. The underwriters may exercise this option only to cover over-allotments made in connection with the sale of the common stock offered by this prospectus. To the extent that the underwriters exercise this option, each of the underwriters will become obligated, subject to conditions, to purchase approximately the same percentage of these additional shares of common stock as the number of shares of common stock to be purchased by it in the above table bears to the total number of shares of common stock offered by this prospectus. We will be obligated, pursuant to the option, to sell these additional shares of common stock to the underwriters to the extent the option is exercised. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

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The underwriting discounts and commissions per share are equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting discounts and commissions are % of the initial public offering price. We have agreed to pay the underwriters the following discounts and commissions, assuming either no exercise or full exercise by the underwriters of the underwriters over-allotment option:

	Fee per Share	Total Fees	
		Without Exercise of Over-Allotment Option	With Full Exercise of Over-Allotment Option
<b>Discounts and commissions paid by us</b>	\$	\$	\$

In addition, we estimate that our share of the total expenses of this offering, excluding underwriting discounts and commissions, will be approximately \$2.8 million.

We have agreed to indemnify the underwriters against some specified types of liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriters may be required to make in respect of any of these liabilities.

Each of our officers and directors, and greater than 3% stockholders, have agreed not to 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 this offering or common stock issuable upon exercise of options or warrants held by these persons for a period of 180 days after the effective date of the registration statement of which this prospectus is a part without the prior written consent of Deutsche Bank Securities Inc. This consent may be given at any time without public notice. Transfers can be made during the lock-up period in the case of (a) shares of common stock acquired in open market transactions after the completion of this offering, (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) 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 2005 Equity Incentive Plan, or 2005 Equity Plan, and 2010 Stock Option and Incentive Plan, or 2010 Equity Plan, or pursuant to a net exercise or cashless exercise by the stockholder of outstanding equity awards pursuant to our 2005 Equity Plan and 2010 Equity Plan, or (ii) 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 clause (c)(i) above, no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made in connection with such transactions. We have entered into a similar agreement with Deutsche Bank Securities Inc., as representative of the underwriters, except that without such consent we may grant options and sell shares pursuant to our 2005 Equity Plan and 2010 Equity Plan. There are no agreements between Deutsche Bank Securities Inc. and any of our stockholders or affiliates releasing them from these lock-up agreements prior to the expiration of the 180-day period.

Deutsche Bank Securities Inc. has advised us that the underwriters do not intend to confirm sales to any account over which they exercise discretionary authority.

In connection with the offering, the underwriters may purchase and sell shares of our common stock in the open market. These transactions may include short sales, purchases to cover positions created by short sales and stabilizing



transactions.

Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. Covered short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares of common stock from us

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in the offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option.

Naked short sales are any sales in excess of the over-allotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if underwriters are concerned that there may be downward pressure on the price of the shares in the open market prior to the completion of the offering.

Stabilizing transactions consist of various bids for or purchases of our common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may impose a penalty bid. This occurs when a particular underwriter repays to the other underwriters a portion of the underwriting discount received by it because Deutsche Bank Securities Inc., as representative of the underwriters, has repurchased shares sold by or for the account of that underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions may have the effect of preventing or slowing a decline in the market price of our common stock. Additionally, these purchases, along with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on The NASDAQ Global Market, in the over-the-counter market or otherwise.

A prospectus in electronic format is being made available on Internet web sites maintained by one or more of the lead underwriters of this offering and may be made available on web sites maintained by other underwriters. Other than the prospectus in electronic format, the information on any underwriter's web site and any information contained in any other web site maintained by an underwriter is not part of the prospectus or the registration statement of which the prospectus forms a part.

Piper Jaffray & Co. and certain of its affiliates, through their carry interest in an entity that has an ownership interest in VantagePoint Venture Partners IV, L.P., or VPVP IV, may be deemed to beneficially own a de minimus number of our shares held by VPVP IV.

## **Pricing of this Offering**

Prior to this offering, there has been no public market for our common stock. Consequently, the initial public offering price of our common stock will be determined by negotiation among us and Deutsche Bank Securities Inc., as representative of the underwriters. Among the primary factors that will be considered in determining the public offering price are:

- prevailing market conditions;
- our results of operations in recent periods;
- the present stage of our development;

the market capitalizations and stages of development of other companies that we and Deutsche Bank Securities Inc., as representative of the underwriters, believe to be comparable to our business; and  
estimates of our business potential.

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**European Economic Area**

In relation to each member state of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State), with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the Relevant Implementation Date) an offer of the shares to the public may not be made in that Relevant Member State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that an offer to the public in that Relevant Member State of any shares may be made at any time under the following exemptions under the Prospectus Directive if they have been implemented in the Relevant Member State:

- (a) to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- (b) to any legal entity which has two or more of (i) an average of at least 250 employees during the last financial year; (ii) a total balance sheet of more than 43,000,000 and (iii) an annual net turnover of more than 50,000,000, as shown in its last annual or consolidated accounts; or
- (c) in any other circumstances falling within Article 3(2) of the Prospectus Directive;

provided that no such offer of shares shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an offer of shares to the public in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expression Prospectus Directive means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

**United Kingdom**

Each underwriter has represented and agreed that (i) it has not offered or sold and, prior to the expiration of the period of six months from the closing date of this offering, will not offer or sell any shares of our common stock to persons in the United Kingdom except to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of their businesses or otherwise in circumstances which have not resulted and will not result in an offer to the public in the United Kingdom within the meaning of the Public Offers of Securities Regulations 1995; (ii) it has complied with and will comply with all applicable provisions of the Financial Services Act 1986 with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom; and (iii) it has only issued or passed on and will only issue or pass on in the United Kingdom, any document received by it in connection with the issue of the shares of our common stock to a person who is of a kind described in Article 11(3) of the Financial Services Act 1986 (Investment Advertisements) (Exemptions) Order 1996 or is a person to whom such document may otherwise lawfully be issued or passed on.

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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. Certain legal matters relating to this offering will be passed upon for the underwriters by Latham & Watkins LLP, Menlo Park, 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 we are offering 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.

Upon the closing of the offering, we will be subject to the informational requirements of the Securities Exchange Act and will 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.

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**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 paragraph of Note 12, as to which the date is February 23, 2010)

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**Anthera Pharmaceuticals, Inc.**  
**(A Development Stage Company)**

**BALANCE SHEETS**

	<b>December 31, 2008</b>	<b>December 31, 2009</b>	<b>December 31, 2009 Pro Forma (Note 2) (unaudited)</b>
<b>ASSETS</b>			
<b>CURRENT ASSETS:</b>			
Cash and cash equivalents	\$ 7,895,113	\$ 3,803,384	
Restricted cash	40,000		
Prepaid expenses and other current assets	63,468	19,825	
<b>Total current assets</b>	<b>7,998,581</b>	<b>3,823,209</b>	
Property and equipment net	27,779	12,994	
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>LIABILITIES AND STOCKHOLDERS DEFICIT</b>			
<b>CURRENT LIABILITIES:</b>			
Accounts payable	\$ 1,597,300	\$ 3,145,706	
Accrued clinical study	1,461,179	565,034	
Accrued liabilities	319,893	767,663	
Accrued payroll and related costs	116,045	153,235	
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>Total liabilities</b>	<b>8,494,417</b>	<b>18,167,645</b>	
Commitments and Contingencies (Note 5)			
Stockholders 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 pro forma at December 31, 2009	552	552	\$
Series A-2 convertible preferred stock, \$0.001 par value, 1,635,514 shares authorized; 1,620,669, shares issued and	1,621	1,621	



outstanding at December 31, 2008 and 2009; (aggregate liquidation value of \$8,323,782 as of December 31, 2008 and 2009); 0 shares outstanding pro forma at December 31, 2009			
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 pro forma at December 31, 2009	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 pro forma at December 31, 2009	3,226	3,226	
Preferred stock, \$0.001 par value			
Common stock, \$0.001 par value, 18,443,341 shares authorized; 1,454,890 and 1,566,199 shares issued and outstanding at December 31, 2008 and 2009, respectively; 9,930,003 shares outstanding pro forma at December 31, 2009	1,455	1,566	9,930
Additional paid-in capital	52,557,756	52,941,384	52,941,166
Accumulated other comprehensive loss	(1,160)		
Deficit accumulated the during the development stage	(53,026,460)	(65,229,952)	(65,229,952)
Total stockholders deficit	(460,263)	(12,278,856)	\$ (12,278,856)
TOTAL	\$ 8,034,154	\$ 5,888,789	

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
	2007	2008	2009	
<b>OPERATING EXPENSES:</b>				
Research and development	\$ 23,921,932	\$ 10,882,322	\$ 8,415,414	\$ 51,323,981
General and administrative	2,468,607	2,980,170	3,425,690	9,917,567
Total operating expenses	26,390,539	13,862,492	11,841,104	61,241,548
<b>LOSS FROM OPERATIONS</b>	<b>(26,390,539)</b>	<b>(13,862,492)</b>	<b>(11,841,104)</b>	<b>(61,241,548)</b>
<b>OTHER INCOME (EXPENSE):</b>				
Interest and other income	696,962	178,129	23,534	1,019,760
Interest and other expense		(296,303)	(385,922)	(699,620)
Beneficial conversion features		(4,118,544)		(4,308,544)
Total other income (expense)	696,962	(4,236,718)	(362,388)	(3,988,404)
<b>NET LOSS</b>	<b>\$ (25,693,577)</b>	<b>\$ (18,099,210)</b>	<b>\$ (12,203,492)</b>	<b>\$ (65,229,952)</b>
Net loss per share basic and diluted	\$ (28.15)	\$ (13.47)	\$ (8.06)	
Weighted-average number of shares used in per share calculation basic and diluted	912,668	1,343,420	1,513,598	
Pro forma net loss per share basic and diluted (unaudited)			\$ (1.24)	
Pro forma weighted-average number of shares used in per share calculation basic and diluted (unaudited)			9,877,402	

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**

	<b>Convertible Preferred Stock</b>		<b>Common Stock</b>		<b>Additional Paid-In Capital</b>	<b>Accumulated Other Comprehensive Loss</b>	<b>Deficit Accumulated During Development Stage</b>	<b>Total Stockholder Equity (Deficit)</b>
	<b>Shares</b>	<b>Amount</b>	<b>Shares</b>	<b>Amount</b>				
STATE OF								
RECEPTION September 9, 2004								
Issuance of common stock to warrant holders for cash		\$	140,186	\$ 140	\$ 100	\$		\$ 240
Issuance of common stock to warrant holders for service			735,981	736	524			1,265
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 services at \$1.47 per share	25,575	25			37,631			37,656
Issuance of common stock upon exercise of stock options			33,292	33	4,527			4,560
Reclassification of early exercise of stock options to liability			(29,204)	(29)	(3,971)			(4,000)
Stock-based compensation expense related to consultant agreements					842			842
Net loss							(554,427)	(554,427)
<b>BALANCE December 31, 2005</b>	<b>552,530</b>	<b>552</b>	<b>807,241</b>	<b>807</b>	<b>806,369</b>		<b>(554,427)</b>	<b>253,302</b>
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	224,248	224			961,527			961,751

on conversion of convertible promissory notes at \$3.85 and \$5.14 per share									
issuance of Series A-2 convertible preferred stock in exchange for licensed technology at \$5.14 per share	257,744	258				1,323,524			1,323,78
beneficial conversion feature related to conversion of convertible promissory notes to Series A-1 convertible preferred stock						190,000			190,00
issuance of Series B convertible preferred stock for cash at \$7.28 per share net of issuance cost of \$0,930	2,619,568	2,620				19,036,450			19,039,07
issuance of Series B convertible preferred stock in exchange for licensed technology at \$7.28 per share	127,297	127				926,091			926,21
issuance of common stock upon exercise of stock options			125,581	126		17,074			17,20
class of early exercise of stock options to liability			(36,810)	(37)		(5,006)			(5,04
stock-based compensation expense related to consultant transactions						4,358			4,35
stock-based compensation expense related to employee transactions						4,648			4,64
net loss								(8,679,246)	(8,679,24
<b>BALANCE December 31, 2006</b>	<b>4,920,064</b>	<b>\$ 4,920</b>	<b>896,012</b>	<b>\$ 896</b>	<b>\$ 28,910,128</b>	<b>\$</b>	<b>\$</b>	<b>(9,233,673)</b>	<b>\$ 19,682,27</b>

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				
CE December 31, 2006	4,920,064	\$ 4,920	896,012	\$ 896	\$ 28,910,128	\$	\$ (9,233,673)	\$ 19,6
of common stock upon								
of stock options			493,605	494	118,426			1
of early exercise of								
ptions liability			(240,165)	(240)	(60,333)			(
of common stock for								
			16,355	16	2,434			
used compensation								
related to consultant								
used compensation								
related to employee								
in other comprehensive								
realized loss on								
ents						(1,812)		
							(25,693,577)	(25,6
prehensive loss								(25,6
CE December 31, 2007	4,920,064	4,920	1,165,807	1,166	29,058,005	(1,812)	(34,927,250)	(5,8
on of Series B								
ble preferred stock to								
-1 convertible preferred								
a ratio of 1:1								
of Series B-2								
ble preferred stock for								
7.28 per share net of								
cost of \$242,327 and								
issuance (below)	962,066	962			6,512,241			6,5
of Series B-2	2,235,661	2,235			12,197,765			12,2
ble preferred stock								
version of convertible								
ry notes at \$5.46 per								

of Series B-2 able preferred stock in interest payment at \$5.46	28,517	29			155,601			1
of warrants in on with issuance of -2 convertible preferred					244,478			2
al conversion feature o conversion of ble promissory notes es B-2 convertible l stock					4,118,544			4,1
of common stock upon of stock options of early exercise of			179,886	180	67,925			
ions liability			128,180	128	12,773			
ase of common stock mployee termination sed compensation related to consultant			(18,983)	(19)	(4,856)			
					51,874			
sed compensation related to employee					143,406			1
n other comprehensive ealized gain on ents						652	(18,099,210)	(18,0
ensive loss								(18,0
CE December 31, 2008	8,146,308	8,146	1,454,890	1,455	52,557,756	(1,160)	(53,026,460)	(4
of common stock upon of stock options of early exercise of			19,089	19	15,255			
ions liability			92,220	92	26,027			
sed compensation related to consultant					88,382			
sed compensation related to employee					253,964			2
n other comprehensive ealized gain on ents						1,160	(12,203,492)	(12,2
ensive loss								(12,2

December 31, 2009	8,146,308	\$ 8,146	1,566,199	\$ 1,566	\$ 52,941,384	\$	\$ (65,229,952)	\$ (12,2
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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 December 31, 2009
	2007	2008	2009	
<b>CASH FLOW FROM OPERATING ACTIVITIES:</b>				
Net loss	\$ (25,693,577)	\$ (18,099,210)	\$ (12,203,492)	\$ (65,229,952)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation	18,922	21,997	18,451	72,327
Amortization of discount on short-term investments	(130,248)			(130,248)
Realized loss on short-term investments		7,522	1,160	8,682
Realized gain from disposal of property and equipment			(214)	(214)
Stock-based compensation expense employees	74,861	143,406	253,964	476,879
Stock-based compensation expense consultants	12,489	51,874	88,382	157,945
Issuance of common stock for consulting service	2,450			41,366
Issuance of preferred stock for service and license fee				2,250,000
Issuance of preferred stock in lieu of interest payment		155,630		157,381
Beneficial conversion feature		4,118,544		4,308,544

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Amortization of discount on convertible promissory notes			136,722	136,722
Amortization of debt issuance cost			79,644	79,644
Mark to market adjustment on warrant liability			(715)	(715)
Changes in assets and liabilities:				
Prepaid expenses and other assets	(62,269)	31,182	51,437	(19,826)
Accounts payable	3,002,254	(2,176,982)	(212,623)	1,384,676
Accrued clinical study	1,160,717	65,013	(896,145)	565,034
Accrued liabilities	8,489	135,137	473,889	732,192
Accrued payroll and related costs	651,529	(578,910)	37,190	153,235
License fee payable	6,000,000	(1,000,000)	(5,000,000)	
Net cash used in operating activities	(14,954,383)	(17,124,797)	(17,172,350)	(54,856,328)
INVESTING ACTIVITIES:				
Property and equipment purchases	(27,145)	(6,752)	(3,852)	(85,507)
Proceeds from disposal of property and equipment			400	400
Purchase of short-term investments	(14,800,564)			(14,800,564)
Proceeds from sale of short-term investments	9,104,000	5,818,132		14,922,132
Restricted cash	(70,000)	30,000	40,000	
Net cash provided by (used in) investing activities	(5,793,709)	5,841,380	36,548	36,461
FINANCING ACTIVITIES:				
Proceeds from issuance of convertible notes		12,200,000	13,400,000	26,560,000

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Payment of debt issuance cost			(97,317)	(97,317)
Net proceeds from issuance of preferred stock		6,757,681		32,210,278
Payment of financing cost for initial public offering			(273,884)	(273,884)
Proceeds from issuance of common stock net of repurchase				115
Proceeds from exercise of stock options	118,920	68,105	15,274	224,059
Net cash provided by financing activities	118,920	19,025,786	13,044,073	58,623,251
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(20,629,172)	7,742,369	(4,091,729)	3,803,384
CASH AND CASH EQUIVALENTS Beginning of period	20,781,916	152,744	7,895,113	
CASH AND CASH EQUIVALENTS End of period	\$ 152,744	\$ 7,895,113	\$ 3,803,384	\$ 3,803,384
SUPPLEMENTAL CASH DISCLOSURES OF CASH FLOW INFORMATION:				
Interest paid	\$	\$ 1,413	\$	\$ 15,229
Taxes paid	\$ 8,235	\$ 4,379	\$ 4,900	\$ 29,587
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
Beneficial conversion feature	\$	\$ 4,118,544	\$	\$ 4,308,544
Accrued and deferred offering cost	\$	\$	\$ 1,648,299	\$ 1,648,299

Accrued and deferred debt issuance cost	\$	\$	\$	112,730	\$	112,730
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See accompanying notes to financial statements.

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**Anthera Pharmaceuticals, Inc.  
(A Development Stage Company)**

**NOTES TO FINANCIAL STATEMENTS  
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**

**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, A-002 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-lymphocyte stimulator. 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. To date, 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 to raise additional working capital through private placements, public offerings, bank financing or advances from related parties or shareholder loans.



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**Anthera Pharmaceuticals, Inc.  
(A Development Stage Company)**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

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**

*Pro Forma Balance Sheet and Net Loss Per Share (unaudited)*

The pro forma balance sheet data presented as of December 31, 2009, reflects the conversion of all outstanding shares of convertible preferred stock as of that date into 8,146,308 shares of common stock, which will occur immediately prior to closing of the proposed initial public offering as if the conversion had occurred on December 31, 2009, and the cashless exercise of warrants for 217,496 shares of common stock prior to the closing of our initial public offering. The pro forma basic and diluted net loss per common share and the pro forma weighted-average number of shares for the year ended December 31, 2009 has been computed to give effect to the conversion of the Company's convertible preferred stock (using the as-if-converted method) into common stock as though the conversion had occurred on the original dates of issuance and the exercise of warrants for common stock which expire upon an initial public offering. The December 31, 2009 balance sheet data also reflects the Company's authorization of 5,000,000 preferred shares upon completion of the initial public offering.

*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.

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**Anthera Pharmaceuticals, Inc.  
(A Development Stage Company)**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

*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.

*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 and cash equivalents. The Company's cash equivalents consist of cash, certificates of deposits, and treasury money market funds. The Company has not experienced any losses in such accounts. The Company believes it is not exposed to significant credit risk related to cash and cash equivalents.

*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.

*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*



The Company adopted the provisions of FASB ASC 820, *Fair Value Measurements and Disclosures*, effective January 1, 2008. FASB ASC 820 defines fair value, establishes a framework for measuring fair value under generally accepted accounting principles and enhances disclosures about fair value measurements.

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**Anthera Pharmaceuticals, Inc.  
(A Development Stage Company)**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

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.

The adoption of this statement did not have a material impact on the Company's results of operations and financial condition.

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

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**Anthera Pharmaceuticals, Inc.  
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**NOTES TO FINANCIAL STATEMENTS (Continued)**

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.

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



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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 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.

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The following table summarizes the Company's calculation of net loss per common share:

	<b>Years Ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>Historical net loss per share</b>			
Numerator			
Net loss	\$ (25,693,577)	\$ (18,099,210)	\$ (12,203,492)
Denominator			
Weighted-average common shares outstanding	1,174,317	1,573,448	1,623,677
Less: Weighted-average shares subject to repurchase	(261,649)	(230,028)	(110,079)
Denominator for basic and diluted net loss per share	912,668	1,343,420	1,513,598
Basic and diluted net loss per share	\$ (28.15)	\$ (13.47)	\$ (8.06)
<b>Pro forma net loss per share (unaudited):</b>			
Net loss attributed to common stockholders			(12,203,492)
Pro forma adjustment			
Net loss used to compute pro forma net loss per share			(12,203,492)
<b>Denominator</b>			
Basic and diluted weighted-average common shares, as used above			1,513,598
Add: Pro forma adjustments to reflect assumed weighted-average effect of conversion of 8,146,308 shares of convertible preferred stock and the cashless exercise of warrants that are exercisable for 217,496 shares of common stock which expire upon an initial public offering			8,363,804
Weighted-average shares used in computing pro forma basic and diluted net loss per common share			9,877,402
Pro forma basic and diluted net loss per share			\$ (1.24)

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,**

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	<b>2007</b>	<b>2008</b>	<b>2009</b>
Options to purchase common stock	103,322	539,234	932,544
Common stock subject to repurchase	261,649	230,028	110,079
Warrants to purchase common stock (1)		94,230	240,516
Convertible preferred stock (on an as-if-converted basis)	4,920,064	6,184,045	8,146,308
	5,285,035	7,047,537	9,429,447

- (1) 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



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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.

*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.

Prior to January 1, 2006, the Company accounted for stock-based awards to employees and directors using the intrinsic value method. Under the intrinsic value method, stock-based compensation expense was recognized based on the intrinsic value method whereby any difference between exercise price and fair value of the common stock on the date of grant was recognized as stock-based compensation expense ratably over the vesting period. As all employee stock options granted through December 31, 2005 were granted with an exercise price equal to the fair value of the common stock at the date of grant, no expense was recognized through December 31, 2005.

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.

*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.



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*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.

### **4. PROPERTY AND EQUIPMENT**

At December 31, 2008 and 2009, property and equipment consist of the following:

	<b>December 31,</b>	
	<b>2008</b>	<b>2009</b>
Computers and software	\$ 64,925	\$ 66,548
Office equipment and furniture	16,730	16,730
Total property and equipment	81,655	83,278
Less accumulated depreciation	(53,876)	(70,284)
Property and equipment, net	\$ 27,779	\$ 12,994

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.

## 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,

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\$165,016 and \$398,025, respectively. Future minimum payments under the operating lease for the year ending December 31, 2010 are \$70,146.

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 \$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.

*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 A-002 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 A-002. 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.

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



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\$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 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 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





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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 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



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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
Warrants for purchase of common stock	240,516	240,516
Common stock options outstanding	957,125	1,323,776
Common stock options available for future grant under stock option plan	405,311	19,571
<b>Total</b>	<b>9,749,260</b>	<b>9,730,171</b>

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.

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**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		
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

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.



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*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.

*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



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**Anthera Pharmaceuticals, Inc.**  
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**NOTES TO FINANCIAL STATEMENTS (Continued)**

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.

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.

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 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



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**NOTES TO FINANCIAL STATEMENTS (Continued)**

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.

**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, 161,646 and 69,424 shares were subject to repurchase with a corresponding liability of \$56,715 and \$31,131, respectively.

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**NOTES TO FINANCIAL STATEMENTS (Continued)**

The following table summarizes stock option activity for the Company:

	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	61,045	153,910	\$ 0.14	8.42
Shares authorized	1,285,047			
Options granted	(65,998)	65,998	\$ 0.14	
Options exercised		(125,581)	\$ 0.14	
Balance at December 31, 2006	1,280,094	94,327	\$ 0.14	6.89
Shares authorized	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	325,137	847,735	\$ 0.26	8.08
Shares authorized	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	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
		1,323,776	\$ 0.92	7.94

Ending Vested and Expected to Vest as of  
December 31, 2009

The grant date total fair value of employee options vested during the years ended December 31, 2007, 2008 and 2009 was \$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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**NOTES TO FINANCIAL STATEMENTS (Continued)**

Information about stock options outstanding, vested and expected to vest as of December 31, 2009, is as follows:

<b>Outstanding, Vested and Expected to Vest</b>			<b>Options Vested</b>	
<b>Exercise Price</b>	<b>Number of Shares</b>	<b>Weighted-Average Remaining Contractual Life (in Years)</b>	<b>Exercise Price</b>	<b>Number of Shares</b>
\$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

*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 optionee's 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 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

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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

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**NOTES TO FINANCIAL STATEMENTS (Continued)**

*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
	2007	2008	2009	2009
Research and development	\$ 44,066	\$ 45,544	\$ 101,395	\$ 194,002
General and administrative	30,795	97,862	152,569	282,877
Total stock-based compensation	\$ 74,861	\$ 143,406	\$ 253,964	\$ 476,879

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.

The assumptions used in the Black-Scholes option-pricing model 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, are as follows:

	Years Ended December 31,			Period from September 9, 2004 (Date of Inception) to December 31, 2009
	2007	2008	2009	2009
Expected Volatility	81%	81%	74%	80%
Dividend Yield	0%	0%	0%	0%
Risk-Free Interest Rate	4.54%	3.08%	2.10%	3.96%
Expected Term (years)	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.

*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.

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**Anthera Pharmaceuticals, Inc.**  
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**NOTES TO FINANCIAL STATEMENTS (Continued)**

The assumptions used in the Black-Scholes option-pricing model 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, are as follows:

	Years Ended December 31,			Period from
	2007	2008	2009	September 9, 2004 (Date of Inception) to December 31, 2009
Expected Volatility	98%	98%	98%	98%
Dividend Yield	0%	0%	0%	0%
Risk-Free Interest Rate	4.40%	3.67%	3.57%	3.69%
Expected Term (years)	10.00	9.26	9.94	9.71

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.

## **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:

	December 31,	December 31,
	2008	2009
Deferred tax assets:		



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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	\$	\$

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**Anthera Pharmaceuticals, Inc.**  
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**NOTES TO FINANCIAL STATEMENTS (Continued)**

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
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%

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:

	Amount	Expiration Years
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 change to the unrecognized tax benefit balance as of

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**NOTES TO FINANCIAL STATEMENTS (Continued)**

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.

## **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 A-002 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.

On November 8, 2009, the Company's board of directors approved a 1-for-1.712 reverse split of the Company's common and preferred stock to be effected immediately prior to the effective date of the Company's initial public offering. The financial statements for the period from September 9, 2004 (Date of Inception) to December 31, 2009

give retroactive effect to the reverse split. In connection with the annual financial statements, the Company has evaluated subsequent events through February 23, 2010.

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**Table of Contents****PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****Item 13. *Other Expenses of Issuance and Distribution.***

The expenses (other than underwriting discounts and commissions) payable by us in connection with this offering are as follows:

	<b>Amount</b>
Securities and Exchange Commission registration fee	\$ 4,743
Financial Industry Regulatory Authority, Inc. fee	\$ 9,000
NASDAQ Global Market listing fee	\$ 100,000
Accountants' fees and expenses	\$ 480,000
Legal fees and expenses	\$ 1,300,000
Blue Sky fees and expenses	\$ 15,000
Transfer Agent's fees and expenses	\$ 3,500
Printing and engraving expenses	\$ 245,000
Miscellaneous	\$ 642,757
<b>Total Expenses</b>	<b>\$ 2,800,000</b>

All expenses are estimated except for the Securities and Exchange Commission fee and the Financial Industry Regulatory Authority, Inc. fee.

**Item 14. *Indemnification of Directors and Officers.***

Section 145 of the Delaware General Corporation Law, or the DGCL, authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact that they have served or are currently serving as a director or officer to a corporation. The indemnity may cover expenses (including attorneys' fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys' fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

We have adopted provisions in our certificate of incorporation and bylaws to be in effect at the completion of this offering that limit or eliminate the personal liability of our directors to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended. Consequently, a director will not be personally liable to us or our stockholders for monetary damages or breach of 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 purchases, redemptions or other distributions; or

any transaction from which the director derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission.

In addition, our bylaws provide that:

we will indemnify our directors, officers and, in the discretion of our board of directors, certain employees to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended; and

we will advance reasonable expenses, including attorneys' fees, to our directors and, in the discretion of our board of directors, to our officers and certain employees, in connection with legal proceedings relating to their service for or on behalf of us, subject to limited exceptions.

We have entered into indemnification agreements with each of our directors and our executive officers and, in several cases, amended and restated indemnification agreements with certain of their affiliates. These agreements provide that we will indemnify each of our directors, executive officers and, at times, their affiliates to the fullest extent permitted by Delaware law. We will advance expenses, including attorneys' fees, judgments, fines and settlement amounts, to each indemnified director, executive officer or affiliate in connection with any proceeding in which indemnification is available and we will indemnify our directors and officers for any action or proceeding arising out of that person's services as an officer or director brought on behalf of the Company or in furtherance of our rights. Additionally, each of our directors may have certain rights to indemnification, advancement of expenses or insurance provided by their affiliates, which indemnification relates to and might apply to the same proceedings arising out of such director's services as a director referenced herein. Nonetheless, we have agreed in the indemnification agreements that the Company's obligations to those same directors are primary and any obligation of the affiliates of those directors to advance expenses or to provide indemnification for the expenses or liabilities incurred by those directors are secondary.

We also maintain general liability insurance which covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act.

The underwriting agreement filed as Exhibit 1.1 to this registration statement provides for indemnification of us and our directors and officers by the underwriters against certain liabilities under the Securities Act and the Exchange Act.

**Item 15. *Recent Sales of Unregistered Securities.***

In the three years preceding the filing of this registration statement, we have sold and issued the following unregistered securities:

*(a) Issuances of Capital Stock*

On February 15, 2008, we issued convertible promissory notes and warrants to purchase shares of the Company's common stock to seven investors for an aggregate principal amount of \$3,000,000.



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On May 14, 2008, we issued convertible promissory notes to seven investors for an aggregate principal amount of \$9,000,000 and we cancelled all warrants to purchase shares of the Company's stock that were issued on February 15, 2008.

On August 12, 2008, we issued 3,226,244 shares of our Series B-2 convertible preferred stock to 10 investors for an aggregate purchase price of \$19,355,638. This aggregate purchase price was comprised of (i) conversion of indebtedness of the Company and interest accrued thereupon, the value of which conversion was \$12,355,630 and (ii) cash payments to the Company, which totaled \$7,000,005. In addition, we issued warrants to three investors to purchase 240,516 shares of our common stock at an exercise price of \$1.34 per share. We have filed a Form D to ensure that all securities issued in this transaction fall within the safe harbor provided pursuant to Rule 506 of Regulation D, which is promulgated under the Securities Act.

On July 17, 2009, we issued convertible promissory notes to nine investors for an aggregate principal amount of \$4,000,000. In addition, we issued warrants to purchase either shares of convertible preferred stock of the Company to be issued in the next equity financing or shares of our Series B-2 convertible preferred stock. Depending on when these convertible promissory notes are converted, the warrants may be exercisable for a number of shares of the securities to be issued in the next equity financing or shares of our Series B-2 convertible preferred stock, at the price which each such security is sold, for a number of shares equaling 25% of the principal amount of the notes or 50% of the principal amount of the notes. In addition, if a sale of all or substantially all of our equity interests or assets should occur prior to our next equity financing and any note has not been converted, we are obligated to pay such 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 9, 2009, we issued convertible promissory notes to nine investors for an aggregate principal amount of \$6,000,000. In addition, we issued warrants to purchase either shares of convertible preferred stock of the company to be issued in the next equity financing or shares of our Series B-2 convertible preferred stock. Depending on when these convertible promissory notes are converted, the warrants may be exercisable for a number of shares of the securities to be issued in the next equity financing or shares of our Series B-2 convertible preferred stock, at the price which each such security is sold, for a number of shares equaling 25% of the principal amount of the notes or 50% of the principal amount of the notes. In addition, if a sale of all or substantially all of our equity interests or assets should occur prior to our next equity financing and any note has not been converted, we are obligated to pay such 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 December 11, 2009, we issued convertible promissory notes to nine investors for an aggregate principal amount of \$3,400,000. These convertible promissory notes are exchangeable for other convertible promissory notes if an initial public offering is not consummated by February 28, 2010. In addition, should we issue exchange convertible promissory notes, we will also issue accompanying warrants to purchase either shares of the securities of the company to be issued in the next equity financing or shares of our Series B-2 convertible preferred stock. Depending on when these exchange convertible promissory notes are converted, the warrants may be exercisable for a number of shares of convertible preferred stock to be issued in the next equity financing or shares of our Series B-2 convertible preferred stock, at the price which each such security is sold, for a number of shares equaling 25% of the principal amount of the notes or 50% of the principal amount of the notes. In addition, if a sale of all or substantially all of our equity interests or assets should occur prior to our next equity financing and any exchange convertible promissory note has not been converted, we are obligated to pay such 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.

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No underwriters were used in the foregoing transactions. Unless otherwise stated, the sales of securities described above were deemed to be exempt from registration pursuant to Section 4(2) of the Securities Act as transactions by an issuer not involving a public offering. All of the purchasers in these transactions represented to us in connection with their purchase that they were acquiring the securities for investment and not distribution, that they could bear the risks of the investment and could hold the securities for an indefinite period of time. Such purchasers received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration or an available exemption from such registration. All of the foregoing securities are deemed restricted securities for the purposes of the Securities Act.

*(b) Grants and Exercises of Stock Options and Grants of Restricted Stock*

In the three years preceding the filing of this registration statement, we have issued under our 2005 Equity Incentive Plan, options to purchase an aggregate of 1,007,565 shares of our common stock to certain of our directors, employees and service providers at exercise prices ranging from \$0.26 to \$7.70 per share. Of these options, 689,952 have been exercised.

In the three years preceding the filing of this registration statement, we have not issued any restricted stock under our 2005 Incentive Equity Plan to our directors, employees or service providers.

The issuances of the securities described above were deemed to be exempt from registration pursuant to Rule 701 promulgated under the Securities Act as transactions pursuant to compensatory benefit plans. The shares of common stock issued upon the exercise of options are deemed to be restricted securities for purposes of the Securities Act. The foregoing discussion does not give effect to our planned reverse stock split or the conversion of our preferred stock into shares of common stock in connection with this offering.

**Item 16. *Exhibits and Financial Statement Schedules.***

*(a) Exhibits.*

See the Exhibit Index on the page immediately following the signature page for a list of exhibits filed as part of this registration statement on Form S-1, which Exhibit Index is incorporated herein by reference.

**Item 17. *Undertakings.***

The undersigned registrant hereby undertakes to provide to the underwriter at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. In the event that a claim for indemnification by the registrant against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by the controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.



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The undersigned registrant hereby undertakes that:

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

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

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**Table of Contents****SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this Amendment No. 5 to registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Hayward, state of California, on this 23<sup>rd</sup> day of February, 2010.

Anthera Pharmaceuticals, Inc.

By: /s/ Paul F. Truex

Paul F. Truex, President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment No. 5 to Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
/s/ Paul F. Truex Paul F. Truex	President and Chief Executive Officer and Director (Principal Executive Officer)	February 23, 2010
/s/ Christopher P. Lowe Christopher P. Lowe	Chief Financial Officer and Vice President of Administration (Principal Financial and Accounting Officer)	February 23, 2010
*	Chairman of the Board of Directors	February 23, 2010
Christopher S. Henney *	Director	February 23, 2010
Annette Bianchi *	Director	February 23, 2010
James I. Healy *	Director	February 23, 2010
A. Rachel Leheny *	Director	February 23, 2010
Donald J. Santel *	Director	February 23, 2010

Daniel K. Spiegelman

\*

Director

February 23, 2010

David E. Thompson

\*By: /s/ Paul F. Truex

Paul F. Truex  
Attorney-in-fact

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**Table of Contents****EXHIBIT LIST**

<b>Number</b>	<b>Description</b>
1.1	Form of Underwriting Agreement
3.1	Fourth Amended and Restated Certificate of Incorporation, as currently in effect
3.2	Certificate of Amendment to Fourth Amended and Restated Certificate of Incorporation, as currently in effect
3.3	Bylaws, as currently in effect
3.4	Certificate of Amendment of Bylaws, as currently in effect
3.5	Form of Certificate of Amendment to Fourth Amended and Restated Certificate of Incorporation (to be effective prior to the closing of this offering)
3.6	Form of Fifth Amended and Restated Certificate of Incorporation (to be effective upon completion of this offering)
3.7	Form of Amended and Restated Bylaws (to be effective immediately prior to the closing of this offering)
4.1	Specimen certificate evidencing shares of common stock
4.2	Second Amended and Restated Investor Rights Agreement by and among the Company and the other persons and entities party thereto, dated as of July 17, 2009
5.1	Opinion of Goodwin Procter LLP
# 10.1	2005 Equity Incentive Plan and form agreements thereunder
# 10.2	2010 Stock Option and Incentive Plan and form agreements thereunder
10.3	Form of Amended and Restated Indemnification Agreement
# 10.4	Form of Amended and Restated Change in Control Agreement
# 10.5	Form of Amended and Restated Severance Benefits Agreement
+ 10.6	License Agreement among Eli Lilly and Company, Shionogi & Co., Ltd. and the Company, dated as of July 31, 2006.
+ 10.7	Agreement between Shionogi & Co., Ltd. and the Company, dated as of September 7, 2009 (amending License Agreement among Eli Lilly and Company, Shionogi & Co., Ltd. and the Company, dated as of July 31, 2006)
+ 10.8	Agreement between Eli Lilly and Company and the Company, dated as of September 15, 2009 (amending License Agreement among Eli Lilly Company, Shionogi & Co., Ltd. and the Company, dated as of July 31, 2006)
+ 10.9	Amended and Restated Technology Transfer Letter Agreement between Eli Lilly and Company and the Company, dated as of July 12, 2006.
+ 10.10	License Agreement between Amgen Inc. and the Company, dated as of December 18, 2007
10.11	Consent to Sublease, by and among the Company, NewTower Trust Company Multi-Employer Property Trust and Guava Technologies, dated as of September 12, 2008
10.12	Sublease by and between the Company and Guava Technologies, dated as of August 1, 2008
10.13	Note and Warrant Purchase Agreement by and among the Company and the other persons and entities party thereto, dated as of July 17, 2009
10.14	Form of Senior Secured Promissory Note sold pursuant to that Note and Warrant Purchase Agreement, dated as of July 17, 2009
10.15	Form of Stock Purchase Warrant sold pursuant to that Note and Warrant Purchase Agreement, dated as of July 17, 2009
10.16	Stock Purchase Agreement by and among the Company and the other persons and entities party thereto, dated as of September 25, 2009

- 10.17 Escrow Agreement by and among the Company, Fremont Bank and the other persons and entities party thereto, dated as of September 25, 2009
- 10.18 Amendment No. 1 to License Agreement between Amgen Inc. and the Company, dated as of October 16, 2009
- 10.19 Amendment No. 1 to Stock Purchase Agreement and Escrow Agreement by and among the Company and the other persons and entities party thereto, dated as of November 3, 2009

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<b>Number</b>	<b>Description</b>
10.20	Amendment No. 2 to Stock Purchase Agreement and Escrow Agreement by and among the Company and the other persons and entities party thereto, dated as of December 11, 2009
10.21	Note Purchase Agreement by and among the Company and the other persons and entities party thereto, dated as of December 11, 2009
10.22	Form of Senior Secured Promissory Note sold pursuant to that certain Note Purchase Agreement, dated as of December 11, 2009
10.23	Form of Senior Secured Promissory Note to be exchanged pursuant to that certain Note Purchase Agreement, dated as of December 11, 2009
10.24	Form of Stock Purchase Warrant to be issued pursuant to that certain Note Purchase Agreement, dated as of December 11, 2009
10.25	Agreement between Eli Lilly and Company and the Company, dated as of January 28, 2010 (amending Agreement between the parties, dated as of September 15, 2009)
21.1	Subsidiary of Anthera Pharmaceuticals, Inc.
23.1	Consent of Deloitte & Touche LLP, independent registered public accounting firm
23.2	Consent of Goodwin Procter LLP (included in Exhibit 5.1)
24.1	Power of Attorney (included on page II-5 of the original filing)
24.2	Power of Attorney for Daniel K. Spiegelman

+ Certain provisions of this Exhibit have been omitted pursuant to a request for confidential treatment

# Indicates management contract or compensatory plan, contract or agreement

Previously filed