sunesis

Letter to Stockholders

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2012 Annual Meeting of Stockholders
Notice and Proxy Statement

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2011 Annual Report on Form 10-K

April 23, 2012

Dear Fellow Stockholders,

For Sunesis, 2011 was a defining year marked by significant progress in the clinic, in our pipeline and in our regulatory, financial and intellectual property strategies. We believe that vosaroxin, our lead drug candidate, is now the most promising and most advanced therapy in development for the treatment of relapsed/refractory acute myeloid leukemia (AML), with our pivotal Phase 3, randomized, double-blind, placebo-controlled VALOR trial approaching several important milestones.

AML is a rapidly progressing cancer of the blood characterized by the uncontrolled proliferation of immature blast cells in the bone marrow. The American Cancer Society estimates there will be approximately 13,780 new cases of AML and 10,200 deaths from AML in the U.S. in 2012. It is estimated that the prevalence of AML across major global markets, which includes the U.S., France, Germany, Italy, Spain, United Kingdom, and Japan, is over 50,000. Treatment standards in this disease have not changed appreciably in the last 40 years, and the prognosis for adult patients diagnosed with AML remains quite poor, with a 20 percent 5-year survival rate that drops to just 5 percent among patients 65 years and older. In our initial indication, relapsed/refractory AML, there are currently no approved treatments.

Vosaroxin, a first-in-class anti-cancer quinolone derivative, has the potential to set a new standard of care in AML, similar to the way that Velcade® and Revlimid® have ushered in new eras of care in other hematology-oncology indications. To date, this important therapeutic candidate has demonstrated activity in both hematologic malignancies and solid tumors, each of which represents significant market potential. In our Phase 1 and 2 AML studies, vosaroxin has exhibited a combination of tolerability, efficacy and durability in approximately 300 patients, effects characterized by good remission rates, single-digit early mortality rates and promising survival outcomes. This clinical profile points to distinct differences between vosaroxin and other therapies that have been developed in AML.

Thanks to accomplishments of the past 18 months, Sunesis stands at the cusp of validating vosaroxin's clinical potential in AML, progress we have leveraged to advance and expand the vosaroxin program, prepare for potential commercialization and strengthen our balance sheet. These accomplishments include:

Significant Progress with the Vosaroxin Pivotal Program and VALOR Trial. Confidence in the VALOR trial stems from a comprehensive preclinical and clinical program, coupled with the rigor and design of this registration trial. The 450-patient VALOR trial is the largest company-sponsored trial ever undertaken in relapsed/refractory AML. Since its trial launch in December 2010, VALOR has progressed rapidly, with over 110 leading sites recruiting patients in the U.S., Canada, Europe, Australia and New Zealand, and over 260 patients enrolled as of March 2012. Patients enrolling in the VALOR trial are randomized one-to-one to receive either vosaroxin on days one and four in combination with cytarabine daily for five days, or placebo in combination with cytarabine. The trial's primary endpoint is overall survival.

This trial employs an adaptive design that allows for a one-time sample size adjustment by the independent Data and Safety Monitoring Board (DSMB) at the interim analysis. At this analysis, which is expected to occur in the third quarter of 2012, the DSMB will make one of the following recommendations: (1) stop the trial early for efficacy or for futility; (2) continue the study to its planned unblinding, expected in 2013; or (3) increase the sample size by enrolling an additional 225 patients, to a total of 675 evaluable patients. In this last scenario, we would expect to unblind the VALOR trial in early 2014.

The interim analysis will provide important clarity regarding timing of the data unblinding and the subsequent filing of a new drug application in the U.S. and Europe. Overall, we believe that the VALOR trial is a robust and efficient trial design that capitalizes on vosaroxin's strengths and overcomes the challenges that have limited the success of other AML development candidates, including underpowering or the use of non-randomized designs.

Expansion of the Vosaroxin Pivotal Program Beyond VALOR. At the end of 2011, we announced our participation in a Phase 2/3 randomized, controlled, multi-center trial evaluating novel treatment regimens, including two regimens containing vosaroxin, against low dose cytarabine in patients older than 60 years old with AML or high-risk myelodysplastic syndrome (MDS) who are not candidates for intensive chemotherapy. The trial, known as the Less Intensive 1 (LI-1) Trial, is being sponsored by Cardiff University and conducted by the United Kingdom's National Cancer Research Institute Haematological Oncology Study Group under the direction of Professor Alan K. Burnett.

Selection of vosaroxin for this comprehensive study not only speaks to its growing regard within the hematology community, but allows for its continued development in an underserved patient population and builds upon the promising results from our Phase 2 REVEAL-1 trial of single-agent vosaroxin in newly diagnosed elderly AML patients with poor prognostic factors.

Broadening of our Clinical Pipeline: In early 2011, we announced a license agreement with Millennium: The Takeda Oncology Company for the development of our kinase inhibitor program in oncology. Under terms of the agreement, Sunesis received a $4 million upfront payment from Millennium, and is eligible to receive up to $60 million in pre-commercial milestone program payments, as well as royalties on sales of products developed through the collaboration. In addition, Sunesis has retained future co-development and co-promotion rights to such products.

Just five months after announcing this agreement, Millennium initiated a Phase 1 study with MLN2480 in patients with relapsed or refractory solid tumors. MLN2480 is a pan-Raf kinase inhibitor with a distinct molecular signature which has exhibited a promising preclinical profile. The Phase 1 study is a multicenter, open-label, dose escalation study to evaluate the safety, tolerability and maximum tolerated dose of single agent MLN2480, and is being conducted in two stages: the dose escalation phase, which includes patients with a variety of solid tumors, who have failed or are not candidates for standard therapies, or for whom no

approved therapy is available; and the dose expansion phase, which will have a focus on patients with metastatic melanoma. We were pleased to see Millennium move this program into Phase 1 so rapidly, a fact attesting to its priority under their direction.

Sunesis will also continue to work with Biogen Idec, the original partner for this program, in the development of kinase inhibitors for immunology applications. This program remains an important R&D priority for Biogen Idec, and we are hopeful that it will reach the Investigational New Drug (IND) stage within the next 12 months.

Strengthening of our Balance Sheet and Financial Resources. Recognizing the challenges of the capital markets for development-stage companies in our industry, we have deliberately and actively pursued financings in the past year which provide funding through key milestones and enable maximum flexibility in preparing for future commercial success, all while minimizing stockholder dilution.

To that end, we recently announced an innovative transaction with Royalty Pharma, an industry leading acquirer of royalty interests, whereby Royalty Pharma has agreed to pay Sunesis $25 million to acquire a royalty on future worldwide net sales of vosaroxin under certain circumstances relating to its successful development. This agreement was reached largely thanks to the unique design and rigorous execution of the VALOR trial, and provides us with additional capital to extend our runway beyond the unblinding of VALOR. This enables our team to actively prepare for vosaroxin's regulatory filings and U.S. commercial launch, to selectively expand our development programs and to enhance our strategic flexibility on the timing and terms of vosaroxin partnering arrangements outside the U.S.

Prior to our Royalty Pharma agreement in October 2011, we entered into a $25 million tranched loan facility agreement, under which we have drawn an initial $10 million tranche. The second, $15 million tranche will be available to us, at our option, following the VALOR trial's interim analysis, if the DSMB recommends ending the trial early for efficacy or continuing the study with or without a sample size adjustment. The four-year loan facility is structured to have an interest-only period until February 2013, followed by a 32-month amortization period.

Expansion of the Intellectual Property Estate. Sunesis has successfully pursued a deliberate strategy to ensure exclusive coverage in the vosaroxin patent estate well into the future. To that end, we have pursued and received a number of patents covering the composition and use of vosaroxin including, most recently, a U.S. patent claiming compositions related to vosaroxin and providing exclusivity to mid-2030. A family of corresponding patent applications is pending in the U.S. and internationally. Rarely does such a late-stage asset have such a robust patent estate and lengthy period of market exclusivity. This runway gives us the time to fully capture the vosaroxin program's value in our initial AML indication, as well as explore a variety of potential, additional cancer indications.

In addition to patent exclusivity, vosaroxin has been granted orphan drug designation in the U.S., and we expect an imminent decision from the European Commission regarding orphan

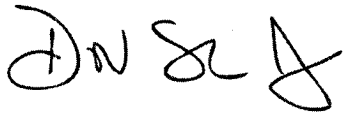
drug designation for vosaroxin for the treatment of AML. Orphan drug status provides for seven and ten years of market exclusivity following approval in the U.S. and Europe, respectively.

Granting of U.S. Food and Drug Administration Fast Track Designation. In February 2011, the Food and Drug Administration (FDA) granted fast track designation to vosaroxin for the potential treatment of relapsed or refractory AML in combination with cytarabine, providing for the possibility of a "rolling submission" for a marketing application.

Expansion of our Management Team. In February 2012, we announced the appointment of Adam R. Craig, MBBS, PhD, MBA, as Executive Vice President, Development and Chief Medical Officer. Dr. Craig's extensive experience in oncology, including recent clinical and regulatory experience in hematology, will be invaluable as we complete the VALOR trial, prepare our critical regulatory filings and support the expansion of our vosaroxin development program and clinical product pipeline.

Clearly, these past 18 months have been very productive and marked by significant progress throughout the organization, a testament to the dedication of our talented employees. We are focused on the achievement of additional key milestones in 2012 and beyond, as we build on momentum with VALOR and vosaroxin, lay the groundwork for future regulatory and commercial success, and advance our pipeline. We appreciate your continued support of Sunesis during this transformational time and look forward to updating you on our progress in the coming months.

Sincerely,



Daniel N. Swisher, Jr.
Chief Executive Officer and President

This letter contains forward-looking statements, including, without limitation, any statements relating to our strategy, including our plans with respect to unblinding the VALOR trial, the planned interim analysis of the VALOR trial, presenting clinical data and initiating clinical trials, our future research and development activities, including clinical testing and the costs and timing thereof, sufficiency of our cash resources, our ability to raise additional funding when needed, any statements concerning anticipated regulatory activities or licensing or collaborative arrangements, our research and development and other expenses, our operations and legal risks, and any statement of assumptions underlying any of the foregoing. Words such as "believe," "continue,""could," "estimate," "expect," "intend,""may," "positive," "potential," "well-positioned," "will," "would" or the negative thereof or similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon Sunesis' current expectations. Forward-looking statements involve risks and uncertainties. Sunesis' actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of these risks and uncertainties, which include, without limitation, risks related to Sunesis' need for substantial additional funding to complete the development and commercialization of vosaroxin, risks related to Sunesis' ability to raise the capital that it believes to be

accessible and is required to fully finance the VALOR trial until its planned unblinding in 2013, the risk that Sunesis' development activities for vosaroxin could be otherwise halted or significantly delayed for various reasons, the risk that Sunesis' clinical studies for vosaroxin may not demonstrate safety or efficacy or lead to regulatory approval, the risk that data to date and trends may not be predictive of future data or results, the risk that Sunesis' nonclinical studies and clinical studies may not satisfy the requirements of the FDA or other regulatory agencies, risks related to the conduct of Sunesis' clinical trials, the risk of third party opposition to granted patents related to vosaroxin, and the risk that Sunesis' proprietary rights may not adequately protect vosaroxin. These and other risk factors are discussed under "Risk Factors" and elsewhere in Sunesis' Annual Report on Form 10-K for the year ended December 31, 2011 and other filings with the Securities and Exchange Commission. Sunesis expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in the company's expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based.

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SUNESIS

SUNESIS PHARMACEUTICALS, INC.
395 Oyster Point Boulevard, Suite 400
South San Francisco, CA 94080

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
To Be Held On June 5, 2012

Proxy Statement

To the Stockholders of Sunesis Pharmaceuticals, Inc.:

The 2012 annual meeting of stockholders of Sunesis Pharmaceuticals, Inc. will be held on Tuesday, June 5, 2012 at 10:00 a.m., local time, at our headquarters located at 395 Oyster Point Boulevard, Suite 400, South San Francisco, California, 94080 for the following purposes:

1. To elect three directors nominated by the board of directors to serve until the 2015 annual meeting of stockholders, as described in the accompanying proxy statement.
2. To ratify the selection of Ernst & Young LLP as the independent registered public accounting firm of Sunesis for the year ending December 31, 2012.
3. To transact any other business that may properly come before the annual meeting or any adjournment or postponement thereof.

These items of business are more fully described in the proxy statement accompanying this notice. The record date for the annual meeting is April 9, 2012. Only stockholders of record at the close of business on that date are entitled to notice of and to vote at the annual meeting and any adjournment or postponement thereof.

Please see the map at *www.sunesis.com/site/contact_us.php* for directions to our headquarters. We look forward to seeing you at the annual meeting.

By Order of the board of directors,

Eric H. Bjerkholt
Executive Vice President, Corporate Development and Finance, Chief Financial Officer and Corporate Secretary

South San Francisco, California
April 23, 2012

You are cordially invited to attend the annual meeting in person. Whether or not you expect to attend the annual meeting, please vote as promptly as possible in order to ensure your representation at the meeting. You may vote your shares over the telephone or the Internet as instructed in these materials. If you received a proxy card or voting instruction card by mail, you may submit your proxy card or voting instruction card by completing, signing, dating and mailing your proxy card or voting instruction card in the envelope provided. Even if you have voted by proxy, you may still vote in person if you attend the meeting. Please note, however, that if your shares are held of record by a broker, bank or other nominee and you wish to vote at the meeting, you must obtain a proxy issued in your name from that record holder.

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TABLE OF CONTENTS

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SUNESIS PHARMACEUTICALS, INC.
395 Oyster Point Boulevard, Suite 400
South San Francisco, CA 94080

PROXY STATEMENT FOR THE 2012 ANNUAL MEETING OF STOCKHOLDERS

JUNE 5, 2012

INFORMATION CONCERNING SOLICITATION AND VOTING

General

We are furnishing these proxy materials to our stockholders in connection with the solicitation of proxies by the board of directors of Sunesis Pharmaceuticals, Inc., which we sometimes refer to herein as the Company, Sunesis or we, for our 2012 annual meeting of stockholders, or the Annual Meeting, to be held on June 5, 2012, and any adjournment, continuation or postponement thereof, for the purposes set forth in the attached Notice of Annual Meeting of Stockholders. Our principal executive office is located at 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080.

These proxy materials, including a copy of our Annual Report on Form 10-K for the year ended December 31, 2011, this proxy statement and the Notice of Internet Availability of Proxy Materials are first being distributed and made available to stockholders on or about April 23, 2012. This proxy statement contains important information for you to consider when deciding how to vote on the matters brought before the Annual Meeting. Please read it carefully.

Pursuant to rules adopted by the U.S. Securities and Exchange Commission, or the SEC, we have elected to provide access to our proxy materials over the Internet. Accordingly, we are sending a Notice of Internet Availability of Proxy Materials, or the Notice, to our stockholders of record. If your shares are held in an account at a brokerage firm, bank, dealer or other similar organization, the Notice or voting instructions are being forwarded to you by that organization. The Notice is not a voting form; however, the Notice provides instructions on how to vote by Internet, by telephone, or by requesting and returning a paper proxy card or by voting in person at the Annual Meeting. All stockholders will have the ability to access the proxy materials on the website referred to in the Notice or request to receive a printed set of the proxy materials. We are providing stockholders who have previously requested to receive paper copies of our proxy materials with paper copies of our proxy materials. We intend to mail the Notice and the full sets of proxy materials to the stockholders as described above on or about April 23, 2012.

The Notice will also provide instructions on how you can elect to receive future proxy materials electronically or in printed form by mail. If you choose to receive future proxy materials electronically, you will receive an email next year with instructions containing a link to the proxy materials and a link to the proxy voting site. Your election to receive proxy materials electronically or in printed form by mail will remain in effect until you terminate such election. Choosing to receive future proxy materials electronically will allow us to provide you with the information you need in a timelier manner, will save us the cost of printing and mailing documents to you and will conserve natural resources.

If you receive more than one Notice or set of proxy materials, your shares may be registered in more than one name or in different accounts. Please follow the voting instructions in the Notice or proxy materials to ensure that all of your shares are voted.

Solicitation

The expenses of preparing, printing and distributing the materials used in the solicitation of proxies on behalf of the board of directors will be borne by us. In addition to the solicitation of proxies by use of the mail, we may utilize the services of certain of our officers and employees (who will receive no compensation in addition to their regular salaries) to solicit proxies personally and by mail, telephone and electronic means from brokerage houses and other stockholders. We have retained Broadridge Investor Communication Services, or Broadridge, to aid in the distribution of proxies and the provision of telephone and Internet voting services, which will be paid by us. We may also reimburse brokerage firms, banks and other agents for the cost of forwarding proxy materials to beneficial owners.

Voting Rights

Our common stock is the only type of security entitled to vote at the Annual Meeting. Only stockholders of record at the close of business on April 9, 2012 are entitled to notice of, and to vote on, each of the matters to be voted upon at the Annual Meeting. On each matter to be voted upon, you have one vote for each share of common stock you own as of April 9, 2012. There are no statutory or contractual rights of appraisal or similar remedies available to those stockholders who dissent from any matter to be acted on at the Annual Meeting. Cumulative voting is not available and each share of common stock is entitled to one vote per share of common stock.

If on April 9, 2012 your shares were registered directly in your name with our transfer agent, American Stock Transfer & Trust Company, then you are a stockholder of record. As a stockholder of record, you may vote in person at the Annual Meeting or vote by proxy. Whether or not you plan to attend the Annual Meeting, we urge you to vote by proxy as instructed below to ensure your vote is counted.

If on April 9, 2012 your shares were held, not in your name, but rather in an account at a brokerage firm, bank, dealer or other similar organization, then you are the beneficial owner of shares held in "street name" and the Notice or voting instructions are being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the Annual Meeting. As a beneficial owner, you have the right to direct your broker or other agent regarding how to vote the shares in your account. You are also invited to attend the Annual Meeting. However, since you are not the stockholder of record, you may not vote your shares in person at the Annual Meeting unless you request and obtain a valid proxy from your broker or other agent.

Matters Submitted to a Vote of Stockholders, Voting Quorum, Abstentions and Voting Requirements

There are two matters scheduled for a vote:

- Proposal No. 1: the election of three directors nominated by the board of directors to serve until the 2015 annual meeting of stockholders; and
- Proposal No. 2: the ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2012.

The board of directors knows of no other matters that will be presented for consideration at the Annual Meeting.

In order to conduct any business at the Annual Meeting, a quorum must be present in person or represented by valid proxy. A quorum will be present if stockholders holding at least a majority of the outstanding shares of the common stock entitled to vote at the Annual Meeting are present in person or represented by proxy at the Annual Meeting. As of April 9, 2012, the record date for the Annual Meeting, there

were 46,924,232 shares of common stock outstanding and entitled to vote. Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your broker, bank or other nominee holding your shares in "street name") or if you vote in person at the Annual Meeting. If there is no quorum, either the chairman of the Annual Meeting or the holders of a majority of shares entitled to vote and present either in person or represented by proxy may adjourn the meeting to another date.

Votes will be counted by the inspector of election appointed for the Annual Meeting. With respect to Proposal No. 1, you may vote "For" all the nominees to the board of directors, "Withhold" your vote for all nominees, or you may "Withhold" your vote for any nominee you specify. With respect to Proposal No. 2, you may vote "For" or "Against" or abstain from voting. Abstentions will be counted towards the vote total with respect to Proposal No. 2 and will have the same effect as "Against" votes. Broker non-votes, which are discussed in greater detail below, will be counted for the purposes of establishing a quorum, but will not be counted for any purpose in determining whether a proposal has been approved. An automated system administered by Broadridge will tabulate all votes cast at the Annual Meeting.

- For Proposal No. 1, which relates to the election of directors, the three nominees receiving the most "For" votes (from the holders of shares present in person or represented by proxy and entitled to vote on the election of directors) will be elected. Only votes "For" or "Withheld" will affect the outcome.

- To be approved, Proposal No. 2, which relates to the ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for 2012, must receive "For" votes from the holders of a majority of shares entitled to vote and present either in person or by proxy. If you "Abstain" from voting, it will have the same effect as an "Against" vote. Broker-non votes will have no effect; however, Proposal No. 2 is considered a routine matter, and therefore no broker non-votes are expected to exist in connection with Proposal No. 2.

Voting Procedures and Options

The procedures for voting are fairly simple and are as follows:

Stockholder of Record: Shares Registered in Your Name

If you are a stockholder of record, you may vote in person at the Annual Meeting, vote by proxy over the telephone, vote by proxy via the Internet or vote by proxy using a proxy card that you may request. The envelope provided requires no postage if mailed in the United States. Whether or not you plan to attend the Annual Meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the Annual Meeting and vote in person even if you have already voted by proxy.

- To vote in person, come to the Annual Meeting and we will give you a ballot when you arrive.

- To vote using the proxy card that you may request, simply complete, sign and date the proxy card and return it promptly in the envelope provided. If you return your signed proxy card to us before the Annual Meeting, we will vote your shares as you direct.

- To vote over the telephone, dial toll-free 800-690-6903 using a touch-tone phone and follow the recorded instructions. You will be asked to provide the control number from the enclosed proxy card. Your vote must be received by 11:59 p.m., Eastern Time, on June 4, 2012 to be counted.

- To vote via the Internet, go to *www.proxyvote.com* to complete an electronic proxy card. You will be asked to provide the control number from the enclosed proxy card. Your vote must be received by 11:59 p.m., Eastern Time, on June 4, 2012 to be counted.

We are providing stockholders who have previously requested to receive paper copies of the proxy materials with paper copies of the proxy materials instead of a Notice. If you would like to reduce the environmental impact and the costs incurred by us in mailing proxy materials, you may elect to receive all future proxy materials electronically via email or the Internet. If you make this election, you will receive an email message shortly after the proxy statement is released containing the Internet link to access our Notice, proxy statement and annual report. The email will also include instructions for voting on the Internet.

In order to receive these materials electronically, follow the instructions to vote on the Internet at *www.proxyvote.com* and, when prompted, indicate that you agree to access stockholder communications electronically in the future. Your choice to receive proxy materials electronically will remain in effect until you contact our Corporate Secretary and inform us otherwise. You may send an electronic message to bjerkholt@sunesis.com or contact our Corporate Secretary by mail at 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080, Attention: Eric H. Bjerkholt, Executive Vice President, Corporate Development and Finance, Chief Financial Officer and Corporate Secretary.

Beneficial Owner: Shares Registered in the Name of a Bank, Broker or Other Nominee

If you are a beneficial owner whose stock is held in street name, you should have received a Notice containing voting instructions from your bank, broker or other nominee, rather than from us. Simply follow the voting instructions in such Notice regarding how to instruct your broker or other nominee holding the shares to vote your shares. To vote in person at the Annual Meeting, you must obtain a valid proxy from your broker, bank or other agent. Follow the instructions from your broker or bank included with these proxy materials, or contact your broker or bank to request a proxy form.

You may request a paper or email copy of the proxy materials at no charge via the Internet at *www.proxyvote.com*, by calling 1-800-579-1639, or by sending a blank email to sendmaterial@proxyvote.com with your control number by May 22, 2012. Beneficial owners will not otherwise receive a paper or email copy of the proxy materials.

We provide Internet proxy voting to allow you to vote your shares online, with procedures designed to ensure the authenticity and correctness of your proxy vote instructions. However, please be aware that you must bear any costs associated with your Internet access, such as usage charges from Internet access providers and telephone companies.

The Annual Meeting will be held on Tuesday, June 5, 2012 at 10:00 a.m. Pacific Time at our principal executive offices located at 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080. Directions to the Annual Meeting may be found at *www.sunesis.com/site/contact_us.php*. For admission to the Annual Meeting, stockholders may be asked to present proof of identification and a statement from their bank, broker or other nominee reflecting their beneficial ownership of our common stock as of April 9, 2012 as well as a proxy from the record holder to the stockholder.

Voting of Proxies

Stockholder of Record

If you are a stockholder of record and you return a signed proxy card to us or otherwise vote before the Annual Meeting, we will vote your shares as you direct. All shares represented by valid proxies (and not revoked before they are voted) will be voted at the Annual Meeting as follows, unless there are different instructions on the proxy:

- Proposal No. 1: "For" the election of three directors nominated by the board of directors to serve until the 2015 annual meeting of stockholders;

- Proposal No. 2: "For" the ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2012; and

- At the proxyholder's discretion, on such other matters, if any, that may come before the Annual Meeting.

Beneficial Owner

Generally, if shares are held in street name, the beneficial owner of the shares is entitled to give voting instructions to the broker or nominee holding the shares. If you are a beneficial owner of shares held in "street name" and you do not provide the organization that holds your shares with specific instructions, under the rules of various national and regional securities exchanges, the organization that holds your shares may generally vote on routine matters but cannot vote on non-routine matters, as further described below. If the organization that holds your shares does not receive instructions from you on how to vote your shares on a non-routine matter, the organization that holds your shares will inform our inspector of elections that it does not have the authority to vote on this matter with respect to your shares. This is generally referred to as a "broker non-vote." When our inspector of elections tabulates the votes for any particular matter, broker non-votes will be counted for purposes of determining whether a quorum is present, but will not be counted toward the vote total for any proposal.

Under the rules and interpretations of the New York Stock Exchange, "non-routine" matters are matters that may substantially affect the rights or privileges of stockholders, such as mergers, stockholder proposals and elections of directors, even if not contested, and, accordingly, includes Proposal No. 1. We encourage you to provide voting instructions to the organization that holds your shares to ensure that your vote is counted on all proposals.

Revocability of Proxies

You may revoke your proxy at any time before it is voted at the Annual Meeting by:

- delivering written notice of revocation to our Corporate Secretary at Sunesis Pharmaceuticals, Inc., 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080, or in person at the Annual Meeting;

- submitting a later dated proxy; or

- attending the Annual Meeting and voting in person.

Your most recent proxy card or telephone or Internet proxy is the one that is counted.

Your attendance at the Annual Meeting will not, by itself, constitute revocation of your proxy. If your shares are held by your broker or bank as a nominee or agent, you should follow the instructions provided by your broker or bank.

Internet Availability of Proxy Materials

This proxy statement, our Annual Report on Form 10-K for the year ended December 31, 2011 and a letter to stockholders are available at https://materials.proxyvote.com/867328.

Results of the Annual Meeting

Preliminary voting results will be announced at the Annual Meeting. In addition, final voting results will be published in a current report on Form 8-K that we expect to file within four business days after the Annual

Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

Availability of Our Independent Registered Public Accounting Firm

Representatives of Ernst & Young LLP, our independent registered public accounting firm, are expected to be present at the Annual Meeting. They will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions. For additional information regarding the Audit Committee and its activities with Ernst & Young LLP, see "*Information about the Board of Directors and Corporate Governance*" and "*Report of the Audit Committee of the Board of Directors.*"

YOUR VOTE IS IMPORTANT. ACCORDINGLY, PLEASE VOTE BY PROXY WHETHER OR NOT YOU PLAN TO ATTEND THE ANNUAL MEETING IN PERSON.

PROPOSAL NO. 1

ELECTION OF NOMINEES TO THE BOARD OF DIRECTORS

Our board of directors, or our Board, consists of ten members with one vacancy and is divided into three classes of directors serving staggered three-year terms. Directors for each class are elected at the annual meeting of stockholders held in the year in which the term for their class expires and hold office for a three-year term and until their successors are duly elected and qualified, or their earlier death, resignation or removal. In accordance with our amended and restated certificate of incorporation and bylaws, our Board may fill existing vacancies on the Board by appointment.

The three nominees for Class I director are Mr. Edward Hurwitz, Ms. Helen S. Kim and Mr. Dayton Misfeldt, each of whom currently serves as a Class I director whose term expires at the Annual Meeting. If re-elected at the Annual Meeting, each of these nominees would serve until our 2015 annual meeting of stockholders and until his or her successor is elected and qualified, or, if sooner, until his or her death, resignation or removal. Each nominee has indicated his or her willingness to continue to serve as a director if re-elected. Our management has no reason to believe that any nominee will be unable to serve. In the event that any of the nominees should be unavailable for election as a result of an unexpected occurrence, shares represented by executed proxies will be voted for the election of a substitute nominee proposed by management.

Directors are elected by a plurality of the votes of the shares present in person or represented by proxy and entitled to vote at the Annual Meeting. Proxies cannot be voted for more than three persons. The three nominees nominated by the Board to serve as Class I directors must receive the most "For" votes (among votes properly cast in person or by proxy) of nominees for the vacancies in such director class in order to be elected. Shares represented by executed proxies will be voted, if authority to do so is not withheld, "For" the election of the nominees named below. Only votes "For" or "Withheld" will affect the outcome.

The following table sets forth certain information as of March 15, 2012 with respect to our directors, including the three persons nominated for election by our Board at the Annual Meeting.

Name	Age	Director Since
James W. Young, Ph.D.	67	2000
Daniel N. Swisher, Jr.	48	2004
Matthew K. Fust	47	2005
Homer L. Pearce, Ph.D.	59	2006
David C. Stump, M.D.	62	2006
Edward Hurwitz	48	2009
Dayton Misfeldt	38	2009
Helen S. Kim	49	2009
Steven B. Ketchum, Ph.D.	47	2012

The principal occupations and positions of our directors, including the three persons nominated for election by our Board at the Annual Meeting, for at least the past five years, are as follows:

Class I Nominees for Election to the Board of Directors for a Three-Year Term Expiring in 2015

Edward Hurwitz has served as a director of Alta Partners, a venture capital firm, since June 2002. From June 1997 to October 2002, Mr. Hurwitz served as Senior Vice President and Chief Financial Officer of Affymetrix, Inc., a microarray technology company. From April 1994 to June 1997, Mr. Hurwitz was a biotechnology research analyst for Robertson Stephens & Company, and from April 1992 to April 1994 was a biotechnology research analyst for Smith Barney Shearson. From November 1990 to April 1992, Mr. Hurwitz practiced commercial law at Cooley LLP. Mr. Hurwitz also serves on the boards of directors of Cara

Therapeutics, Inc. and MacroGenics, Inc., both privately held companies. Mr. Hurwitz holds a B.A. in Molecular Biology from Cornell University, a J.D. from the University of California, Berkeley Boalt Hall School of Law and an M.B.A. from the Haas School of Business. Mr. Hurwitz was appointed as a director pursuant to the Investor Rights Agreement executed in connection with Alta Partners' purchase of our securities in a private placement of equity securities in April 2009, or the Private Placement. See "*Certain Relationships and Related Party Transactions—Investor Rights Agreements*" for a description of this agreement and related amendments. The Board has concluded that Mr. Hurwitz should serve on our Board due to his financial, legal and scientific expertise, as well as his deep understanding of the biotechnology industry, which the Board believes makes him an important resource for the Board as it assesses both financial and strategic decisions.

Helen S. Kim currently serves as a strategic advisor to NGM Biopharmaceuticals, Inc., where she served as the chief business officer from August 2009 to January 2012. Prior to joining NGM, Ms. Kim was the chief executive officer of TRF Pharma, where she served from December 2008 to June 2009. Prior to her service at TRF, Ms. Kim served as the president and chief executive officer of Kosan Biosciences, Inc. from January 2008 to July 2008. From August 2003 to December 2007, Ms. Kim served as chief program officer of the Gordon and Betty Moore Foundation and from 2002 to 2003 as chief business officer of Affymax, Inc. Prior to her service at Affymax, Ms. Kim was senior vice president of corporate development of Onyx Pharmaceuticals, Inc. from 1999 to 2002. Ms. Kim also served as the vice president of strategic marketing at Chiron Corporation from 1989 to 1998. Ms. Kim currently serves on the board of Immunocellular Therapeutics, Ltd., a publicly traded biotechnology company, and West Coast Clinical Trial Global, a privately held global contract research organization. Ms. Kim holds a B.S. in Chemical Engineering from Northwestern University and an M.B.A. from the University of Chicago. Ms. Kim was appointed as a director pursuant to the Investor Rights Agreement executed in connection with Growth Equity Opportunities Fund, LLC's purchase of our securities in the Private Placement. See "*Certain Relationships and Related Party Transactions—Investor Rights Agreements*" for a description of this agreement and related amendments. The Board has concluded that Ms. Kim should serve on our Board due to her corporate development, managerial and scientific expertise, which the Board believes makes her an important resource for the Board as it assesses both tactical and strategic business decisions.

Dayton Misfeldt is an Investment Partner at Bay City Capital LLC, a venture capital firm, and focuses on biopharmaceutical investment opportunities. Prior to joining Bay City Capital in May 2000, Mr. Misfeldt was a Vice President at Roth Capital Partners where he worked as a sell-side analyst covering the biopharmaceutical industry. Mr. Misfeldt has also worked as a Project Manager at LifeScience Economics. Mr. Misfeldt received a B.A. in Economics from the University of California, San Diego. Mr. Misfeldt was appointed as a director pursuant to the Investor Rights Agreement executed in connection with Bay City Capital's purchase of our securities in the Private Placement. See "*Certain Relationships and Related Party Transactions—Investor Rights Agreements*" for a description of this agreement and related amendments. The Board has concluded that Mr. Misfeldt should serve on our Board due to his financial expertise and strong understanding of the biotechnology industry, which the Board believes makes him an important resource for the Board as it assesses both financial and strategic decisions.

Class II Directors Continuing in Office Until the 2013 Annual Meeting

James W. Young, Ph.D. served as Executive Chairman of our Board from December 2003 to April 2009 and has served as non-executive Chairman of our Board since April 2009. From May 2000 to November 2003, Dr. Young served as our Chief Executive Officer. In April 2006, he joined 5AM Ventures, a venture capital firm, as a Venture Partner. From September 1995 to March 2000, Dr. Young served as Vice President of Research, as Senior Vice President, Research and Development, and as Group Vice President at ALZA Corporation, a pharmaceutical company. From September 1992 to August 1995, Dr. Young served as Senior Vice President for Business Development and as President of the Pharmaceuticals Division of Affymax, N.V., a biopharmaceutical company. From September 1987 to August 1992, he served as Senior Vice President for Business Development and as Senior Vice President and General Manager of the Pharmaceuticals Division at Sepracor Inc., a pharmaceutical company. Dr. Young also served as a director of Corixa Corporation, a biopharmaceutical

company, from 2000 to July 2005. Dr. Young also serves as a member of the boards of directors of two private companies, Pearl Therapeutics, Inc. and Incline Therapeutics, Inc. Dr. Young holds a B.S. in Chemistry from Fordham University and a Ph.D. in Organic Chemistry from Cornell University. The Board has concluded that Dr. Young should serve on our Board due to his prior history as our Chief Executive Officer and his long tenure as Board Chairman, which brings continuity to the Board and a depth of understanding. In addition, the Board believes that he brings operational and industry expertise due to his experience in management of other pharmaceutical and biopharmaceutical companies, as well as leadership skills that are important to the Board.

Steven B. Ketchum, Ph.D. served as our Senior Vice President, Research and Development from June 2008 to February 2012. In February 2012, Dr. Ketchum accepted the position of President of Research and Development, Senior Vice President at Amarin Corporation plc, a biopharmaceutical company, and concurrently transitioned from his executive role to a member of our Board. From May 2005 to May 2008, Dr. Ketchum served as Senior Vice President, Research & Development and Medical Affairs of Reliant Pharmaceuticals, Inc., a pharmaceutical company, which was acquired by GlaxoSmithKline in 2007. From June 2002 to April 2005, Dr. Ketchum served as Senior Vice President, Operations and Regulatory Affairs for IntraBiotics Pharmaceuticals, Inc. Dr. Ketchum also held positions at ALZA Corporation from November 1994 to May 2002, most recently as Senior Director, Regulatory Affairs. Dr. Ketchum earned a Ph.D. in Pharmacology from University College London (funded by the Sandoz Institute for Medical Research) and a B.S. in Biological Sciences from Stanford University. The Board has concluded Dr. Ketchum should serve on our Board due to his tenure at Sunesis and his scientific and regulatory expertise and industry background, which position him to make an effective contribution to the Board, and which the Board believes to be particularly important as we continue our drug development efforts and progress towards potential future regulatory filings.

Homer L. Pearce, Ph.D. served in various capacities at Eli Lilly & Company between 1979 and March 2006, including Vice President, Cancer Research and Clinical Investigation from 1994 to 2002 and Distinguished Research Fellow, Cancer Research, Lilly Research Laboratories from 2002 to March 2006. Since August 2006, Dr. Pearce has served as a consultant to Sunesis, reviewing, assessing and advising us on our development plans and strategies. He is a member of the American Association for Cancer Research, the American Chemical Society and the American Association for the Advancement of Science. Dr. Pearce holds a B.S. from Texas A&M University and a Ph.D. in Organic Chemistry from Harvard University. The Board has concluded that Dr. Pearce should serve on our Board due to his scientific expertise and industry background, which are valuable as we continue our drug development efforts.

Class III Directors Continuing in Office Until the 2014 Annual Meeting

Matthew K. Fust has been Executive Vice President and Chief Financial Officer at Onyx Pharmaceuticals, Inc., a biopharmaceutical company, since January 2009. Prior to joining Onyx, Mr. Fust was Executive Vice President and Chief Financial Officer at Jazz Pharmaceuticals, Inc., a pharmaceutical company, which he joined in May 2003. From May 2002 to May 2003, Mr. Fust was Chief Financial Officer at Perlegen Sciences, Inc., a biotechnology company. From June 1996 to January 2002, Mr. Fust was with ALZA Corporation, first as Controller and then as Chief Financial Officer. Mr. Fust holds a B.A. in Accounting from the University of Minnesota and an M.B.A. from the Stanford Graduate School of Business. The Board has concluded that Mr. Fust should serve on our Board due to his financial expertise with its focus on the pharmaceutical and biopharmaceutical industries. This expertise makes him an important resource for the Board in its oversight of our financial operations and related reporting.

David C. Stump, M.D. has been Executive Vice President, Research and Development, at Human Genome Sciences, Inc., a biopharmaceutical company, since November 1999. From December 2003 to May 2007, Dr. Stump served as Executive Vice President of Drug Development at Human Genome Sciences and, from November 1999 to December 2003, as its Senior Vice President, Drug Development. Prior to joining Human Genome Sciences, Dr. Stump held roles of increasing responsibility at Genentech, Inc., a biopharmaceutical company, from 1989 to 1999, including Vice President, Clinical Research and Genentech Fellow. Prior to joining

Genentech, Dr. Stump was an Associate Professor of Medicine and Biochemistry at the University of Vermont. Since September 2006, Dr. Stump has served as a consultant to Sunesis, reviewing, assessing and advising us on our development plans and strategies. Dr. Stump is a member of the board of directors of Dendreon Corporation, a biotechnology company, and a member of the board of trustees of Earlham College. Dr. Stump holds an A.B. from Earlham College and an M.D. from Indiana University and did his residency and fellowship training in internal medicine, hematology, oncology and biochemistry at the University of Iowa. The Board has concluded that Dr. Stump should serve on our Board due to his scientific and clinical expertise and industry background, which are valuable as we continue our drug development efforts.

Daniel N. Swisher, Jr. has served as our Chief Executive Officer, or CEO, and a member of our Board since January 2004 and also as our President since August 2005. From December 2001 to December 2003, he served as our Chief Business Officer and Chief Financial Officer. From June 1992 to September 2001, Mr. Swisher served in various management roles, including Senior Vice President of Sales and Marketing, for ALZA Corporation. Mr. Swisher also serves on the board of Cerus Corporation, a publicly traded biopharmaceutical company. Mr. Swisher holds a B.A. in History from Yale University and an M.B.A. from the Stanford Graduate School of Business. The Board has concluded that Mr. Swisher should serve on our Board due to his long tenure as our CEO, which brings continuity to the Board, his operational and industry expertise through his previous managerial roles as well as his detailed understanding of our business.

There are no family relationships among any of our executive officers, directors or persons nominated to become one of our directors.

THE BOARD OF DIRECTORS RECOMMENDS
A VOTE *FOR* THE ELECTION OF THE DIRECTORS
COVERED BY PROPOSAL NO. 1.

PROPOSAL NO. 2

RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee of the Board, or the Audit Committee, has selected Ernst & Young LLP, or Ernst & Young, as our independent registered public accounting firm for the year ending December 31, 2012 and has further directed that management submit the selection of Ernst & Young for ratification by the stockholders at the Annual Meeting. Ernst & Young has audited our financial statements since our inception in 1998. Representatives of Ernst & Young are expected to be present at our Annual Meeting, will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

Stockholder ratification of the selection of Ernst & Young as our independent registered public accounting firm is not required by our bylaws or other governing documents. However, the Audit Committee is submitting the selection of Ernst & Young to our stockholders for ratification as a matter of good corporate governance. If the stockholders fail to ratify the selection, the Audit Committee will reconsider whether or not to retain Ernst & Young. Even if the selection is ratified, the Audit Committee in their discretion may direct the appointment of a different independent registered public accounting firm at any time during the year if they determine that such a change would be in the best interests of Sunesis and our stockholders.

Stockholders are requested in this Proposal No. 2 to ratify the selection of Ernst & Young as our independent registered public accounting firm for the year ending December 31, 2012. The affirmative vote of the holders of a majority of the shares present in person or represented by proxy and entitled to vote will be required to ratify this Proposal No. 2. Abstentions will be counted towards the tabulation of votes cast on the proposal and will have the same effect as "Against" votes. Broker non-votes are counted towards a quorum, but are not counted for any purpose in determining whether this matter has been approved. However, Proposal No. 2 is considered a routine matter, and therefore no broker non-votes are expected to exist in connection with Proposal No. 2.

THE BOARD OF DIRECTORS RECOMMENDS
A VOTE *FOR* PROPOSAL NO. 2.

INFORMATION ABOUT THE BOARD OF DIRECTORS AND CORPORATE GOVERNANCE

Independence of the Members of the Board of Directors

The laws and rules governing public companies and the NASDAQ Stock Market LLC, or NASDAQ, listing requirements obligate our Board to affirmatively determine the independence of its members. The Board consults with our corporate counsel to ensure that the Board's determinations are consistent with relevant securities and other laws and regulations regarding the definition of "independent," including those set forth in NASDAQ listing requirements, as in effect from time to time.

Consistent with these considerations, after a review of all relevant transactions or relationships between each director, or any of their family members, and Sunesis, our senior management and our independent registered public accounting firm, the Board has affirmatively determined that Ms. Kim, Drs. Young, Pearce and Stump and Messrs. Fust, Hurwitz and Misfeldt—a majority of our Board—are independent directors within the meaning of the applicable NASDAQ listing requirements.

In making its determination of independence, the Board considered our consulting relationships with Drs. Pearce and Stump, the relationships of Messrs. Hurwitz and Misfeldt and Ms. Kim with certain of our principal stockholders, which are described under "*Director Compensation*" beginning on page 21 of this proxy statement, and Dr. Young's position as our Executive Chairman until April 3, 2009 and compensation paid to Dr. Young in connection with such employment. In 2011, neither Dr. Pearce nor Dr. Stump received consulting fees pursuant to these arrangements and Dr. Young did not receive any compensation other than as described under "*Director Compensation*" below. Our Board does not believe that these stockholder and former employment relationships or these consulting arrangements interfere with these directors' exercise of independent judgment in carrying out their responsibilities as directors.

Board Leadership Structure

The Board is currently chaired by Dr. Young, Sunesis' former Executive Chairman. Dr. Young, or the Board Chairman, has authority, among other things, to call and preside over Board meetings, to set meeting agendas and to determine materials to be distributed to the Board. Accordingly, the Board Chairman has substantial ability to shape the work of the Board. We believe that separation of the positions of Board Chairman and CEO reinforces the independence of the Board in its oversight of our business and affairs. In addition, we believe that such separation creates an environment that is more conducive to objective evaluation and oversight of management's performance, increasing management accountability and improving the ability of the Board to monitor whether management's actions are in the best interests of Sunesis and its stockholders. As a result, we believe that having a Board Chairman separate from the CEO can enhance the effectiveness of the Board as a whole. In addition, Dr. Young's previous position as Executive Chairman helps ensure that the Board and management act with a common purpose. In our view, having a Board Chairman far removed from management has the potential to give rise to divided leadership, which could interfere with good decision making or weaken our ability to develop and implement strategy. Instead, we believe that Dr. Young's former management position makes him best positioned to act as a bridge between management and the Board, facilitating the regular flow of information and implementation of our strategic initiatives and business plans. We also believe that it advantageous to have a Board Chairman with extensive history and knowledge of Sunesis, as is the case with Dr. Young.

Role of the Board in Risk Oversight

The Board has an active role in overseeing management of Sunesis' risks, which it administers directly as well as through various standing committees of the Board that address risks inherent in their respective areas of oversight. In particular, our Board is responsible for monitoring and assessing strategic risk exposure, including information regarding our credit, liquidity and operations and the risks associated with each. Our primary risks

are currently associated with the development of vosaroxin, including our ability to raise additional capital to complete the development and potential commercialization of vosaroxin. The Audit Committee of the Board has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures. However, due to the criticality of these risks, they are also discussed to a great extent by the full Board at regularly scheduled meetings, or at ad hoc meetings with the full Board or a subset thereof. The Board also monitors the various risks associated with the development of vosaroxin, drawing on the experience and insight of the full membership thereof. The Audit Committee also monitors compliance with legal and regulatory requirements, in addition to oversight of the performance of our internal controls over financial reporting. The Nominating and Corporate Governance Committee of the Board, or the Nominating Committee, monitors the effectiveness of our corporate governance guidelines, including whether they are successful in preventing illegal or improper liability-creating conduct, and manages risks associated with the independence of the Board and potential conflicts of interest. The Compensation Committee of the Board, or the Compensation Committee, assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk taking. While each committee is responsible for evaluating certain risks and overseeing management of such risks, the entire Board is regularly informed through committee reports about such risks.

Meetings of the Board of Directors

Our Board held four meetings during 2011. Each Board member attended 75% or more of the aggregate meetings of the Board and of the committees on which he or she served.

Executive Sessions

The independent directors meet in executive session without management directors, non-independent directors or management present. These sessions take place prior to or following regularly scheduled Board meetings. The directors met in such sessions four times during 2011.

Information Regarding Committees of the Board of Directors

Our Board has three standing committees: the Audit Committee; the Compensation Committee; and the Nominating Committee. Each of these three standing committees has a written charter approved by our Board that reflects the applicable standards and requirements adopted by the SEC and NASDAQ. A copy of each charter can be found on our website, *www.sunesis.com*, under the section titled "Investors & Media" and under the subsection "Corporate Governance." Information contained in, or accessible through, our website is not a part of this proxy statement. The following table provides membership and meeting information for 2011 for each of the committees of the Board:

Name	Audit	Compensation	Nominating and Corporate Governance
Matthew K. Fust	X*	X	
Edward Hurwitz(1)	X	X	
Helen S. Kim(2)	X		
Dayton Misfeldt		X*	X
Homer L. Pearce, Ph.D.			X*
David C. Stump, M.D.	X		
Total Meetings in 2011	5	7	3

* Committee Chairperson.

(1) On March 22, 2012, Mr. Hurwitz resigned as a member of the Audit Committee and Compensation Committee.

(2) On March 22, 2012, Ms. Kim was appointed as a member of the Audit Committee.

Below is a description of each standing committee of the Board. The Board has determined that each committee member meets the applicable NASDAQ rules and regulations regarding "independence" and is free of any relationship that would impair his individual exercise of independent judgment with regard to Sunesis. The standing committees regularly report to the Board on their actions and recommendations. The committees periodically review their charters and assess their own performance. In addition, the Board, through the Nominating Committee, conducts an annual review of the role, function, roster and operation of each of the Board's standing committees.

Audit Committee

The Audit Committee was established by our Board to oversee our corporate accounting and financial reporting processes and audits of our financial statements. For this purpose, our Audit Committee is responsible for, among other things:

- overseeing the accounting and financial reporting processes of Sunesis and the audits of our financial statements, including reviewing our disclosures under "Management's Discussion and Analysis of Financial Condition and Results of Operations," earnings press releases and earnings guidance provided to analysts and ratings agencies;
- assisting our Board in its oversight of the integrity of our financial statements;
- determining and approving the initial engagement and retention of the independent registered public accounting firm;
- reviewing and approving the independent registered public accounting firm's performance of any proposed permissible audit and non-audit services and the fees for such services;
- reviewing and approving or rejecting transactions between us and any related persons;
- reviewing significant issues regarding accounting principles and financial statement presentations, including any significant changes in our selection or application of accounting principles, policies or practices;
- conferring with management and the independent registered public accounting firm regarding our policies and procedures regarding risk assessment and management;
- establishing procedures, as required under applicable law, for the receipt, retention and treatment of complaints received by us regarding accounting, internal accounting controls or auditing matters and the confidential and anonymous submission by employees or agents of concerns regarding questionable accounting or auditing matters;
- reviewing with counsel, the independent registered public accounting firm and management, as appropriate, any significant regulatory or other legal or accounting initiative or matter that may have a material impact on our financial statements, compliance programs and policies; and
- preparing the report required by the SEC rules to be included in our annual proxy statement.

The Audit Committee is chaired by Mr. Fust, and also includes Ms. Kim and Dr. Stump. Mr. Hurwitz served on the Audit Committee until his resignation from the Audit Committee on March 22, 2012. The Board reviews the NASDAQ definition of "independence" for Audit Committee members on an annual basis and has determined that all members of our Audit Committee are independent (as independence is currently defined in Rule 5605(c)(2)(A)(i) and (ii) of the NASDAQ listing requirements). The Board has also determined that

Mr. Fust qualifies as an "audit committee financial expert," as defined in applicable SEC rules. The Board made a qualitative assessment of Mr. Fust's level of knowledge and experience based on a number of factors, including his formal education and experience as a chief financial officer for public reporting companies.

Report of the Audit Committee of the Board of Directors(1)

The Audit Committee oversees our accounting and financial reporting processes and the audits of our financial statements on behalf of the Board. Management has the primary responsibility for establishing and maintaining adequate internal control over financial reporting, preparing the financial statements, and establishing and maintaining adequate controls over public reporting. Our independent registered public accounting firm for 2011, Ernst & Young, had responsibility for conducting an audit of our annual financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States), or PCAOB, and expressing an opinion on the conformity of those audited financial statements with U.S. generally accepted accounting principles.

In fulfilling its oversight responsibilities, the Audit Committee reviewed and discussed with management and with Ernst & Young our audited consolidated financial statements for the year ended December 31, 2011 included in our Annual Report on Form 10-K, including a discussion of the quality, not just the acceptability, of the accounting principles, the reasonableness of significant judgments and the clarity of disclosures in the financial statements.

The Audit Committee is responsible for evaluating, managing and approving the engagement of the independent registered public accounting firm, including the scope, extent and procedures for the annual audit and the compensation to be paid for these services, and all other matters the Audit Committee deems appropriate, including ensuring the independent registered public accounting firm's accountability to the Board and the Audit Committee.

The Audit Committee has discussed with Ernst & Young the matters required to be discussed by Statement on Auditing Standards No. 61, as amended (AICPA, *Professional Standards*, Vol. 1. AU section 380), as adopted by the PCAOB in Rule 3200T, which include, among other items, matters related to the conduct of the audit of our financial statements. The Audit Committee has also received the written disclosures and the letter from Ernst & Young required by applicable requirements of the PCAOB regarding Ernst & Young's communications with the Audit Committee concerning independence, and has discussed with Ernst & Young their independence.

Based on the review and discussions referred to above, the Audit Committee has recommended to the Board that the audited consolidated financial statements be included in our Annual Report on Form 10-K for the year ended December 31, 2011.

Matthew K. Fust, *Chairman*
Edward Hurwitz(2)
David C. Stump, M.D.

(1) The material in this report is not "soliciting material," is not deemed "filed" with the SEC and is not to be incorporated by reference in any of our filings under the Securities Act of 1933, as amended, or the Securities Act, or the Exchange Act, other than our Annual Report on Form 10-K, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

(2) Mr. Hurwitz served on the Audit Committee until his resignation from the Audit Committee on March 22, 2012.

Compensation Committee

Our Compensation Committee is responsible for, among other things:

- fulfilling the Board's role in overseeing our compensation plans, policies and programs, including reviewing and approving corporate performance goals and objectives;
- assisting our Board in discharging its responsibilities with respect to officer, employee, consultant and director compensation, including making recommendations to our Board regarding non-employee director compensation;
- establishing corporate and individual performance objectives relevant to the compensation of our executive officers and other senior management and evaluating their performance in light of these stated objectives;
- reviewing and discussing the disclosures contained in our Compensation Discussion and Analysis report included in our annual proxy statement, if required;
- assessing and monitoring whether any of our compensation policies and programs has the potential to encourage excessive risk-taking;
- preparing the report required by SEC rules to be included in our annual proxy statement, if required; and
- supervising the administration of our stock option plans, employee stock purchase plan and other compensation and incentive programs and administering any plans and programs designed and intended to provide compensation for our officers, including severance arrangements and change of control protections.

The Compensation Committee is chaired by Mr. Misfeldt, and also includes Mr. Fust. Mr. Hurwitz served on the Compensation Committee until his resignation from the Compensation Committee on March 22, 2012. Following Mr. Hurwitz's resignation from the Compensation Committee, the Board maintained the size of the Compensation Committee at two members. All members of our Compensation Committee are "independent" (as independence is currently defined in Rule 5605(a)(2) of the NASDAQ listing requirements). Each member of the Compensation Committee is an "outside" director as that term is defined in Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code, and a "non-employee" director within the meaning of Rule 16b-3 of the rules promulgated under the Exchange Act.

Under its charter, the Compensation Committee may form, and delegate authority to, subcommittees, as appropriate.

Role and Authority of the Compensation Committee and the Board

The Compensation Committee is charged with determining and approving the compensation of our CEO and other members of senior management, including those designated as reporting officers under Section 16 of the Exchange Act and referred to as executive officers.

In recommending or determining (as applicable) executive compensation, the Compensation Committee and the Board take into consideration each executive's success in achieving his or her individual performance goals and objectives and the achievement of our corporate performance goals and objectives deemed relevant to such executive. The Compensation Committee and our Board also consider the compensation paid to similarly situated officers at comparable companies, the compensation paid to executives in past years and any other

factors deemed appropriate under the circumstances. In addition, in the case of the long-term equity incentive component of compensation, the Compensation Committee and the Board consider Sunesis' performance and relative stockholder return.

While the Compensation Committee is ultimately responsible for making all compensation decisions affecting our executives, our CEO plays an important role in the process underlying such decisions. However, none of our executives participate in the portion of any Compensation Committee or Board meetings regarding the review of his or her own performance or the determination of the actual amounts of his or her compensation. The Compensation Committee may also delegate duties or responsibilities to subcommittees, as appropriate.

Compensation Committee Process

Throughout the year, the Compensation Committee meets in person or via telephone. As a general rule, the Compensation Committee conducts the annual process described below with respect to determining executive compensation:

Review Overall Compensation Philosophy. The process for determining compensation for each year generally begins in the prior year and continues through the beginning of the year, with a review and analysis of our total compensation philosophy to confirm the frame of reference which will be used in setting compensation for the upcoming year. This analysis also includes a determination of the composition of our peer group and the target levels of various components of compensation based on market data from such peer group. At the request of the Compensation Committee, a compensation consulting firm may assist with this analysis.

During 2010 and 2011, the Compensation Committee retained Radford Surveys + Consulting, or Radford, an independent compensation consulting firm, to assist in reviewing our overall compensation philosophy in comparison to market trends and industry standards, designing the peer group of companies for benchmarking and assessing competitive market data on executive compensation. Representatives from Radford attended certain Compensation Committee meetings in 2010 and 2011 at the request of the Compensation Committee and made recommendations, including recommendations relating to executive compensation for 2011 and 2012, respectively.

Analyze Peer Data; Make Equity Awards. A representative of management annually compiles data regarding executive total compensation (base salary, bonus and equity) from our selected peer group, with the assistance of a compensation consulting firm as deemed necessary. The Compensation Committee then meets to review the peer data to determine the equity awards to be granted to executives. The same data is also analyzed in preparation for making any adjustments to base salary and bonus targets in the coming year. In 2011, the Compensation Committee made certain option grants to our executive officers to align their stock ownership levels with our selected peer group. See "*Executive Compensation—Summary Compensation Table*" and "*Executive Compensation and Related Information—Outstanding Equity Awards Table at December 31, 2011*" below for more information regarding option grants in 2011.

Determine Base Salary, Bonus Target and Performance Objectives for the Coming Year. Each year, the Compensation Committee meets to discuss and, as appropriate, approve adjustments to base salary and bonus targets for executives for the coming year based on its analysis of peer data. The Compensation Committee also meets to select the corporate and individual objectives against which to measure executive performance for the coming year and to recommend such objectives to the Board for adoption. At this time, the Compensation Committee will generally review our established total compensation philosophy, as well as the selected peer group data previously compiled by a representative of management and a compensation consulting firm, if engaged. Our CEO will make recommendations to the Compensation Committee regarding the base salary and bonus targets of executives (other than for himself) based on such data, as well as performance objectives for the upcoming year. As part of this process, each executive will work with our CEO to develop individual performance goals for the new performance period. The Compensation Committee will then approve total

compensation of our CEO and other executives, including base salary, bonus and equity compensation, and either approve or recommend to the Board for approval individual objectives for the applicable new performance period. The Board will approve the corporate objectives and, if applicable, individual objectives and assign a relative weighting to each objective.

In early 2011, the Compensation Committee reviewed executive compensation and approved certain adjustments to executive base salaries and executive bonus targets for the year ended December 31, 2011. The Compensation Committee also reviewed and recommended to the Board for approval both corporate and individual performance objectives for the year ended December 31, 2011. The Board subsequently approved such performance objectives, which formed the basis for the evaluation of bonuses to be paid to employees under the 2011 Bonus Program in early 2012. See section titled "*Executive Compensation and Related Information—Narrative to Summary Compensation Table—2011 Bonus Program*" below for more information regarding our 2011 Bonus Program.

Assess Prior Year's Performance; Determine Bonuses. Historically, every year, the Compensation Committee engages in an active dialogue with our CEO regarding Sunesis' performance in the prior year as measured against the established corporate objectives for such year. The Compensation Committee also reviews with our CEO the performance of each executive, taking into consideration each executive's success in achieving his or her individual and applicable team objectives and the achievement of our corporate objectives deemed relevant to such executive. Our CEO also provides his evaluation of his own performance for the prior year. Our CEO then makes recommendations to the Compensation Committee of individual amounts of bonuses (other than for himself) in light of the analysis of the prior year's performance.

In early 2012, the Compensation Committee assessed each executive officer's performance of individual objectives and the overall corporate objectives. The Compensation Committee, using its subjective judgment of the Company's performance in 2011 measured against performance goals, approved the payment of cash bonuses to the executive officers. See sections titled "*Executive Compensation and Related Information—Summary Compensation Table*" and "*Executive Compensation and Related Information—Narrative to Summary Compensation Table—2011 Bonus Program*" below for more information.

Nominating and Corporate Governance Committee

Our Nominating Committee is responsible for, among other things:

- recommending to our Board the composition and operations of our Board;
- identifying and evaluating individuals qualified to serve as members of our Board, and recommending to our Board director nominees for the annual meeting of stockholders and to fill vacancies;
- overseeing all aspects of corporate governance on behalf of our Board, including making recommendations regarding corporate governance issues and developing a set of corporate governance guidelines applicable to us;
- recommending to our Board the responsibilities of each Board committee, the composition and operation of each Board committee, and director nominees for assignment to each Board committee; and
- overseeing our Board's annual evaluation of its performance and the performance of our Board committees.

The Nominating Committee is chaired by Dr. Pearce and also includes Mr. Misfeldt, each of whom is "independent" (as independence is currently defined in Rule 5605(a)(2) of the NASDAQ listing requirements).

Director Nominations Process

The Nominating Committee is charged with monitoring the size and composition of our Board. In addition, the Nominating Committee has primary responsibility for reviewing, evaluating and recommending to the Board the slate of nominees for director to be elected by the stockholders at each annual meeting of stockholders and, where applicable, to fill vacancies. In its exercise of these responsibilities, the Nominating Committee considers the appropriate size and composition of our Board, taking into account that our Board as a whole should have competency in the following areas:

- industry knowledge;
- accounting and finance;
- business judgment;
- management;
- leadership;
- business strategy;
- corporate governance; and
- risk management.

The Nominating Committee evaluates the types of backgrounds, skills, and attributes which are needed to help strengthen our Board in light of the need for an appropriate balance of the above competencies. This evaluation takes place in the context of the current composition of the Board, our operating requirements and the interests of Sunesis and our stockholders.

The Nominating Committee identifies nominees for director by first evaluating the current directors whose terms are about to expire, considering the above criteria and any potential conflicts of interest as well as applicable independence and experience requirements. In the case of incumbent directors whose terms are about to expire, the Nominating Committee considers the director's demonstrated service and commitment to Sunesis, as well as his or her willingness to continue in service on our Board. If any incumbent director whose term is expiring does not wish to continue in service as a director, if the Nominating Committee decides not to nominate a member for re-election, or if the Nominating Committee wishes to increase the size of the Board, it will identify the desired skills and experience of a new nominee as outlined above unless the Board determines not to fill the vacancy. In 2011, we did not engage a third party to identify or assist in identifying potential director nominees, although we have done so in the past and reserve the right to do so in the future.

In addition to evaluating core competencies, when considering candidates for director, the Nominating Committee will consider whether such candidates have sufficient time to devote to the affairs of Sunesis as well as each candidate's reputation for integrity and commitment to rigorously represent the long-term interests of our stockholders. Other considerations include any potential conflicts of interest as well as applicable independence and experience requirements as set forth by applicable NASDAQ and SEC rules and regulations. In addition, the Nominating Committee balances the value of continuity of service of incumbent Board members with that of obtaining new perspectives. With respect to new candidates for the Board, the Nominating Committee will also conduct any necessary or appropriate inquiries into the backgrounds and qualifications of such candidates. The Nominating Committee also believes that the Board should be comprised of individuals whose backgrounds and experience complement those of other Board members, and also considers whether a prospective nominee promotes a diversity of talent, skill, expertise, background, perspective and experience, including with respect to age, gender, ethnicity, place of residence and specialized experience. The Nominating Committee does not assign specific weights to particular criteria and nominees are not required to possess any particular attribute.

The Nominating Committee also recommends to our Board the responsibilities and composition of the Board's committees and evaluates and recommends to the Board those directors to be appointed to the various committees, including the directors recommended to serve as chairman of each committee. The evaluation of such appointments takes into consideration, among other factors, applicable independence and experience requirements as set forth by applicable NASDAQ and SEC rules and regulations and the membership criteria specified in the relevant committee charter.

The Nominating Committee will consider director candidates recommended by our stockholders. The committee does not intend to alter the manner in which it evaluates candidates, including the criteria set forth above, based on whether or not the candidate is recommended by a stockholder. The Nominating Committee will consider stockholders' nominations for directors only if written notice is timely received by our Corporate Secretary at Sunesis Pharmaceuticals, Inc., 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080, and contains the information required for such nominations in accordance with our bylaws. To be timely, notice must be received not less than 120 days prior to the first anniversary of the date on which we first mailed a proxy statement to stockholders in connection with the preceding year's annual meeting, unless the date of the annual meeting has been changed by more than 30 days from the date of the prior year's meeting, in which case notice must be received not later than the later of the 120th day prior to such annual meeting or the 10th day following the day on which public announcement of the date of such meeting is first made. Submissions must include the full name of the proposed nominee, a description of the proposed nominee's business experience for at least the previous five years, complete biographical information, a description of the proposed nominee's qualifications as a director and a representation that the nominating stockholder is a beneficial or record holder of our stock and has been a holder for at least one year. Any such submission must be accompanied by the written consent of the proposed nominee to be named as a nominee and to serve as a director if elected. The Nominating Committee did not receive any stockholder nominations during 2011.

Director Evaluations

On an annual basis, the Nominating Committee conducts an evaluation of the Board, the functioning of the committees and each individual member of the Board as deemed appropriate and necessary.

Stockholder Communications with the Board of Directors

Our stockholders may communicate with the Board by writing to our Corporate Secretary at Sunesis Pharmaceuticals, Inc., 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080. Our Corporate Secretary will review these communications and will determine whether they should be presented to our Board. The purpose of this screening is to allow the Board to avoid having to consider irrelevant or inappropriate communications. All communications directed to the Audit Committee in accordance with our Complaint, Investigation and Whistleblower Policy that relate to questionable accounting or auditing matters involving Sunesis will be promptly and directly forwarded to the chairman of the Audit Committee.

Annual Meeting Attendance

We have a corporate policy that encourages our directors to attend our annual stockholder meetings. In 2011, Mr. Swisher attended our annual meeting.

Corporate Governance Guidelines

Our Board has documented our governance practices by adopting Corporate Governance Guidelines to assure that the Board will have the necessary authority and practices in place to review and evaluate our business operations as needed and to make decisions that are independent of our management. The guidelines are also intended to align the interests of directors and management with those of our stockholders. The Corporate Governance Guidelines clarify the role of the Board in reviewing, approving and monitoring fundamental

financial and business strategy and major corporate actions; ensuring processes are in place for maintaining the integrity of Sunesis and its financial statements; assessing major risks presented to Sunesis and reviewing options for their mitigation; and selecting, evaluating and compensating our CEO, Chairman and other officers of Sunesis. The Corporate Governance Guidelines also set forth the practices our Board intends to follow with respect to director qualification and selection, board composition and selection, board meetings and involvement of senior management, board committee composition and selection, director access to management and independent advisors, and non-employee director compensation and continuing education. The Corporate Governance Guidelines were adopted by the Board to, among other things, reflect changes to the legal and regulatory requirements, including the NASDAQ listing requirements and SEC rules, and evolving best practices and other developments.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our executive officers, directors and persons who own more than 10% of our common stock to file reports of ownership and changes in ownership with the SEC. Executive officers, directors and greater than 10% stockholders are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file.

To our knowledge, based solely on a review of the copies of reports furnished to us, we believe that during the year ended December 31, 2011, our executive officers, directors and greater than 10% stockholders complied with all Section 16(a) filing requirements.

Director Compensation

Board and Committee Fees and Awards.

Commencing in 2011, on the date of our annual meeting of stockholders and on the three-month anniversary thereof for the subsequent three quarters, each non-employee director of our Board (other than the Board Chairman) is entitled to receive a quarterly payment of $7,500 and the non-employee Board Chairman is entitled to receive a quarterly payment of $12,500, each in connection with his or her services as a director and Board Chairman, respectively. Additionally, on the same dates as above, the non-employee director who serves as chairman of the Audit Committee, Compensation Committee or Nominating Committee will be entitled to receive a quarterly payment of $2,500, $1,875 and $1,875, respectively, for service as chairman. Each non-employee director who serves on a committee will be entitled to receive a quarterly payment of $1,250 for service as a member of the committee.

Messrs. Hurwitz and Misfeldt directors waived their cash compensation in 2011. Our CEO did not receive any additional compensation in 2011 for his service on our Board.

On June 30, 2011, each non-employee director of our Board (other than the Chairman of our Board) received a grant of non-qualified stock options to purchase 50,000 shares of our common stock under our 2011 Equity Incentive Plan, or the 2011 Plan, and the non-employee Board Chairman received a grant of non-qualified stock options to purchase 60,000 shares of our common stock under the 2011 Plan. Each of these options vests monthly over a two-year period. We have not adopted a policy for granting equity awards to our non-employee directors; the Board may make future equity awards to the non-employee directors in its discretion.

Consulting Arrangements.

We have entered into consulting agreements with Drs. Pearce and Stump.

In August 2006, we entered into a consulting agreement with Dr. Pearce under which his services include reviewing, assessing and advising us on our development plans and strategies. Pursuant to the consulting agreement, Dr. Pearce is entitled to receive up to $3,000 a day, prorated at an hourly rate of $375 an hour, for his consulting services. Total payments to Dr. Pearce under this agreement may not exceed $40,000 during any one-year period. In 2011, Dr. Pearce received no consulting fees pursuant to this arrangement.

In September 2006, we entered into a consulting agreement with Dr. Stump under which his services include reviewing, assessing and advising us on our development plans and strategies. Pursuant to the consulting agreement, Dr. Stump is entitled to receive up to $3,000 a day, prorated at an hourly rate of $375 an hour, for his consulting services. Total payments to Dr. Stump under this agreement may not exceed $40,000 during any one-year period. In 2011, Dr. Stump received no consulting fees pursuant to this arrangement.

Director Compensation Table

The following table sets forth the compensation information for our non-employee directors for the year ended December 31, 2011. The compensation received by Mr. Swisher, as a named executive officer, is set forth in the "*Executive Compensation and Related Information—Summary Compensation Table*" on page 24 of this proxy statement.

Name	Fees Earned or Paid in Cash ($)(1)	Option Awards ($)(2)(3)	Total ($)
Matthew K. Fust	$45,000	$72,690	$117,690
Edward Hurwitz	—	72,690	72,690
Helen S. Kim	30,000	72,690	102,690
Dayton Misfeldt	—	72,690	72,690
Homer L. Pearce, Ph.D.	37,500	72,690	110,190
David C. Stump M.D.	35,000	72,690	107,690
James W. Young, Ph.D.	50,000	87,228	137,228

(1) Consists of fees earned for Board and committee meeting attendance as described above.

(2) The dollar amounts in this column represent the aggregate grant date fair value of stock option awards granted pursuant to the 2011 Plan in the year ended December 31, 2011. These amounts have been calculated in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or FASB ASC Topic 718. Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. For additional information on the valuation assumptions, refer to Note 11, *Stock-Based Compensation*, to the Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2011 which identifies assumptions made in the valuation of option awards in accordance with FASB ASC Topic 718.

(3) On June 30, 2011, each non-employee director of our Board (other than the Board Chairman) received a grant of non-qualified stock options to purchase 50,000 shares of our common stock. The aggregate grant date fair value of each such option award was $72,690. On the same date, the non-employee Board Chairman received a grant of non-qualified stock options to purchase 60,000 shares of our common stock. The aggregate grant date fair value of this option award was $87,228. As of December 31, 2011, each non-employee director held stock options to purchase the following aggregate number of shares of our common stock: Mr. Fust held options to purchase 78,335 shares of our common stock; Messrs. Hurwitz and Misfeldt each held options to purchase 58,334 shares of our common stock; Ms. Kim held options to purchase 68,334 shares of our common stock; Drs. Pearce and Stump each held options to purchase 76,668 shares of our common stock; and Dr. Young held options to purchase 174,365 shares of our common stock.

CERTAIN INFORMATION WITH RESPECT TO EXECUTIVE OFFICERS

Biographies of Our Executive Officers

Set forth below is information regarding each of our executive officers as of March 15, 2012. Biographical information with regard to Mr. Swisher is presented under "*Proposal No. 1: Election of Nominees to the Board of Directors*" on page 10 of this proxy statement. Dr. Ketchum resigned from his position as Senior Vice President, Research and Development and was appointed to the Board effective February 15, 2012. His biographical information is presented under "*Proposal No. 1: Election of Nominees to the Board of Directors*" on page 9 of this proxy statement.

Name	Age	Position
Daniel N. Swisher, Jr.	48	CEO, President and Director
Eric H. Bjerkholt	52	Executive Vice President, Corporate Development and Finance and Chief Financial Officer
Adam R. Craig, Ph.D.	46	Executive Vice President, Development and Chief Medical Officer
Steven B. Ketchum, Ph.D.	47	Former Senior Vice President, Research and Development

The principal occupations and positions for at least the past five years of our executive officers, other than Mr. Swisher, are as follows:

Eric H. Bjerkholt served as our Senior Vice President, Corporate Development and Finance and Chief Financial Officer from February 2007 to January 2012, at which time he was promoted to Executive Vice President, Corporate Development and Finance and Chief Financial Officer. From January 2004 to January 2007, he served as our Senior Vice President and Chief Financial Officer. From January 2002 to January 2004, Mr. Bjerkholt served as Senior Vice President and Chief Financial Officer at IntraBiotics Pharmaceuticals, Inc., a pharmaceutical company focused on the development of antibacterial and antifungal drugs for the treatment of serious infectious diseases. Mr. Bjerkholt was a co-founder of LifeSpring Nutrition, Inc., a privately held nutraceutical company, and from May 1999 to March 2002 served at various times as its chief executive officer, President and Chief Financial Officer. From 1990 to 1997, Mr. Bjerkholt was an investment banker at J.P. Morgan & Co. Mr. Bjerkholt is a member of the Board of Directors of StemCells, Inc., a biotechnology company. Mr. Bjerkholt holds a Cand. Oecon degree in Economics from the University of Oslo and an M.B.A. from Harvard Business School.

Adam R. Craig, Ph.D. has served as our Executive Vice President, Development and Chief Medical Officer since March 2012. From September 2007 until December 2011, Dr. Craig served as Chief Medical Officer of ChemGenex Pharmaceuticals Ltd., a biotechnology company focused on the development of novel therapeutic agents for the treatment of cancer, and in similar roles following the acquisition of ChemGenex by Cephalon, Inc. in July 2011, and the acquisition of Cephalon, Inc. by Teva Pharmaceutical Industries Ltd. in October 2011. From December 2011until joining the Company, Dr. Craig served as a consultant to Teva Pharmaceutical Industries Ltd. Before joining ChemGenex, he was founding Chief Medical Officer at Innovive Pharmaceuticals, Inc., a hematology-focused company. Prior to joining Innovive, Dr. Craig held positions of increasing responsibility at ArQule Inc., Ilex Oncology Inc., and Antisoma plc. Dr. Craig received his medical qualifications from London University, a Ph.D. in molecular medicine from the University of Leeds, and an M.B.A. from the Open Business School in the United Kingdom. Dr. Craig is a member of the Royal College of Pediatrics and Child Health Physicians (UK) and undertook post-graduate training in pediatrics and pediatric oncology. He also currently serves as a member of the Commercialization Review Council for the Cancer Prevention Research Institute of Texas, a fund for cancer research and prevention programs and services.

EXECUTIVE COMPENSATION AND RELATED INFORMATION

Summary Compensation Table

The following table sets forth information regarding the compensation for services performed during the years ended December 31, 2011 and December 31, 2010 awarded to, paid to or earned by (i) our CEO and (ii) our two other most highly compensated executive officers, as determined by reference to total compensation for the year ended December 31, 2011. Such individuals are referred to as our "named executive officers," or NEOs, for the year ended December 31, 2011. All compensation awarded to, earned by, or paid to our NEOs are included in the table below for the years indicated.

Name and Principal Position	Year	Salary ($)(1)	Bonus ($)	Option Awards ($)(2)	Non-Equity Incentive Plan Compensation ($)	All Other Compensation ($)	Total ($)
Daniel N. Swisher, Jr.	2011	$417,150	$ —	$1,090,350	$191,900(3)(4)	$ 3,130(5)	$1,702,530
CEO and President	2010	405,000	—	—	232,875(6)(7)	3,455	641,330
Eric H. Bjerkholt	2011	350,000	—	654,210	120,750(3)(8)	3,466(9)	1,128,426
Executive Vice President, Corporate Development and Finance, Chief Financial Officer and Corporate Secretary	2010	340,000	—	—	156,825(6)(10)	3,466	500,291
Steven B. Ketchum, Ph.D.	2011	370,000	22,500(11)	654,210	95,700(3)	105,814(12)	1,248,224
Former Senior Vice President, Research and Development	2010	360,000	80,000(11)	—	176,850(6)(13)	106,627	723,477

(1) Includes amounts earned but deferred at the election of the named executive officer, such as salary deferrals under our 401(k) Plan established under Section 401(k) of the Code.

(2) The dollar amounts in this column represent the aggregate grant date fair value of stock option awards granted pursuant to our equity compensation plans in the year ended December 31, 2011. These amounts have been calculated in accordance with FASB ASC Topic 718. Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. For additional information on the valuation assumptions, refer to Note 11, *Stock-Based Compensation*, to the Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2011 which identifies assumptions made in the valuation of option awards in accordance with FASB ASC Topic 718.

(3) Represents amounts earned under the 2011 Bonus Program for performance from January 1, 2011 through December 31, 2011. Amounts earned under the 2011 Bonus Program were paid out on February 29, 2012. See "*Narrative to Summary Compensation Table—2011 Bonus Program.*"

(4) $95,950 of which was paid in the form of 55,143 fully vested shares our common stock based on the closing price of $1.74 of our common stock on The NASDAQ Capital Market on February 29, 2012.

(5) Consists of $630 in group life insurance premiums and $2,500 in matching 401(k) contributions.

(6) Represents amounts earned under the 2009 Bonus Program and 2010 Bonus Program for performance from May 8, 2009 through April 30, 2010 and June 30, 2010 through December 31, 2010, respectively. Amounts

earned under the 2009 Bonus Program were paid out on July 30, 2010. Amounts earned under the 2010 Bonus Program were paid out on February 28, 2011. See *"Narrative to Summary Compensation Table—2009 Bonus Program"* and *"Narrative to Summary Compensation Table—2010 Bonus Program"* below.

(7) Consists of (i) $81,000 earned under the 2009 Bonus Program, $40,500 of which was paid in the form of 13,917 fully vested shares of our common stock based on the closing price of $2.91 of our common stock on The NASDAQ Capital Market on July 30, 2010, and (ii) $151,875 earned under the 2010 Bonus Program, $75,937 of which was paid in the form of 36,160 fully vested shares our common stock based on the closing price of $2.10 of our common stock on The NASDAQ Capital Market on February 28, 2011.

(8) $30,187 of which was paid in the form of 17,349 fully vested shares our common stock based on the closing price of $1.74 of our common stock on The NASDAQ Capital Market on February 29, 2012.

(9) Consists of $966 in group life insurance premiums and $2,500 in matching 401(k) contributions.

(10) Consists of (i) $61,200 earned under the 2009 Bonus Program, $15,300 of which was paid in the form of 5,257 fully vested shares of our common stock based on the closing price of $2.91 of our common stock on The NASDAQ Capital Market on July 30, 2010, and (ii) $95,625 earned under the 2010 Bonus Program, $23,906 of which was paid in the form of 11,383 fully vested shares our common stock based on the closing price of $2.10 of our common stock on The NASDAQ Capital Market on February 28, 2011.

(11) Consists of bonuses paid on a discretionary basis by our Compensation Committee to cover Dr. Ketchum's commuting expenses. See *"Narrative to Summary Compensation Table—Offer Letter to Dr. Ketchum"* below.

(12) Consists of $102,684 in housing allowances, $630 in group life insurance premiums and $2,500 in matching 401(k) contributions.

(13) Consists of (i) $75,600 earned under the 2009 Bonus Program, $18,900 of which was paid in the form of 6,494 fully vested shares of our common stock based on the closing price of $2.91 of our common stock on The NASDAQ Capital Market on July 30, 2010, and (ii) $101,250 earned under the 2010 Bonus Program, $25,312 of which was paid in the form of 12,053 fully vested shares our common stock based on the closing price of $2.10 of our common stock on The NASDAQ Capital Market on February 28, 2011.

Narrative to Summary Compensation Table

Bonuses Paid to Dr. Ketchum

In the years ended December 31, 2010 and 2011, we paid bonuses to Dr. Ketchum totaling $80,000 and $22,500, respectively, on an ad hoc basis, in connection with his commute from his home in Far Hills, New Jersey to our offices, which amounts are reflected in the "Bonus" column of the *Summary Compensation Table.*

2009 Bonus Program

In May 2009, our Board approved the 2009 Bonus Program, which provided our executive officers and other eligible employees the opportunity to earn cash bonuses based on the level of achievement from the date of adoption through March 31, 2010 by us of certain corporate objectives and by each participant of certain individual performance objectives. A participant must have remained an employee through the payment date under the program to have earned a cash bonus.

The program originally provided that the closing of a financing or corporate transaction with net proceeds of $20.0 million had to occur on or before March 31, 2010 in order for bonuses to be earned under the program, or the Financing Threshold. In March 2010, the board extended the end date of the period covered by the

program from March 31, 2010 to April 30, 2010 and removed the Financing Threshold. However, if our cash balance did not equal or exceed $25.0 million on or before July 31, 2010, or the Cash Balance Threshold, as a result of proceeds from one or more transactions deemed to be aligned with the value-creating objectives of the program, no cash bonuses would have been earned under the program regardless of whether the corporate objectives and/or individual objectives were deemed to be achieved by the Compensation Committee.

The Board, with input from the Compensation Committee, approved the corporate objectives and assigned a weighting to each such objective. The Compensation Committee set the individual objectives of our CEO, as well as the individual objectives of the remaining executive officers based on the recommendations of the CEO. The individual objectives of non-executive participants were set by each participant's immediate supervisor.

Each eligible participant in the 2009 Bonus Program was eligible to receive a cash bonus in an amount up to a specified percentage of such participant's annual base salary earned in 2009, or the 2009 Bonus Targets. The 2009 Bonus Targets ranged from 25.0% to 40.0% of a participant's 2009 base salary for Vice President level employees and above. The 2009 Bonus Target and bonus target amount for each of our NEOs were as follows:

Named Executive Officer	Bonus Target Percentage	Bonus Target Amount
Daniel N. Swisher, Jr.	40.0%	$162,000
Eric H. Bjerkholt	30.0	102,000
Steven B. Ketchum, Ph.D.	30.0	108,000

In July 2010, the Compensation Committee approved the payment of bonuses to certain of our employees, including our NEOs, pursuant to our 2009 Bonus Program. The bonus payment amounts approved by the Compensation Committee were based on its determination of the degree to which the corporate and individual objectives were achieved and that we had met the Cash Bonus Threshold.

A portion of the bonuses awarded to our NEOs consisted of fully vested shares of our common stock granted under our 2005 Equity Incentive Award Plan, or 2005 Plan, in order to minimize the associated cash expense of the payouts. The number of shares of our common stock awarded to each of our NEOs under the 2005 Plan were determined based on the last closing price of our common stock as quoted on The NASDAQ Capital Market on July 30, 2010, the date the bonus payments were made, rounded down to the nearest whole share. The portions of the bonus payment amounts paid in cash and shares of our common stock are reflected in the "Non-Equity Incentive Plan Compensation" column for the year ended December 31, 2010 of the *Summary Compensation Table*.

2010 Bonus Program

In September 2010, our Board approved the 2010 Bonus Program, which provided our executive officers and other eligible employees the opportunity to earn cash bonuses based on the level of achievement from June 30, 2010 through December 31, 2010 by us of certain corporate objectives and by each participant of certain individual performance objectives. A participant must have remained an employee through the payment date under the 2010 Bonus Program to have earned a cash bonus.

The Board approved the corporate objectives and assigned a weighting to each objective. The Compensation Committee set the individual objectives of our CEO, as well as the individual objectives of the remaining executive officers based on the recommendations of the CEO. The individual objectives of non-executive participants were set by each participant's immediate supervisor.

Each eligible participant in the 2010 Bonus Program was eligible to receive a cash bonus in an amount up to a specified percentage of such participant's annual base salary earned in 2010, or the 2010 Bonus Targets. Under the 2010 Bonus Program, the 2010 Bonus Targets ranged from 25.0% to 50.0% of a participant's 2010 base salary for Vice President level employees and above. The 2010 Bonus Target and bonus target amount for each of our NEOs was as follows:

Named Executive Officer	Bonus Target Percentage	Bonus Target Amount
Daniel N. Swisher, Jr.	50.0%	$202,500
Eric H. Bjerkholt	37.5	127,500
Steven B. Ketchum, Ph.D.	37.5	135,000

In February 2011, the Compensation Committee approved the payment of bonuses to certain of our employees, including our NEOs, pursuant to our 2010 Bonus Program. The bonus payment amounts approved by the Compensation Committee were based on its determination of the degree to which such corporate and individual objectives were achieved.

A portion of the bonuses awarded to our NEOs consisted of fully vested shares of our common stock granted under our 2005 Plan in order to minimize the associated cash expense of the payouts. The number of shares of our common stock awarded to each of our NEOs under the 2005 Plan were determined based on the closing price of our common stock as quoted on The NASDAQ Capital Market on February 28, 2011, rounded down to the nearest whole share. The portions of the bonus payment amounts paid in cash and shares of our common stock are reflected in the "Non-Equity Incentive Plan Compensation" column for the year ended December 31, 2010 of the *Summary Compensation Table.*

2011 Bonus Program

In February 2011, our Board approved the 2011 Bonus Program, which provided our executive officers and other eligible employees the opportunity to earn cash bonuses based on the level of achievement from January 1, 2011 through December 31, 2011 by us of certain corporate objectives and by each participant of certain individual performance objectives. A participant must have remained an employee through the payment date under the 2011 Bonus Program to have earned a cash bonus.

The Board approved the corporate objectives and assigned a weighting to each objective. The Compensation Committee set the individual objectives of our CEO, as well as the individual objectives of the remaining executive officers based on the recommendations of the CEO. The individual objectives of non-executive participants were set by each participant's immediate supervisor.

Each eligible participant in the 2011 Bonus Program was eligible to receive a cash bonus in an amount up to a specified percentage of such participant's annual base salary earned in 2011, or the 2011 Bonus Targets. Under the 2011 Bonus Program, the 2011 Bonus Targets ranged from 30% to 50% of a participant's 2011 base salary for Vice President level employees and above. The 2011 Bonus Target and bonus target amount for each of our NEOs was as follows:

Named Executive Officer	Bonus Target Percentage	Bonus Target Amount
Daniel N. Swisher, Jr.	50.0%	$208,575
Eric H. Bjerkholt	37.5	131,250
Steven B. Ketchum, Ph.D.	37.5	138,750

In January 2012, the Board approved the payment of a bonus to Dr. Ketchum in connection with his transition to the Board and, in February 2012, the Compensation Committee approved the payment of bonuses to certain of our employees, including our NEOs other than Dr. Ketchum, pursuant to the 2011 Bonus Program. The bonus payment amounts approved by the Board and Compensation Committee were based on their respective determinations of the degree to which such corporate and individual objectives were achieved.

A portion of the bonuses awarded to our NEOs other than Dr. Ketchum consisted of fully vested shares of our common stock granted under our 2011 Plan in order to minimize the associated cash expense of the payouts. The number of shares of our common stock awarded to each of our NEOs under the 2011 Plan were determined based on the closing price of our common stock as quoted on The NASDAQ Capital Market on February 29, 2012, rounded down to the nearest whole share. The portions of the bonus payment amounts paid in cash and shares of our common stock are reflected in the "Non-Equity Incentive Plan Compensation" column for the year ended December 31, 2011 of the *Summary Compensation Table*."

Stock Option Grants in 2011

See "*Outstanding Equity Awards Table at December 31, 2011*" below for the terms of the stock options held by our NEOs as of December 31, 2011, including the stock options granted to our NEOs in 2011.

Outstanding Equity Awards Table at December 31, 2011

The following information sets forth the outstanding stock options held by our NEOs as of December 31, 2011. As of December 31, 2011, none of our NEOs held unearned equity incentive awards or unvested stock awards.

	Option Awards			
Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date
Daniel N. Swisher, Jr.	21,569	—	$15.30	02/06/12
CEO and President	7,843	—	15.30	04/16/13
	11,765	—	15.30	01/21/14
	3,529	—	15.30	06/24/14
	39,167	—	31.50	11/29/15
	20,000	—	29.10	10/13/16
	25,834	—	15.54	09/13/17
	72,917	52,083(1)	2.94	08/31/19
	93,750	656,250(2)	2.09	06/30/21
Eric H. Bjerkholt	9,804	—	15.30	01/21/14
Executive Vice President, Corporate Development and Finance,	2,941	—	15.30	06/09/14
Chief Financial Officer and Corporate Secretary	20,000	—	31.50	11/29/15
	10,000	—	29.10	10/13/16
	15,000	—	15.54	09/13/17
	9,844	1,406(3)	8.64	06/30/18
	43,752	31,248(1)	2.94	08/31/19
	56,250	393,750(2)	2.09	06/30/21
Steven B. Ketchum, Ph.D.	1,458	209(4)	8.64	06/30/18
Former Senior Vice President, Research and Development	20,416	2,917(5)	8.64	06/30/18
	43,750	31,250(1)	2.94	08/31/19
	56,250	393,750(2)	2.09	06/30/21

(1) This stock option was granted on August 31, 2009 pursuant to our 2005 Plan and vests monthly during the 48-month period measured from the grant date, subject to the holder's continued service with Sunesis.

(2) This stock option was granted on June 30, 2011 pursuant to our 2011 Plan and vests monthly during the 48-month period measured from the grant date, subject to the holder's continued service with Sunesis.

(3) This stock option was granted on June 30, 2008 pursuant to our 2005 Plan and vests monthly during the 48-month period measured from the grant date, subject to the holder's continued service with Sunesis.

(4) This stock option was granted on June 30, 2008 pursuant to our 2005 Plan and vested as to 1/4th of the shares on June 30, 2009, with the remaining shares vesting monthly over the following 36 months, subject to the holder's continued service with Sunesis.

(5) This stock option was granted on June 30, 2008 pursuant to our 2006 Plan and vested as to 1/4th of the shares on June 30, 2009, with the remaining shares vesting monthly over the following 36 months, subject to the holder's continued service with Sunesis.

Post-Termination Compensation

Dr. Ketchum

In connection with Dr. Ketchum's resignation from his position as our Senior Vice President, Research and Development in connection with his appointment to the Board, we entered into a letter agreement, or the Ketchum Agreement, with Dr. Ketchum on February 2, 2012. Under the terms of the Ketchum Agreement, Dr. Ketchum's outstanding options will continue vesting until June 30, 2012 and he will forfeit all shares that remain unvested as of such date. Dr. Ketchum is not entitled to any additional compensation in connection with his transition from executive officer to member of the Board, including under his Executive Severance Benefits Agreement.

Executive Severance Benefits Agreements

We entered into executive severance benefits agreements with each of our NEOs to provide certain benefits upon a termination of employment.

The Compensation Committee believes such agreements help us attract and retain employees in a marketplace where such protections are commonly offered by our peer companies. We also believe that severance protections offered upon terminations arising in connection with a change of control allow our executives to assess a potential change of control objectively, without regard to the potential impact of the transaction on their own job security. At the time we originally entered into the executive severance benefits agreements with each of the NEOs, the Compensation Committee determined that the terms of such executive severance benefits agreements reflected industry standard severance payments, benefits and equity acceleration.

Mr. Swisher. Under the executive severance benefits agreement with Mr. Swisher, if Mr. Swisher is terminated without cause or he is constructively terminated, he is entitled to receive a payment equal to 12 months salary and continued health benefits for a maximum period of the first 12 months following termination (which may be terminated earlier upon his coverage by a new employer), subject to the execution of a general release in favor of Sunesis. Under Mr. Swisher's executive severance benefits agreement, he will also be eligible for certain option acceleration benefits, as described in more detail below.

Mr. Bjerkholt. Under the executive severance benefit agreement with Mr. Bjerkholt, if Mr. Bjerkholt is terminated without cause or is constructively terminated, he is entitled to receive a payment equal to nine months salary and continued health benefits for a maximum period of the first nine months following termination (which may be terminated earlier upon his coverage by a new employer), subject to the execution of a general release in favor of Sunesis. Under Mr. Bjerkholt's executive severance benefits agreements, he will also be eligible for certain option acceleration benefits, as described in more detail below.

Under the executive severance benefits agreements, with Messrs. Swisher and Bjerkholt, in connection with a change of control of Sunesis, the vesting of 50.0% of each such executive officer's outstanding unvested

option awards is automatically accelerated immediately prior to the effective date of such change of control. In the event of a termination without cause or a constructive termination of any of these executives officers (i) within 12 months following a change of control, 100% of such executive officer's outstanding unvested awards would automatically accelerate on the date of termination, or (ii) if prior to or more than 12 months following a change of control, the outstanding awards that would have vested over the 12 month period following the date of termination would automatically accelerate for such executive officer.

In general, a "change of control" under these executive severance benefits agreements, as amended, includes an acquisition transaction in which a person or entity (with certain exceptions described in the agreements) becomes the direct or indirect beneficial owner of more than 50.0% of our voting stock, as well as the consummation of certain types of corporate transactions, such as a merger, consolidation, reorganization, business combination or sale of all or substantially all of our assets, pursuant to which our stockholders own, directly or indirectly, less than 50.0% of Sunesis or our successor, or if our stockholders approve a liquidation or dissolution of Sunesis. However, a cash financing transaction will not constitute a change of control transaction pursuant to the terms of the executive severance benefits agreements.

Each of the executive severance benefits agreements described above provides that, in the event that any benefits provided in connection with a change of control (or a related termination of employment) would be subject to the 20.0% excise tax imposed by Section 4999 of the Code, the executive officer will receive the greater, on an after-tax basis (taking account of all federal, state and local taxes and excise taxes), of such benefits or such lesser amount of benefits as would result in no portion of the benefits being subject to the excise tax. An executive officer's receipt of any severance benefits is subject to his execution of a release in favor of Sunesis. Any benefits under the executive severance benefits agreement would terminate immediately if the executive officer, at any time, violates any proprietary information or confidentiality obligation to us.

Retirement Savings

We encourage our executives and employees generally to plan for retirement compensation through voluntary participation in our 401(k) Plan. All of our employees, including our executives, may participate in our 401(k) Plan by making pre-tax contributions from wages of up to 60.0% of their annual cash compensation, up to the current Internal Revenue Service limits. All of our executives can participate in the 401(k) Plan on the same terms as our employees. We believe this program is comparable with programs offered by our peer companies and assists us in attracting and retaining our executives.

During the years ended December 31, 2011 and December 31, 2010, Messrs. Swisher and Bjerkholt and Dr. Ketchum elected to defer a portion of their compensation under the 401(k) plan and, as a result, received corresponding matching contributions from us.

Change of Control Equity Incentive Plan Protections

Our 1998 Stock Plan, or 1998 Plan, and our 2001 Stock Plan, or 2001 Plan, both provide that in the event of a proposed sale of all or substantially all of our assets or a merger of Sunesis with or into another corporation in which we are not the surviving corporation, each outstanding award shall be assumed or an equivalent award substituted by such successor corporation, unless the successor corporation does not agree to assume the award, in which case, the award shall terminate upon the consummation of the merger or sale of assets.

Our 2005 Plan and 2006 Employment Commencement Incentive Plan, or 2006 Plan, provide that upon any change of control of Sunesis, our Board (or any committee delegated authority by our Board) may, in its discretion, make adjustments it deems appropriate to reflect such change with respect to (i) the aggregate number and type of awards that may be issued under the applicable plan, (ii) the terms and conditions of any outstanding awards, and (iii) and the grant or exercise price of any outstanding awards. If outstanding awards are not assumed by the surviving or successor entity and such successor entity does not substitute substantially similar awards for those awards outstanding under the 2005 Plan and the 2006 Plan, such outstanding awards shall become fully exercisable and/or payable as applicable and all forfeiture restrictions on such outstanding awards shall lapse.

In addition, our 2005 Plan and 2006 Plan include change in control provisions, which may result in the accelerated vesting of outstanding awards. In the event of a change in control of our company, for example, if we are acquired by merger or asset sale, each outstanding award under the 2005 Plan and 2006 Plan will accelerate and immediately vest with respect to 50.0% of the unvested award, and if the remainder of the award is not to be assumed by the successor corporation, the full amount of the award will automatically accelerate and become immediately vested. Additionally, in the event the remainder of the award is assumed by the successor corporation, any remaining unvested shares would accelerate and immediately vest in the event the optionee is terminated without cause or resigns for good reason within 12 months following such change in control. Pursuant to amendments to the 2005 Plan and 2006 Plan approved by our Board in March 2009, a cash financing will not constitute a change of control. In order to make the treatment of outstanding options granted under the 1998 Plan and 2001 Plan for then-current employees identical to the treatment of options granted under the 2005 Plan and 2006 Plan, all options outstanding under the 1998 Plan and 2001 Plan were amended to reflect identical change in control provisions.

Our 2011 Plan provides that in the event of a change of control of Sunesis, all outstanding stock awards under the 2011 Plan may be assumed, continued or substituted for by any surviving or acquiring entity (or its parent company). If the surviving or acquiring entity (or its parent company) elects not to assume, continue or substitute for outstanding stock awards, then, with respect to any such stock awards that are held by participants whose continuous service with us or an affiliate has not terminated prior to the effective date of the change in control, the vesting and exercisability of such stock awards will be accelerated in full contingent upon the effectiveness of the change in control. In the event of a change in control in which the surviving or acquiring entity (or its parent company) assumes, continues or substitutes outstanding stock awards and with respect to any stock awards that are held by participants whose continuous service with us or an affiliate has not terminated prior to the effective date of the change in control, if such participant's continuous service terminates due to an involuntary termination (not including death or disability) without cause or due to a voluntary resignation with good reason in either case on or within 12 months after the effective time of such change in control, the vesting and exercisability of such stock awards will be accelerated in full effective as of the date of the participant's termination of continuous service.

We believe that the terms of our equity incentive plans described above are consistent with industry practice.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Principal Accountant Fees and Services

In connection with the audit of our 2011 financial statements, we entered into an engagement agreement with Ernst & Young, which sets forth the terms by which Ernst & Young will perform audit and interim services for us. We have agreed to waive a jury trial in proceedings arising out of this agreement under certain circumstances.

The following is a summary of the aggregate fees billed to us by Ernst & Young, our independent registered public accounting firm, for the years ended December 31, 2011 and 2010 for each of the following categories of professional services:

	Year Ended December 31,	
Fee Category	**2011**	**2010**
Audit fees(1)	$295,205	$305,924
Audit-related fees(2)	56,300	143,350
Tax fees	—	—
All other fees	—	—
Total fees	$351,505	$449,274

(1) Audit fees for 2011 and 2010 included the aggregate fees for professional services rendered for the audit of our financial statements, review of our interim financial statements, review of our registration statements on Forms S-3 and Form S-8, review of our internal controls over financial reporting, and the issuance of consents.

(2) Audit-related fees in 2011 and 2010 were for the provision of comfort letters to Cantor Fitzgerald & Co. in relation to our controlled equity offering sales agreements with them.

All of the fees described above were pre-approved by the Audit Committee.

Pre-approval Policies

The Audit Committee has adopted a policy relating to the approval of all audit and non-audit services that are to be performed by our independent registered public accounting firm. This policy generally provides that we will not engage our independent registered public accounting firm to render audit or non-audit services unless the service is specifically approved in advance by the Audit Committee or the engagement is entered into pursuant to pre-approval procedures established by the Audit Committee, including policies for delegating authority to a member of the Audit Committee. Any service that is approved pursuant to a delegation of authority to a member of the Audit Committee must be reported to the full Audit Committee at a subsequent meeting.

The Audit Committee has determined that the rendering of the services other than audit services by Ernst & Young as described above is compatible with maintaining their independence.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Certain Related Party Transactions

Other than as described below, there were no other related party transactions during 2010 or 2011 with our executive officers, directors and beneficial owners of five percent or more of our securities.

Executive Severance Benefits Agreements

We have entered into executive severance benefits agreements and related amendments with our executive officers. See "*Executive Compensation and Related Information*" above for further discussion of these arrangements.

Stock Option Grants

We have granted stock options to our executive officers and our non-employee directors. See "*Executive Compensation and Related Information*" and "*Information about the Board of Directors and Corporate Governance—Director Compensation*" above for further discussion of these awards.

Indemnification of Directors and Officers

We have entered into indemnity agreements with our executive officers and directors which provide, among other things, that we will indemnify such executive officer or director, under the circumstances and to the extent provided for therein, for expenses, damages, judgments, fines and settlements he or she may be required to pay in actions or proceedings which he or she is or may be made a party by reason of his or her position as a director, executive officer or other agent of Sunesis, and otherwise to the fullest extent permitted under Delaware law and our bylaws. We also intend to execute these agreements with our future executive officers and directors.

There is no pending litigation or proceeding naming any of our directors or executive officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or executive officer.

Consulting Agreements

In 2006, we entered into consulting agreements with two of our directors, Drs. Pearce and Stump. See "*Information about the Board of Directors and Corporate Governance—Director Compensation*" above for further discussion of these agreements.

Purchases of Our Securities

On March 31, 2009, we entered into a securities purchase agreement with accredited investors, including certain members of management, providing for a private placement of our securities, or the Private Placement. The Private Placement contemplated the sale of up to $15.0 million of units, consisting of Series A preferred stock and warrants to purchase common stock in two closings, and a common stock closing of up to $28.5 million. $10.0 million in units were sold in the initial closing on April 3, 2009, $5.0 million in units were sold in the second closing on October 30, 2009 and $28.5 million in shares of our common stock were sold in the third and final closing on June 30, 2010. In conjunction with the third closing, each of the outstanding shares of Series A convertible preferred stock issued in the initial and second closings of the Private Placement was converted into 10 shares of our common stock. The participation in the Private Placement by some of our executive officers was approved by the Audit Committee. We believe the terms obtained or consideration that we received in connection with the Private Placement were comparable to terms available or the amounts that would be received by us in arm's-length transactions.

The table below reflects the following for the funds affiliated with certain of our directors and our executive officers: (i) the number of shares of common stock issued and sold in the third closing of the Private Placement held on June 30, 2010; (ii) the number of shares of common stock issued upon conversion of the outstanding shares of Series A convertible preferred stock held by each such investor upon the third closing of the Private Placement; (iii) the number of shares of common stock underlying warrants issued in the initial and second closings of the Private Placement; and (iv) the total amount invested in all three closings of the Private Placement by each named investor.

Investor	Executive Officer or Director Affiliation (if any)	Common Stock Issued in Third Closing	Common Stock Issued Upon Conversion of Series A Preferred Stock	Warrants	Total Amount Invested in All Closings ($)
Entities affiliated with Bay City Capital	Dayton Misfeldt	3,970,741(1)	1,665,830(2)	1,665,830(3)	$10,000,000
Growth Equity Opportunities Fund, LLC(4)	Helen S. Kim	3,970,741	1,665,831	1,665,831	10,000,000
Entities affiliated with Alta Partners	Ed Hurwitz	1,985,369(5)	832,909(6)	832,909(7)	5,000,000
Swisher Revocable Trust	Daniel N.Swisher, Jr.	79,414	33,315	33,315	200,000
Bjerkholt / Hahn Family Trust	Eric H.Bjerkholt	39,707	16,656	16,656	100,000
Steven B. Ketchum, Ph.D.	Self	39,707	16,656	16,656	100,000

(1) Consists of (i) 3,896,489 shares of common stock purchased by Bay City Capital Fund V, L.P. and (ii) 74,252 shares of common stock purchased by Bay City Capital Fund V Co-Investment Fund, L.P. In connection with and immediately subsequent to the initial closing of the Private Placement, an affiliate of Bay City Capital was appointed to our Board. The director on our Board designated by Bay City Capital is Dayton Misfeldt, an investment partner of Bay City Capital. See "*Security Ownership of Certain Beneficial Owners and Management*" below for more information regarding the holdings of Mr. Misfeldt and these entities.

(2) Consists of (i) 1,634,681 shares of common stock held by Bay City Capital Fund V, L.P. and (ii) 31,149 shares of common stock held by Bay City Capital Fund V Co-Investment Fund, L.P.

(3) Consists of warrants to purchase (i) 1,634,681 shares of common stock purchased by Bay City Capital Fund V, L.P. and (ii) 31,149 shares of common stock purchased by Bay City Capital Fund V Co-Investment Fund, L.P.

(4) In connection with the Private Placement and following the initial closing, Helen S. Kim was appointed to our Board as a designee of Growth Equity Opportunities Fund, LLC, or GEO, on July 24, 2009. See "*Security Ownership of Certain Beneficial Owners and Management*" below for more information regarding the holdings of Ms. Kim and GEO.

(5) Consists of (i) 1,818,432 shares of common stock purchased by Alta BioPharma Partners III, L.P., (ii) 122,124 shares of common stock purchased by Alta BioPharma Partners III GmbH & Co. Beteiligungs KG, and (iii) 44,813 shares of common stock purchased by Alta Embarcadero BioPharma Partners III, LLC. In connection with and immediately subsequent to the initial closing of the Private Placement, an affiliate of Alta Partners was appointed to our Board. The director on our Board designated by Alta Partners is Edward Hurwitz, a director of Alta Partners. See "*Security Ownership of Certain Beneficial Owners and Management*" for more information regarding the holdings of Mr. Hurwitz and these entities.

(6) Consists of (i) 762,879 shares of common stock held by Alta BioPharma Partners III, L.P., (ii) 51,231 shares of common stock held by Alta BioPharma Partners III GmbH & Co. Beteiligungs KG, and (iii) 18,799 shares of common stock held by Alta Embarcadero BioPharma Partners III, LLC.

(7) Consists of warrants to purchase (i) 762,879 shares of common stock purchased by Alta BioPharma Partners III, L.P., (ii) 51,231 shares of common stock purchased by Alta BioPharma Partners III GmbH & Co. Beteiligungs KG, and (iii) 18,799 shares of common stock purchased by Alta Embarcadero BioPharma Partners III, LLC.

Investor Rights Agreement

On April 3, 2009, we entered into an Investor Rights Agreement, as amended, with the investors in connection with the Private Placement, pursuant to which we granted to the investors certain registration rights with respect to the securities issued and sold pursuant to the Private Placement, or the Investor Rights Agreement. Some of the rights granted under the Investor Rights Agreement expired upon conversion of the Series A Preferred Stock into common stock on June 30, 2010. The remaining rights included an agreement between the parties with respect to the size and composition of our Board. Specifically, following the initial closing of the Private Placement, the size of our Board was set at eight members, and certain investors had the right to designate, and we were required to nominate, three members to our Board. Alta BioPharma Partners III, L.P., or Alta, Bay City Capital LLC, or Bay City Capital, and GEO, together with their respective affiliates, each had the right to designate one such investor designee. As a result, our Board elected Messrs. Hurwitz and Misfeldt to our Board on April 3, 2009 as designees of Alta and Bay City Capital, respectively, and Ms. Kim to our Board on July 24, 2009 as designee of GEO. In connection with the second closing of the Private Placement on October 30, 2009, the size of our Board was increased to nine members, with one vacancy, pursuant to the Investor Rights Agreement. Certain investors were also entitled to designate five members to our Board after May 1, 2010. Specifically, each of Alta, Bay City Capital, GEO and ONC Partners, L.P., together with their respective affiliates, had the right to designate one designee, with the remaining designee designated by the investors holding the majority of Registrable Shares as specified in the Investor Rights Agreement. However, pursuant to an amendment to the Investor Rights Agreement entered into on February 2, 2012, the size of our Board was increased to ten members, with the investors retaining their designation rights with respect to up to five members of our Board, subject to the conditions and limits set forth in such agreement.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth, as of March 15, 2012, information regarding beneficial ownership of our common stock by:

- each person, or group of affiliated persons, known by us to beneficially own more than five percent of our common stock;
- each of our NEOs;
- each director and nominee for director; and
- all of our executive officers and directors as a group.

Beneficial ownership is determined according to the rules of the SEC and generally means that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power of that security, and includes options and warrants that are currently exercisable as of or within 60 days of March 15, 2012. Shares of common stock subject to stock options and warrants exercisable as of or within 60 days of March 15, 2012 are deemed to be outstanding for computing the percentage ownership of the person holding these options and warrants and the percentage ownership of any group of which the holder is a member, but are not deemed outstanding for computing the percentage of any other person. Except as indicated by footnote, and subject to community property laws where applicable, we believe the persons named in the table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them.

This table lists applicable percentage ownership based on 46,835,372 shares of common stock outstanding as of March 15, 2012. Unless otherwise indicated, the address for each of the beneficial owners in the table below is c/o Sunesis Pharmaceuticals, Inc., 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080.

	Beneficial Ownership (1)	
Name of Beneficial Owner	Shares of Common Stock Beneficially Owned (#)(2)	Percentage of Common Stock Beneficially Owned (%)
5% Stockholders:		
Entities affiliated with Alta Partners(3)	3,747,813	7.8%
Entities affiliated with Bay City Capital(4)	7,303,917	15.1
Growth Equity Opportunities Fund, LLC(5)	7,302,404	15.1
Entities affiliated with Merlin Biomed(6)	2,995,080	6.4
ONC General Partnership Limited(7)	3,095,923	6.6
Named Executive Officers and Directors:		
James W. Young, Ph.D.(8)	142,904	*
Daniel N. Swisher, Jr.(9)	600,441	1.3
Eric H. Bjerkholt(10)	333,029	*
Steven B. Ketchum, Ph.D. (11)	258,324	*
Matthew K. Fust(12)	49,168	*
Edward Hurwitz(13)	3,776,980	7.9
Helen S. Kim(14)	39,167	*
Dayton Misfeldt(15)	7,333,084	15.1
Homer L. Pearce, Ph.D.(16)	47,501	*
David C. Stump, M.D.(17)	47,501	*
All executive officers and directors as a group (11 persons)	**12,628,099**	**25.0**

* Represents beneficial ownership of less than one percent (1.0%) of the outstanding shares of our capital stock.

(1) This table is based upon information provided to us by our executive officers and directors and upon information about principal stockholders known to us based on Schedules 13G and 13D filed with the SEC.

(2) Includes shares issuable pursuant to stock options and warrants exercisable within 60 days of March 15, 2012.

(3) Includes (i) 173,355 shares of common stock and 57,175 shares of common stock issuable upon exercise of warrants outstanding held by Alta BioPharma Partners III GmbH & Co. Beteiligungs KG, (ii) 2,581,312 shares of common stock and 851,378 shares of common stock issuable upon exercise of warrants outstanding held by Alta BioPharma Partners III, L.P., and (iii) 63,613 shares of common stock and 20,980 shares of common stock issuable upon exercise of warrants outstanding held by Alta Embarcadero BioPharma Partners III, LLC. Alta Partners III, Inc. provides investment advisory services to Alta BioPharma Partners III GmbH & Co. Beteiligungs KG, Alta BioPharma Partners III, L.P. and Alta Embarcadero BioPharma Partners III, LLC, which we refer to collectively as the Alta Funds. The directors of Alta BioPharma Management III, LLC (together, the "Principals"), which is the general partner of Alta BioPharma Partners III, L.P. the managing limited partner of Alta BioPharma Partners III GmbH & Co. Beteiligungs KG, and the managers of Alta Embarcadero BioPharma Partners III, LLC, exercise sole voting and investment power over the shares owned by the Alta Funds. The Principals include Farah Campsi, Edward Penhoet and Edward Hurwitz, a member of our Board. These individuals may be deemed to share voting and investment power over the shares held by the Alta Funds. Each of these individuals disclaims beneficial ownership of such shares, except to the extent of his or her pecuniary interest therein. The address of Alta Partners III, Inc. and its affiliates is One Embarcadero Center, Suite 3700, San Francisco, California 94111.

(4) Includes (i) 1,515 shares of our common stock held by Bay City Capital LLC, a Delaware limited liability company, or BCC, (ii) 5,531,170 shares of common stock and 1,634,681 shares of common stock issuable upon exercise of warrants outstanding held by Bay City Capital Fund V, L.P., or Fund V, and (iii) 105,402 shares of common stock and 31,149 shares of common stock issuable upon exercise of warrants outstanding held by Bay City Capital Fund V Co-Investment Fund, L.P., or Co-Investment V. BCC is the manager of Bay City Capital Management V, LLC, a Delaware limited liability company, or Management V. Management V is the general partner of Fund V and Co-Investment V and has sole voting and dispositive power with respect to the securities held by Fund V and Co-Investment V. BCC is also an advisor to Fund V and Co-Investment V. Dayton Misfeldt, a member of our Board, is a partner of BCC. The address of the principal business and office of Bay City Capital and its affiliates is 750 Battery Street, Suite 400, San Francisco, California 94111.

(5) Includes 5,636,573 shares of common stock and 1,665,831 shares of common stock issuable upon the exercise of warrants outstanding owned by Growth Equity Opportunities Fund, LLC, or GEO. The sole member of GEO is New Enterprise Associates 12, Limited Partnership, or NEA 12. NEA Partners 12, Limited Partnership, or NEA Partners 12, is the sole general partner of NEA 12 and NEA 12 GP, LLC, or NEA 12 GP, is the sole general partner of NEA Partners 12. M. James Barrett, Peter J. Barris, Forest Baskett, Ryan D. Drant, Patrick J. Kerins, Krishna "Kittu" Kolluri, C. Richard Kramlich, Charles W. Newhall III, Mark W. Perry and Scott D. Sandell are the individual managers of NEA 12 GP. Each of the above named entities and persons, except GEO, disclaims beneficial ownership of the securities except to the extent of their pecuniary interest therein, if any. The address for GEO is 1954 Greenspring Drive, Suite 600, Timonium, Maryland 21093.

(6) Includes (i) 19,718 shares of common stock owned by Nexus Gemini, L.P., or Gemini, (ii) 1,820,051 shares of common stock owned by Merlin Nexus III, L.P., or Nexus III, and (iii) 1,155,312 shares of common stock owned by Permal Nexus Gemini Ltd, or Permal. Merlin BioMed Private Equity Advisors, LLC, a Delaware limited liability company, or Merlin, is the investment adviser to Gemini, Nexus III, and

Permal. Dominique Semon is the controlling principal and chief investment officer of Merlin. Merlin and Mr. Semon share voting power and dispositive power over the shares held by Gemini and Nexus III. The principal address for Merlin and its affiliates is 424 West 33rd Street, Suite 520, New York, New York 10001.

(7) Includes 2,818,285 shares of common stock and 277,638 shares of common stock issuable upon the exercise of warrants outstanding owned by ONC General Partner Limited, or ONC. The principal address for ONC is 26 New Street, St. Helier, Jersey, Channel Islands JE4 8PP.

(8) Includes 3,920 shares of our common stock held by family members of Dr. Young. Dr. Young disclaims beneficial ownership of such shares, except to the extent of his pecuniary interest therein. Also includes options held by Dr. Young to purchase 98,188 shares of common stock that are exercisable within 60 days of March 15, 2012.

(9) Includes options held by Mr. Swisher to purchase 365,428 shares of our common stock that are exercisable within 60 days of March 15, 2012. Also includes 127,176 shares of common stock and 33,315 shares of common stock issuable upon the exercise of warrants outstanding that are held in the Swisher Revocable Trust for which Mr. Swisher is the trustee.

(10) Includes options held by Mr. Bjerkholt to purchase 217,485 shares of our common stock exercisable within 60 days of March 15, 2012. Also includes 73,029 shares of common stock and 16,656 shares of common stock issuable upon the exercise of warrants outstanding that are held in the Bjerkholt/Hahn Family Trust for which Mr. Bjerkholt is the trustee.

(11) Includes options held by Dr. Ketchum to purchase 167,707 shares of our common stock exercisable within 60 days of March 15, 2012. Also includes 16,656 shares of common stock issuable upon the exercise of warrants outstanding.

(12) Consists of options held by Mr. Fust to purchase 49,168 shares of our common stock exercisable within 60 days of March 15, 2012.

(13) Includes the shares of common stock and shares of common stock issuable upon the exercise of warrants outstanding detailed in Note (3) above held by the Alta Funds. Mr. Hurwitz is a principal of Alta Partners III, Inc., one of the managing directors of Alta BioPharma Management III, LLC, and a manager of Alta Embarcadero BioPharma Partners III, LLC. He may be deemed to share dispositive and voting power over the shares held by the Alta Funds. Mr. Hurwitz disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein. Also includes options held by Mr. Hurwitz to purchase 29,167 shares of our common stock exercisable within 60 days of March 15, 2012. The address of Mr. Hurwitz is c/o Alta Partners III, Inc., One Embarcadero Center, 37th Floor, San Francisco, California 94111.

(14) Consists of options held by Ms. Kim to purchase 39,167 shares of our common stock exercisable within 60 days of March 15, 2012.

(15) Includes the shares of our common stock and shares of common stock issuable upon the exercise of warrants outstanding detailed in Note (4) above held by the entities affiliated with BCC. Mr. Misfeldt is a partner of BCC. BCC is the manager of Management V. Management V, the general partner of Fund V and Co-Investment V, has sole voting and dispositive power with respect to the securities held by Fund V and Co-Investment V. BCC, as the manager of Management V, is also an advisor to Fund V and Co-Investment V. Also includes options held by Mr. Misfeldt to purchase 29,167 shares of our common stock exercisable within 60 days of March 15, 2012. The address for Mr. Misfeldt is c/o Bay City Capital, 750 Battery Street, Suite 400, San Francisco, California 94111.

(16) Includes options held by Dr. Pearce to purchase 47,501 shares of our common stock exercisable within 60 days of March 15, 2012.

(17) Includes options held by Dr. Stump to purchase 47,501 shares of our common stock exercisable within 60 days of March 15, 2012.

OTHER INFORMATION

Stockholder Proposals for Inclusion in our 2012 Proxy Statement

Our stockholders may submit proposals on matters appropriate for stockholder action at meetings of our stockholders in accordance with Rule 14a-8 promulgated under the Exchange Act. For such proposals to be included in our proxy materials relating to the 2013 annual meeting of stockholders, all applicable requirements of Rule 14a-8 must be satisfied and such proposals must be received by us no later than December 24, 2012. However, if our 2013 annual meeting of stockholders is not held between May 6, 2013 and July 5, 2013, then the deadline will be a reasonable time prior to the time we begin to print and mail our proxy materials. Such proposals should be submitted to our Corporate Secretary at Sunesis Pharmaceuticals, Inc., 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080.

Our bylaws establish an advance notice procedure with regard to certain matters, including stockholder proposals, not included in our proxy statement, to be brought before an annual meeting of stockholders. In general, notice must be received in writing by our Corporate Secretary at Sunesis Pharmaceuticals, Inc., 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080 not less than 120 days before the one year anniversary of the date on which we first mailed our proxy statement to stockholders in connection with the previous year's annual meeting of stockholders and must contain specified information concerning the matters to be brought before such meeting and concerning the stockholder proposing such matters. Therefore, to be presented at our 2013 annual meeting, such a proposal must be received by us on or before December 24, 2012. If the date of the annual meeting is before May 6, 2013 or after July 5, 2013, our Corporate Secretary must receive such notice no later than the close of business on the later of 120 calendar days in advance of such annual meeting and 10 calendar days following the date on which public announcement of the date of such meeting is first made. We also advise you to review our bylaws, which contain additional requirements about advance notice of stockholder proposals and director nominations. The chairman of the 2013 annual meeting of stockholders may determine, if the facts warrant, that a matter has not been properly brought before the meeting and, therefore, may not be considered at the meeting. In addition, if you do not also comply with the requirements of Regulation 14A under the Exchange Act, our management will have discretionary authority to vote all shares for which it has proxies in opposition to any such stockholder proposal or director nomination.

Householding of Proxy Materials

The SEC has adopted rules that permit companies and intermediaries (such as brokers) to satisfy the delivery requirements for proxy materials with respect to two or more stockholders sharing the same address by delivering a single set of other proxy materials addressed to those stockholders. This process, which is commonly referred to as "householding," potentially means extra convenience for stockholders and cost savings for companies.

This year, a number of brokers with account holders who are our stockholders will be "householding" our proxy materials. A single set of proxy materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that it will be "householding" communications to your address, "householding" will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in "householding" and would prefer to receive a separate set of proxy materials in the future, you please notify your broker or write or call either (i) our Investor Relations Department at Sunesis Pharmaceuticals, Inc., 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080, Attention: Eric H. Bjerkholt, Executive Vice President, Corporate Development and Finance, Chief Financial Officer and Corporate Secretary, telephone: (650) 266-3500, or (ii) the transfer agent for our common stock, American Stock Transfer & Trust Company, 59 Maiden Lane, New York, New York 10007, telephone: (877) 777-0800. You will be removed from the householding program within 30 days of receipt of the revocation of your consent. If you revoke your consent, we will promptly deliver to you a separate copy of the proxy materials. Stockholders who currently receive multiple copies of the proxy materials at their addresses and would like to request "householding" of their communications should contact their brokers.

INCORPORATION BY REFERENCE

The information required with respect to securities authorized for issuance under our equity compensation plans by Item 10 of Schedule 14A is incorporated herein by reference to the section titled "*Equity Compensation Plan Information*" in Part III, Item 12 of our Annual Report on Form 10-K for the year ended December 31, 2011.

OTHER MATTERS

Other Matters at the Annual Meeting

The Board knows of no other matters to be submitted at the Annual Meeting. If any other matters properly come before the Annual Meeting, it is the intention of the persons named in the enclosed form of proxy to vote the shares they represent as the Board may recommend.

By Order of the board of directors,

Eric H. Bjerkholt
Executive Vice President, Corporate Development and Finance, Chief Financial Officer and Corporate Secretary

April 23, 2012

A COPY OF OUR ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2011, AS FILED WITH THE SEC, INCLUDING COPIES OF THE EXHIBITS TO OUR ANNUAL REPORT ON FORM 10-K IF SPECIFICALLY REQUESTED, IS AVAILABLE WITHOUT CHARGE, UPON WRITTEN REQUEST OF ANY STOCKHOLDER. PLEASE ADDRESS ALL SUCH REQUESTS TO OUR INVESTOR RELATIONS DEPARTMENT AT SUNESIS PHARMACEUTICALS, INC., 395 OYSTER POINT BOULEVARD, SUITE 400, SOUTH SAN FRANCISCO, CALIFORNIA 94080, ATTENTION: ERIC H. BJERKHOLT, EXECUTIVE VICE PRESIDENT, CORPORATE DEVELOPMENT AND FINANCE, CHIEF FINANCIAL OFFICER AND CORPORATE SECRETARY BY TELEPHONE TO: (650) 266-3717, OR BY E-MAIL TO: BJERKHOLT@SUNESIS.COM.

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

Form 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the Year Ended December 31, 2011
OR
☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number 000-51531

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

Delaware	**94-3295878**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

395 Oyster Point Boulevard, Suite 400
South San Francisco, California 94080
(Address of principal executive offices, including zip code)

(650) 266-3500
(Registrant's telephone number, including area code)

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

Title of Each Class:	**Name of Each Exchange on Which Registered:**
Common Stock, par value $0.0001 per share	The NASDAQ Stock Market LLC

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

2011 Form 10-K

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

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

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

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

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

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

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

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

The aggregate market value of common stock held by non-affiliates of the registrant, based on the closing sales price for such stock on June 30, 2011, as reported by The Nasdaq Stock Market, was $67,451,642. The calculation of the aggregate market value of voting and non-voting stock excludes 14,440,221 shares of the registrant's common stock held by current executive officers, directors and stockholders that the registrant has concluded are affiliates of the registrant. Exclusion of such shares should not be construed to indicate that any such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the registrant or that such person is controlled by or under common control with the registrant.

The total number of shares outstanding of the registrant's common stock, $0.0001 par value per share, as of March 1, 2012, was 46,820,107.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Definitive Proxy Statement, to be filed with the Securities and Exchange Commission pursuant to Regulation 14A in connection with the 2012 Annual Meeting of Stockholders of Sunesis Pharmaceuticals, Inc. (hereinafter referred to as "Proxy Statement") are incorporated by reference in Part III of this report. Such Proxy Statement will be filed with the Securities and Exchange Commission not later than 120 days after the conclusion of the registrant's year ended December 31, 2011.

SUNESIS PHARMACEUTICALS, INC.

TABLE OF CONTENTS

PART I

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report, including the information we incorporate by reference, contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which involve risks, uncertainties and assumptions. All statements, other than statements of historical facts, are "forward-looking statements" for purposes of these provisions, including without limitation any statements relating to our strategy, including our plans with respect to unblinding the VALOR trial, the planned interim analysis of the VALOR trial, presenting clinical data and initiating clinical trials, our future research and development activities, including clinical testing and the costs and timing thereof, sufficiency of our cash resources, our ability to raise additional funding when needed, any statements concerning anticipated regulatory activities or licensing or collaborative arrangements, our research and development and other expenses, our operations and legal risks, and any statement of assumptions underlying any of the foregoing. In some cases, forward-looking statements can be identified by the use of terminology such as "anticipates," "believe," "continue," "estimates," "expects," "intend," "look forward," "may," "could," "seeks," "plans," "potential," or "will" or the negative thereof or other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements contained herein are reasonable, there can be no assurance that such expectations or any of the forward-looking statements will prove to be correct, and actual results could differ materially from those projected or assumed in the forward-looking statements. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of many factors, including but not limited to those set forth under "Risk Factors," and elsewhere in this report. We urge you not to place undue reliance on these forward-looking statements, which speak only as of the date of this report. All forward-looking statements included in this report are based on information available to us on the date of this report, and we assume no obligation to update any forward-looking statements contained in this report.

In this report, "Sunesis," the "Company," "we," "us," and "our" refer to Sunesis Pharmaceuticals, Inc. and its wholly owned subsidiary, Sunesis Europe Limited, except where it is made clear that the term refers only to the parent company.

ITEM 1. *BUSINESS*

General

We are a biopharmaceutical company focused on the development and commercialization of new oncology therapeutics for the treatment of solid and hematologic cancers. Our efforts are currently focused primarily on the development of vosaroxin for the treatment of acute myeloid leukemia, or AML. Vosaroxin is a first-in-class anti-cancer quinolone derivative, or AQD—a class of compounds that has not been used previously for the treatment of cancer. AQDs have been shown to mediate anti-tumor activity by targeting mammalian topoisomerase II, an enzyme critical for cell replication. We have built a highly experienced cancer drug development organization committed to advancing vosaroxin in multiple indications to improve the lives of people with cancer.

In December 2010, we commenced enrollment of a Phase 3, multi-national, randomized, double-blind, placebo-controlled, pivotal trial of vosaroxin in combination with cytarabine in patients with relapsed or refractory AML, or the VALOR trial. The VALOR trial is designed to evaluate the effect of vosaroxin in combination with cytarabine, a widely used chemotherapy in AML, on overall survival as compared to placebo in combination with cytarabine. The trial has an adaptive design and is based on data from our Phase 2 clinical trial of vosaroxin in combination with cytarabine in relapsed or refractory AML, together with guidance received from both U.S. and European regulatory agencies.

The VALOR trial is designed to have a 90% probability of detecting a 40% difference in overall survival, and includes a single pre-specified interim analysis by the independent Data and Safety Monitoring Board, or DSMB, which is expected to occur in the third quarter of 2012. The DSMB will examine pre-specified efficacy and safety data sets and decide whether to (i) stop the trial early for efficacy or for futility; (ii) continue the study to its planned unblinding, which is expected in mid-2013 in this event; or (iii) recommend a one-time sample size adjustment if deemed beneficial to maintain adequate statistical power across a range of clinically meaningful and statistically significant outcomes. In this event, trial unblinding is expected in early 2014.

We are also completing data analysis in preparation for database lock for two fully-enrolled clinical trials of vosaroxin: (a) the Phase 2 portion of a Phase 1b/2 trial of vosaroxin in combination with cytarabine for the treatment of patients with relapsed or refractory AML, and (b) a Phase 2 trial in previously untreated patients age 60 years or older with AML, or REVEAL-1, which explored three dose schedules. In addition, we completed a Phase 2 single-agent trial of vosaroxin in patients with platinum-resistant ovarian cancer in 2010, which explored three doses and two different schedules of vosaroxin.

In December 2011, we announced our participation in a Phase 2/3 randomized, controlled, multi-center trial evaluating novel treatment regimens against low-dose cytarabine, or LD Ara-C, in patients older than 60 years with AML or high-risk myelodysplastic syndrome, or MDS. This trial, known as the Less Intensive 1, or LI-1 Trial, is being conducted by the United Kingdom's National Cancer Research Institute, or NCRI, Haematological Oncology Study Group under the sponsorship of Cardiff University and the direction of Professor Alan K. Burnett. In March 2012, the first patient was enrolled in this trial.

The LI-1 Trial employs a "Pick a Winner" randomized progressive design to efficiently evaluate a number of investigational treatments versus LD Ara-C, as described by Hills and Burnett in the journal Blood, 2011;118(9):2389-94. Two regimens containing vosaroxin have been selected as investigational treatment arms in this study. These regimens and other novel treatments will be evaluated in a randomized Phase 2 portion of the trial, with key endpoints including complete remission, 12-month survival, and overall survival. Treatment arms exhibiting promising results on the basis of these endpoints may continue to enroll patients in a Phase 3 portion of the trial with a primary endpoint of overall survival.

We own worldwide development and commercialization rights to vosaroxin. In 2009, the U.S. Food and Drug Administration, or FDA, granted orphan drug designation to vosaroxin for the treatment of AML. In February 2011, the FDA granted fast track designation to vosaroxin for the potential treatment of relapsed or refractory AML in combination with cytarabine. We have been granted, or notified of allowance of, a number of key patents for vosaroxin, details of which are provided in the Intellectual Property section below.

In March 2011, we entered into three agreements as part of a series of agreements between Biogen Idec MA Inc., or Biogen Idec, Millennium Pharmaceuticals, Inc., a wholly-owned subsidiary of Takeda Pharmaceutical Company Limited, or Millennium, and ourselves, (details of milestone and royalty payments, as well as development and promotion rights, are provided in the Outlicense and Collaboration Agreements section below):

- A license agreement with Millennium, or the Millennium Agreement, pursuant to which we granted Millennium exclusive licenses for the development of our oral, selective pan-Raf kinase inhibitor and one additional undisclosed kinase inhibitor program in oncology that were previously a part of our August 2004 collaboration agreement with Biogen Idec, or the Original Biogen Idec Agreement. In September 2011, we announced that Millennium had initiated a Phase 1 clinical study of an oral investigative drug selective for pan-Raf kinase inhibition, MLN2480, licensed to them under this agreement.

- An amendment and restatement of the Original Biogen Idec Agreement, or the Restated Biogen Idec Agreement, to provide for the discovery, development and commercialization of small molecule inhibitors of a unique preclinical kinase inhibitor program involved in immunology.

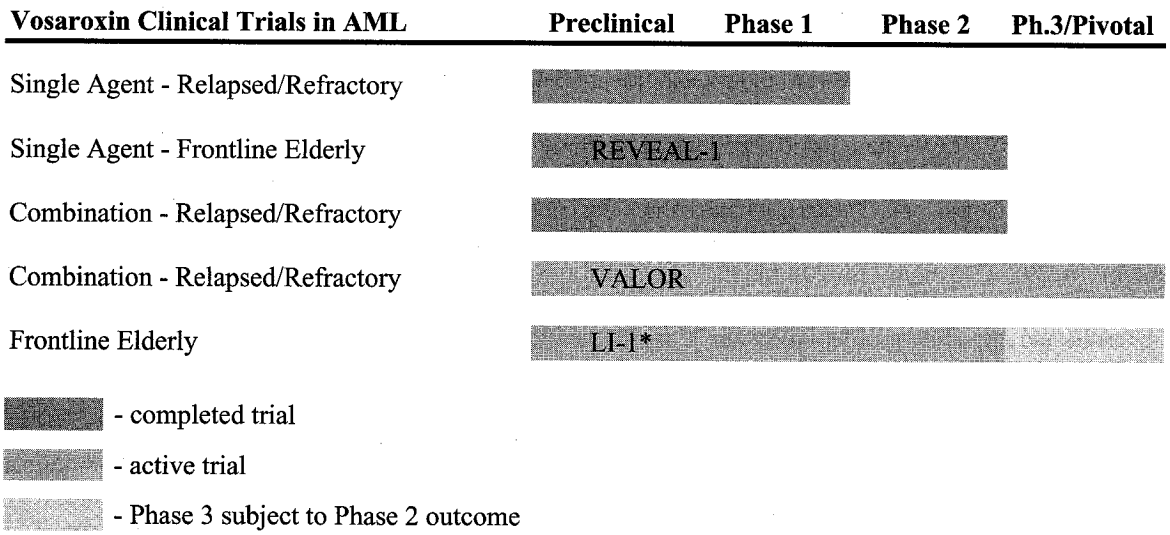
- A termination and transition agreement with Biogen Idec and Millennium, which provides for the termination of Biogen Idec's exclusive rights under the Original Biogen Idec Agreement to all discovery programs under such agreement other than a preclinical kinase inhibitor program involved in immunology, the permitted assignment of assets and rights to Millennium as provided in the Millennium Agreement, and an upfront, non-refundable payment to us.

Vosaroxin

Vosaroxin is a first-in-class AQD—a class of compounds that has not been used previously for the treatment of cancer. AQDs have been shown to mediate anti-tumor activity by targeting mammalian topoisomerase II, an enzyme critical for cell replication. Vosaroxin acts by DNA intercalation and inhibition of topoisomerase II in replicating cancer cells. The resulting site-selective DNA damage rapidly causes the cancer cells to stop dividing and die. In preclinical studies, vosaroxin demonstrated broad anti-tumor activity and exhibited additive or synergistic activity when combined with several therapeutic agents currently used in the treatment of cancer, including cytarabine. Clinical activity is observed in both solid and hematologic malignancies. We licensed worldwide development and commercialization rights to vosaroxin from Dainippon Sumitomo Pharma Co., Ltd., or Dainippon, in 2003.

Vosaroxin Clinical Trials in AML

The following chart summarizes the status of clinical trials in AML that have been conducted or are currently being conducted with vosaroxin:



* Sponsored by Cardiff University, and being conducted by the NCRI Haematological Oncology Study Group

In December 2011, we announced our participation in the LI-1 Trial, a Phase 2/3 randomized, controlled, multi-center trial evaluating a number of novel treatment regimens against LD Ara-C in patients over the age of 60 years with AML or high-risk MDS who are not candidates for intensive chemotherapy. Several treatments, including two regimens containing vosaroxin, will be evaluated in a randomized Phase 2 design with key endpoints including complete remission, or CR, 12-month survival, and overall survival. Treatment arms exhibiting promising results on the basis of these endpoints may continue to enroll in a Phase 3 portion of the trial with a primary endpoint of overall survival. In March 2012, the first patient was enrolled in this trial.

In December 2010, we commenced enrollment of the VALOR trial, a Phase 3, randomized, double-blind, placebo-controlled, pivotal clinical trial of vosaroxin in combination with cytarabine to evaluate overall survival in patients with relapsed or refractory AML. The trial has an adaptive design and is based on data from our

Phase 2 clinical trial of vosaroxin in combination with cytarabine in relapsed or refractory AML, together with guidance received from U.S. and European regulatory agencies. We expect to enroll 450 evaluable patients in the VALOR trial at more than 100 study sites in the U.S., Canada, Europe, Australia and New Zealand. The trial is designed to have a 90% probability of detecting a 40% difference in overall survival, and includes a single pre-specified interim analysis by the DSMB, which is expected to occur in the third quarter of 2012. The DSMB will examine pre-specified efficacy and safety data sets and decide whether to: (i) stop the trial early for efficacy or for futility; (ii) continue the study to its planned unblinding; or (iii) recommend a one-time sample size adjustment of 225 additional evaluable patients if deemed beneficial to maintain adequate statistical power across a range of clinically meaningful and statistically significant outcomes. In December 2011, we announced that the DSMB had completed a planned periodic safety review and recommended that the trial continue as planned without changes to study conduct.

In January 2010, we completed enrollment in the Phase 2 portion of a Phase 1b/2 clinical trial of vosaroxin in combination with cytarabine in patients with relapsed or refractory AML and we are currently completing data analysis in preparation for database lock. The trial is designed to evaluate the safety, pharmacokinetics and anti-leukemic activity of escalating doses of vosaroxin administered in combination with cytarabine given either as a continuous intravenous, or IV, infusion or a two-hour IV infusion. A pooled set of 69 patients with first relapsed (n=36) or primary refractory (n=33) AML were evaluated for efficacy outcomes. The median overall survival was 7.1 months, the CR rate was 25%, and the combined complete remission rate was 28% including CR, CR without full platelet recovery, or CRp, and CR with incomplete recovery, or CRi. The median leukemia-free survival was 25 months, and 26% of patients in the Phase 2 portion received hematopoietic stem cell transplants. The two regimens of vosaroxin in combination with cytarabine were generally well tolerated. The most common severe non-hematologic toxicities were related to infections. Severe stomatitis or oral mucositis was observed in 16% of patients, and was manageable with standard supportive care. All-cause mortality was low, at 3% at 30 days and 9% at 60 days.

In October 2009, we completed enrollment in a Phase 2 single-agent clinical trial of vosaroxin in previously untreated patients aged 60 years or older with AML and we are currently completing data analysis in preparation for database lock. The trial includes three dosing schedules: Schedule A, once weekly for three weeks (n=29); Schedule B, once weekly for two weeks (n=35); and Schedule C, on days one and four at either 72 mg/m^2 (n=29) or 90 mg/m^2 (n=20). Median survival was 8.6, 5.7, 7.7 and 5.5 months, and one-year survival was 38%, 31%, 38% and 25%, in Schedules A, B, and C (72 mg/m^2) and C (90 mg/m^2), respectively. Based on these results and the safety profile, vosaroxin 72 mg/m^2 administered on days one and four (Schedule C) was determined to be the recommended dose regimen. For this schedule, the CR plus CRp rate was 35% and 30-day all-cause mortality was 7%.

Prior to 2009, we conducted a Phase 1 clinical trial to evaluate safety, pharmacokinetics, and preliminary clinical activity of two dose schedules of vosaroxin in patients with relapsed or refractory acute leukemia. Anti-leukemic activity was observed in both schedules, and the most common dose-limiting toxicity was stomatitis. The maximum tolerated dose was 72 mg/m^2 for the once weekly for three weeks schedule and 40 mg/m^2 for the twice weekly for two weeks schedule.

Vosaroxin Clinical Trials in Ovarian Cancer and Other Solid Tumors

In mid-2010, we completed a Phase 2 single-agent trial of vosaroxin in platinum-resistant ovarian cancer. Three doses in two schedules of vosaroxin were studied:

- 48 mg/m^2 given every three weeks (n=65)
- 60 mg/m^2 given every four weeks (n=37)
- 75 mg/m^2 given every four weeks (n=35)

Encouraging, durable anti-tumor activity was observed across all doses. For patients treated with 48, 60 and 75 mg/m^2, respectively, the overall response rate, or ORR, was 11%, 11% and 9%, respectively; disease control, defined as stable disease for 12 weeks or more, was 46%, 46% and 51%, respectively; and the median progression-free survival, or PFS, was 83, 61 and 103 days, respectively. Based on clinical activity and tolerability, the 60 mg/m^2 dose and schedule was selected for future consideration. Overall, vosaroxin was generally well tolerated, with more than 10% of patients experiencing severe neutropenia, febrile neutropenia, fatigue, and anemia.

Prior to 2009, we conducted two Phase 1 clinical trials to evaluate different dosing schedules of vosaroxin in patients with advanced solid tumors. We also conducted two Phase 2 studies in non-small cell lung cancer and small cell lung cancer. Although objective responses were observed in both lung cancer studies, it was determined that vosaroxin could be administered with greater dose intensity given the low incidence of severe neutropenia. The studies were halted and we may consider future vosaroxin studies in lung cancer or other solid tumors, as well as in hematologic malignancies.

Inlicense Agreement

In October 2003, we entered into an agreement with Dainippon to acquire exclusive worldwide development and marketing rights for vosaroxin. In January 2011, we made a $0.5 million milestone payment to Dainippon as a result of the initiation of our VALOR trial in December 2010. In the future we may be required to make additional milestone payments of up to $7.0 million to Dainippon for (a) filing new drug applications, or NDAs, in the U.S., Europe and Japan, and (b) for receiving regulatory approvals in these regions, for cancer-related indications. If vosaroxin is approved for a non-cancer indication, an additional milestone payment will become payable to Dainippon.

The agreement also provides for royalty payments to Dainippon at rates based on total annual net sales. Under the agreement, we may reduce our royalty payments to Dainippon if a third party markets a competitive product and we must pay royalties for third-party intellectual property rights necessary to commercialize vosaroxin. Royalty obligations under the agreement continue on a country-by-country and product-by-product basis until the later of the date on which no valid patent claims relating to a product exist or 10 years from the date of the first sale of the product.

If we discontinue seeking regulatory approval and/or the sale of the product in a region, we are required to return to Dainippon its rights to the product in that region. The agreement may be terminated by either party for the other party's uncured breach or bankruptcy.

Outlicense and Collaboration Agreements

Overview

Over the past three years, we have generated revenue primarily through license and collaboration agreements with Biogen Idec, Millennium, and SARcode Bioscience, Inc., or SARcode. In 2009, we recorded revenues of $1.5 million related to a collaboration agreement with Biogen Idec and $2.0 million from the sale of previously-licensed intellectual property to SARcode, which represented 40% and 53% of annual revenues, respectively. In 2011, we recorded revenues of $4.0 million related to a license agreement with Millennium and $1.0 million due to the repayment of three promissory notes by SARcode, which represented 80% and 20% of annual revenues, respectively.

Biogen Idec and Millennium

In August 2004, we entered into the Original Biogen Idec Agreement to discover, develop and commercialize small molecule inhibitors of Raf kinase and up to five additional targets that play a role in oncology and immunology indications or in the regulation of the human immune system. Pursuant to the terms of the Original Biogen Idec Agreement, we applied our fragment-based drug discovery technology, Tethering, to

generate small molecule leads during the research term, for which we received research funding, which was paid in advance to support some of our scientific personnel. In connection with our June 2008 restructuring, the parties agreed to terminate the research term and related funding as of June 30, 2008. A total of $20.0 million of research funding was received through this date. We received a total of $3.0 million in milestone payments for meeting certain preclinical milestones through March 2011, including a $1.5 million milestone received in cash in July 2009 for Biogen Idec's selection of a Raf kinase inhibitor development candidate for the treatment of cancer.

In March 2011, we entered into three agreements as part of a series of agreements between Biogen Idec, Millennium and ourselves:

- The Millennium Agreement, pursuant to which we granted Millennium exclusive licenses for the development of our oral, selective pan-Raf kinase inhibitor and one additional undisclosed kinase inhibitor program in oncology that were previously a part of the Original Biogen Idec Agreement. Under this agreement, we may in the future receive up to $59.3 million in pre-commercialization milestone payments related to the development of the first two indications for each of the licensed products directed against the two exclusively licensed targets, and royalty payments depending on future product sales. The agreement also provides us with future co-development and co-promotion rights. In September 2011, we announced that Millennium had initiated a Phase 1 clinical study of an oral investigative drug selective for pan-Raf kinase inhibition, MLN2480, which was licensed to them under this agreement.

- The Restated Biogen Idec Agreement, to provide for the discovery, development and commercialization of small molecule inhibitors of a unique preclinical kinase inhibitor program involved in immunology. Under this agreement, we continue to be eligible to receive up to $60.0 million in pre-commercialization milestone payments related to the development of the first two indications for licensed products against the specified immunology target, and royalty payments depending on future product sales. We also retain future co-development and co-promotion rights.

- A termination and transition agreement with Biogen Idec and Millennium, which provides for the termination of Biogen Idec's exclusive rights under the Original Biogen Idec Agreement to all discovery programs under such agreement other than a preclinical kinase inhibitor program involved in immunology, the permitted assignment of assets and rights to Millennium as provided in the Millennium Agreement, and the upfront, non-refundable payment of $4.0 million to us as consideration for the above, which was received in April 2011.

SARcode

In March 2006, we licensed our LFA-1 patents and related know-how to SARcode, a privately-held biopharmaceutical company. In March 2009, the license agreement was terminated and SARcode paid us $2.0 million in cash for this intellectual property, which was recorded as revenue in April 2009. Following the termination of the license agreement, SARcode fully satisfied its obligations to us and we have no further rights to the intellectual property transferred to SARcode. In August 2011, SARcode repaid three promissory notes that had been issued to us upon entering into the original license agreement. The total amount received was $1.2 million, which comprised the aggregate principal value of the three notes of $1.0 million, plus $0.2 million of accrued interest, which we recorded as revenue and interest income, respectively, upon receipt.

Manufacturing

We do not have internal manufacturing capabilities for the production of clinical or commercial quantities of vosaroxin. To date, we have relied on, and we expect to continue to rely on, a limited number of third-party contract manufacturers for the production of clinical and commercial quantities of the vosaroxin active

pharmaceutical ingredient, or API, the finished drug product incorporating the API, or FDP, and the placebo used in the VALOR trial. We do not have commercial supply agreements with any of these third parties, and our agreements with these parties may include provisions that allow for termination at will by either party following a relatively short notice period.

We currently rely on two contract manufacturers for the vosaroxin API. We also currently rely on a single contract manufacturer to formulate the vosaroxin API and fill and finish vials of the vosaroxin FDP. Because the vosaroxin API is classified as a cytotoxic substance, the number of available manufacturers for the API and FDP is limited. We believe at least five contract manufacturers in North America have suitable facilities to manufacture the vosaroxin API, and at least four have suitable facilities to manufacture the vosaroxin FDP. A number of manufacturers outside of North America have suitable facilities, including one that currently manufactures our vosaroxin API. If we are unable to obtain sufficient quantities of the vosaroxin API and FDP from our current manufacturers, it may take time to engage alternative manufacturers, which could delay the development of and impair our ability to commercialize vosaroxin.

To date, vosaroxin has been manufactured in quantities appropriate for preclinical studies and clinical trials. New lots of API and FDP may need to be manufactured and released to support our VALOR trial, and for stability assessments required for regulatory approval. Prior to approval for commercial sale, we will need to manufacture registration batches of API and FDP, which will be accompanied by process validation studies, and will require FDA review prior to approval. If the results of these process validation studies do not meet preset criteria, the regulatory approval or commercial launch of vosaroxin may be delayed.

The cytarabine used in our VALOR trial is procured from third-party distributors. Cytarabine has recently been in short supply throughout the world. Additional procurement of cytarabine will be necessary to complete the VALOR trial if there is a sample size adjustment based on the pre-specified interim analysis by the DSMB.

Competition

The life sciences industry is highly competitive, and we face significant competition from many pharmaceutical, biopharmaceutical and biotechnology companies that are researching, developing and marketing products designed to address the treatment of cancer, including AML. Many of our competitors have significantly greater financial, manufacturing, marketing and drug-development resources than we do. Large pharmaceutical companies in particular have extensive experience in the clinical testing of, obtaining regulatory approvals for, and marketing drugs.

We believe that our ability to successfully compete in the marketplace with vosaroxin and any future product candidates, if any, will depend on, among other things:

- our ability to develop novel compounds with attractive pharmaceutical properties and to secure, protect and maintain intellectual property rights based on our innovations;
- the efficacy, safety and reliability of our product candidates;
- the speed at which we develop our product candidates;
- our ability to design and successfully execute appropriate clinical trials;
- our ability to maintain a good relationship with regulatory authorities;
- our ability to obtain, and the timing and scope of, regulatory approvals;

- our ability to manufacture and sell commercial quantities of future products to the market; and
- acceptance of future products by physicians and other healthcare providers.

Vosaroxin is a small molecule therapeutic that will compete with other drugs and therapies currently used for AML, such as nucleoside analogs, anthracyclines, hypomethylating agents, Flt-3 inhibitors, other inhibitors of topoisomerase II, and other novel agents. Additionally, other compounds currently in development could become potential competitors of vosaroxin, if approved for marketing. We expect competition with vosaroxin for the treatment of AML to increase as additional products are developed and approved for use in various patient populations.

Intellectual Property

We believe that patent protection is crucial to our business and that our future success depends in part on our ability to obtain patents protecting vosaroxin or future drug candidates, if any. Historically we have patented a wide range of technology, inventions and improvements related to our business, but which we are no longer actively developing.

The vosaroxin composition of matter is covered by U.S. Patent No. 5,817,669 and its counterpart patents in 43 foreign jurisdictions. This patent is due to expire in October 2015, and most of its foreign counterparts are due to expire in June 2015. While it is possible that patent term restoration and/or supplemental patent certificates would be available for these or other patents we own, we cannot guarantee that such additional protection will be obtained.

We have been granted, or notified of allowance of, a number of additional key patents for vosaroxin, as follows:

- In December 2009, the European Patent Office, or EPO, granted us a patent covering combinations of vosaroxin with cytarabine, which is due to expire in 2025 and has been validated in multiple EPC member states. In June 2011, the U.S. Patent and Trademark Office, or USPTO, granted us a patent in the same family, which is due to expire in 2026. In March 2011, Australia also granted us a patent in this family, which is due to expire 2025. Corresponding applications are pending in other major markets, including Japan and Canada.
- In November 2010, the USPTO granted us a patent covering pharmaceutical compositions of vosaroxin, including the formulation used in our VALOR trial. This patent is due to expire in 2025. In January 2011, the EPO granted us a patent in the same family, which has been validated in multiple European Patent Convention, or EPC, member states. In September 2011, Australia also granted us a patent in this family. These patents are due to expire in 2025. Corresponding applications are pending in other major markets, including Japan and Canada.
- In August 2011, the USPTO granted us a patent covering methods of use of vosaroxin at clinically relevant dose ranges and schedules for the treatment of leukemia. This patent is due to expire in 2026. Corresponding applications are pending in other major markets, including Europe, Japan, Australia and Canada.
- In February 2012, the USPTO granted us a patent covering certain vosaroxin hydrate forms, which is due to expire in 2028. Corresponding applications are pending in other major markets, including Europe, Japan, Australia and Canada.
- In February 2012, the USPTO mailed a notice of allowance for a patent application covering certain compositions related to vosaroxin. We expect that this patent will be granted in 2012, and that it will be due to expire in 2030. Corresponding patent applications are pending in the U.S. and internationally.

As of December 31, 2011, approximately 106 U.S. and foreign applications pertaining to vosaroxin and compositions and uses thereof were pending. When appropriate, we intend to seek patent term restoration, orphan drug status and/or data exclusivity in the United States and their equivalents in other relevant jurisdictions, to the maximum extent that the respective laws will permit at such time. In 2009, the FDA granted orphan drug designation to vosaroxin for the treatment of AML.

Our ability to build and maintain our proprietary position for vosaroxin and any future drug candidates, if any, will depend on our success in obtaining effective claims and enforcing those claims if granted. The patent positions of biopharmaceutical companies like ours are generally uncertain and involve complex legal and factual questions for which some important legal principles remain unresolved. No consistent policy regarding the breadth of patent claims has emerged to date in the United States. The patent situation outside the United States is even more uncertain. We do not know whether any of our patent applications or those patent applications that we license will result in the issuance of any patents. Even if patents are issued, they may not be sufficient to protect vosaroxin or future drug candidates, if any. The patents we own or license and those that may be issued in the future may be opposed, challenged, invalidated or circumvented, and the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages.

Patent applications filed before November 29, 2000 in the United States are maintained in secrecy until patents issue. Later filed U.S. applications and patent applications in most foreign countries generally are not published until at least 18 months after their earliest filing date. Scientific and patent publication often occurs long after the date of the scientific discoveries disclosed in those publications. Accordingly, we cannot be certain that we were the first to invent the subject matter covered by any patent application or that we were the first to file a patent application for any inventions.

Our commercial success depends on our ability to operate without infringing patents and proprietary rights of third parties. We cannot determine with certainty whether patents or patent applications of other parties may materially affect our ability to conduct our business. The existence of third party patent applications and patents could significantly reduce the coverage of patents owned by or licensed to us and limit our ability to obtain meaningful patent protection. If patents containing competitive or conflicting claims are issued to third parties and these claims are ultimately determined to be valid, we may be enjoined from pursuing research, development or commercialization of vosaroxin or future drug candidates, if any, or be required to obtain licenses to such patents or to develop or obtain alternative technology.

We may need to commence or defend litigation to enforce or to determine the scope and validity of any patents issued to us or to determine the scope and validity of third party proprietary rights. Litigation would result in substantial costs, even if the eventual outcome is favorable to us. An adverse outcome in litigation affecting proprietary rights we own or have licensed could present significant risk of competition for vosaroxin or future drug candidates, if any, that we market or seek to develop. Any adverse outcome in litigation affecting third party proprietary rights could subject us to significant liabilities to third parties and could require us to seek licenses of the disputed rights from third parties or to cease using the technology if such licenses are unavailable.

We also rely on trade secrets to protect our technology, especially in situations or jurisdictions in which we believe patent protection may not be appropriate or obtainable. However, trade secrets are difficult to maintain and do not protect technology against independent developments made by third parties.

We seek to protect our proprietary information by requiring our employees, consultants, contractors and other advisers to execute nondisclosure and assignment of invention agreements upon commencement of their employment or engagement. Agreements with our employees also prevent them from bringing the proprietary rights of third parties to us. We also require confidentiality or material transfer agreements from third parties that receive our confidential data or materials. There can be no assurance that these agreements will provide meaningful protection, that these agreements will not be breached, that we will have an adequate remedy for any such breach, or that our trade secrets will not otherwise become known or independently developed by a third party.

We seek to protect our company name and the names of our products and technologies by obtaining trademark registrations, as well as common law rights in trademarks and service marks, in the United States and in other countries. There can be no assurance that the trademarks or service marks we use or register will protect our company name or any products or technologies that we develop and commercialize, that our trademarks, service marks, or trademark registrations will be enforceable against third parties, or that our trademarks and service marks will not interfere with or infringe trademark rights of third parties. We may need to commence litigation to enforce our trademarks and service marks or to determine the scope and validity of our or a third party's trademark rights. Litigation would result in substantial costs, even if the eventual outcome is favorable to us. An adverse outcome in litigation could subject us to significant liabilities to third parties and require us to seek licenses of the disputed rights from third parties or to cease using the trademarks or service marks if such licenses are unavailable.

Government Regulation

The FDA and comparable regulatory agencies in state and local jurisdictions and in foreign countries impose substantial requirements upon the clinical development, manufacture, marketing and distribution of drugs. These agencies and other federal, state and local entities regulate research and development activities and the testing, manufacture, quality control, safety, efficacy, labeling, storage, recordkeeping, approval, advertising and promotion of vosaroxin and any future drug candidates we may develop, if any. The application of these regulatory frameworks to the development, approval and commercialization of vosaroxin or our future drug candidates, if any, will take a number of years to accomplish, if at all, and involve the expenditure of substantial resources.

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, as amended, and implementing regulations. The process required by the FDA before vosaroxin and any future drug candidates may be marketed in the United States generally involves the following:

- completion of extensive preclinical laboratory tests, *in vivo* preclinical studies and formulation studies;
- submission to the FDA of an Investigational New Drug, or IND, application, which must become effective before clinical trials begin;
- performance of adequate and well-controlled clinical trials to establish the safety and efficacy of the product candidate for each proposed indication;
- submission of an NDA to the FDA;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facilities at which the product candidate is produced to assess compliance with current Good Manufacturing Practice, or cGMP, regulations; and
- FDA review and approval of the NDA, including proposed labeling (package insert information) and promotional materials, prior to any commercial marketing, sale or shipment of the drug.

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

In October 2009, the FDA granted orphan drug designation to vosaroxin for treatment of AML. The United States Orphan Drug Act promotes the development of products that demonstrate promise for the diagnosis and treatment of diseases or conditions that affect fewer than 200,000 people in the United States. Upon receipt

of orphan drug designation from the FDA, the sponsor is eligible for tax credits of up to 50% for qualified clinical trial expenses, the ability to apply for annual grant funding, waiver of Prescription Drug User Fee Act, or PDUFA, application fee, and upon approval, the potential for seven years of market exclusivity for the orphan-designated product for the orphan-designated indication.

Preclinical Testing and INDs

Preclinical tests include laboratory evaluation of product chemistry, formulation and stability, as well as studies to evaluate toxicity in animals. Laboratories that comply with the FDA Good Laboratory Practice regulations must conduct preclinical safety tests. The results of preclinical tests, together with manufacturing information and analytical data, are submitted as part of an IND application to the FDA. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises concerns or questions about the conduct of the clinical trial, including concerns that human research subjects will be exposed to unreasonable health risks. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. Our submission of an IND, or those submitted by Biogen Idec, Millennium, or our potential future licensees or collaboration partners, if any, may not result in FDA authorization to commence a clinical trial.

Clinical Trials

Clinical trials involve the administration of an investigational drug to healthy volunteers or to patients under the supervision of a qualified principal investigator. Clinical trials are conducted in accordance with the FDA's Protection of Human Subjects regulations and Good Clinical Practices, or GCP, under protocols that detail the objectives of the study, the parameters to be used to monitor safety, and the efficacy criteria to be evaluated. Each protocol must be submitted to the FDA as part of the IND application.

In addition, each clinical study must be conducted under the auspices of an independent institutional review board, or IRB, at each institution where the study will be conducted. Each IRB will consider, among other things, ethical factors, the safety of human subjects and the possible liability of the institution. The FDA, an IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk. Clinical testing also must satisfy extensive GCP requirements and regulations for informed consent.

Clinical trials are typically conducted in three sequential phases, which may overlap, sometimes followed by a fourth phase:

- *Phase 1 clinical trials* are initially conducted in a limited population to test the drug candidate for safety (adverse effects), dose tolerance, absorption, metabolism, distribution and excretion in healthy humans or, on occasion, in patients, such as cancer patients. In some cases, particularly in cancer trials, a sponsor may decide to conduct what is referred to as a "Phase 1b" evaluation, which is a second safety-focused Phase 1 clinical trial typically designed to evaluate the impact of the drug candidate in combination with currently approved drugs.

- *Phase 2 clinical trials* are generally conducted in a limited patient population to identify possible adverse effects and safety risks, to determine the efficacy of the drug candidate for specific targeted indications and to determine dose tolerance and optimal dosage. Multiple Phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more expensive Phase 3 clinical trials. In some cases, a sponsor may decide to conduct what is referred to as a "Phase 2b" evaluation, which is a second, confirmatory Phase 2 clinical trial that could, if positive and accepted by the FDA, serve as a pivotal clinical trial in the approval of a drug candidate.

- *Phase 3 clinical trials* are commonly referred to as pivotal trials. When Phase 2 clinical trials demonstrate that a drug candidate has potential activity in a disease or condition and has an acceptable safety profile, Phase 3 clinical trials are undertaken to further evaluate clinical efficacy and to further test for safety in an expanded patient population at multiple, geographically dispersed clinical trial sites.
- *Phase 4 (post-marketing) clinical trials* may be required by the FDA in some cases. The FDA may condition approval of an NDA for a drug candidate on a sponsor's agreement to conduct additional clinical trials to further assess the drug's safety and efficacy after NDA approval. Such post-approval trials are typically referred to as Phase 4 clinical trials.

New Drug Applications

The testing and approval processes are likely to require substantial cost, time and effort, and there can be no assurance that any approval will be granted on a timely basis, if at all. The FDA may withdraw product approvals if compliance with regulatory standards is not maintained or if problems occur following initial marketing.

The results of development, preclinical testing and clinical trials, together with extensive manufacturing information and a substantial user fee, are submitted to the FDA as part of an NDA for approval of the marketing and commercial distribution of the drug. The review process routinely takes 12 months (under the latest Prescription Drug User Fee Act goals, a 10-month review period begins at the conclusion of the 60-day filing review period that begins on the date of FDA receipt of the submission), but is often significantly extended by FDA requests for additional information or clarification. The FDA may refer the NDA to an advisory committee for review, evaluation and recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. The FDA may deny approval of an NDA if the applicable regulatory criteria are not satisfied, or it may require additional clinical testing. Even if data from such testing are obtained and submitted, the FDA may ultimately decide that the NDA does not satisfy the criteria for approval. Data from clinical trials are not always conclusive and the FDA may interpret data differently than we or Biogen Idec, Millennium, or our potential future licensees or collaboration partners, if any, interpret data. If regulatory approval is granted, such approval may entail limitations on the indicated uses for which the product may be marketed.

Once issued, the FDA may withdraw drug approval if ongoing regulatory requirements are not met or if safety problems occur after the drug reaches the market. In addition, the FDA may require testing, including Phase 4 clinical trials, and surveillance programs to monitor the effect of approved products that have been commercialized, and the FDA has the power to prevent or limit further marketing of a drug based on the results of these post-marketing programs. Drugs may be marketed only for approved indications and in accordance with the provisions of the approved label. Further, if there are any modifications to the drug, including changes in indications, labeling, or manufacturing processes or facilities, we may be required to submit and obtain FDA approval of a new NDA or NDA supplement, which may require us to develop additional data or conduct additional preclinical studies and clinical trials.

Fast Track Designation

FDA's fast track program is intended to facilitate the development, and to expedite the review, of drugs that are intended for the treatment of a serious or life-threatening condition for which there is no effective treatment and demonstrate the potential to address unmet medical needs for the condition.

With fast track designation, the FDA may initiate review of sections of an NDA before the application is complete. This rolling review is available if the applicant provides and the FDA approves a schedule for the submission of the remaining information and the applicant pays applicable user fees. However, the time period specified in the Prescription Drug User Fee Act, which governs the time period goals the FDA has committed to reviewing an application, does not begin until the complete application is submitted. Additionally, the fast track designation may be withdrawn by the FDA if the FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

In some cases, a fast track designated drug candidate may also qualify for one or more of the following programs:

- *Priority Review.* Under FDA policies, a drug candidate is eligible for priority review, or, under Prescription Drug User Fee Act V, review within eight months from the time a complete NDA is accepted for filing (a six-month review period begins at the conclusion of the 60-day filing review period that begins on the date of FDA receipt of the submission), if the drug candidate provides a significant improvement compared to marketed drugs in the treatment, diagnosis or prevention of a disease. A fast track designated drug candidate would ordinarily meet the FDA's criteria for priority review.

- *Accelerated Approval.* Under the FDA's accelerated approval regulations, the FDA is authorized to approve drug candidates that have been studied for their safety and efficacy in treating serious or life-threatening illnesses and that provide meaningful therapeutic benefit to patients over existing treatments based upon either a surrogate endpoint that is reasonably likely to predict clinical benefit or on the basis of an effect on a clinical endpoint other than patient survival. In clinical trials, surrogate endpoints are alternative measurements of the symptoms of a disease or condition that are substituted for measurements of observable clinical symptoms. A drug candidate approved on this basis is subject to rigorous post-marketing compliance requirements, including the completion of Phase 4 clinical trials to validate the surrogate endpoint or confirm the effect on the clinical endpoint. Failure to conduct required post-approval studies, or to validate a surrogate endpoint or confirm a clinical benefit during post-marketing studies, will allow the FDA to withdraw the drug from the market on an expedited basis. All promotional materials for drug candidates approved under accelerated regulations are subject to prior review by the FDA.

In February 2011, the FDA granted fast track designation to vosaroxin for the potential treatment of relapsed or refractory AML in combination with cytarabine. We do not know whether vosaroxin or our future drug candidates, if any, will receive a priority review designation or, if a priority designation is received, whether that review or approval will be faster than conventional FDA procedures. We also cannot predict whether vosaroxin or our future drug candidates, if any, will obtain accelerated approval or priority review, or the ultimate impact, if any, of the fast track or the accelerated approval process on the timing or likelihood of FDA approval of vosaroxin or our future drug candidates, if any.

Satisfaction of FDA regulations and approval requirements or similar requirements of foreign regulatory agencies typically takes several years, and the actual time required may vary substantially based upon the type, complexity and novelty of the product or disease. Typically, if a drug candidate is intended to treat a chronic disease, as is the case with vosaroxin, safety and efficacy data must be gathered over an extended period of time. Government regulation may delay or prevent marketing of drug candidates for a considerable period of time and impose costly procedures upon our activities. The FDA or any other regulatory agency may not grant approvals for new indications for our drug candidates on a timely basis, or at all. Even if a drug candidate receives regulatory approval, the approval may be significantly limited to specific disease states, patient populations and dosages. Further, even after regulatory approval is obtained, later discovery of previously unknown problems with a drug may result in restrictions on the drug or even complete withdrawal of the drug from the market. Delays in obtaining, or failures to obtain, regulatory approvals for any of our drug candidates would harm our business. In addition, we cannot predict what adverse governmental regulations may arise from future U.S. or foreign governmental action.

Other Regulatory Requirements

Any drugs manufactured or distributed by us, Biogen Idec, Millennium, or our potential future licensees or collaboration partners, if any, pursuant to FDA approvals are subject to continuing regulation by the FDA, including recordkeeping requirements and reporting of adverse experiences associated with the drug. Drug manufacturers and their subcontractors are required to register with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with ongoing

regulatory requirements, including cGMPs, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Failure to comply with the statutory and regulatory requirements can subject a manufacturer to possible legal or regulatory action, such as warning letters, suspension of manufacturing, seizure of product, injunctive action or possible civil penalties.

The FDA closely regulates the post-approval marketing and promotion of drugs, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the Internet. A company can make only those claims relating to safety and efficacy that are approved by the FDA. Failure to comply with these requirements can result in adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available drugs for uses that are not described in the drug's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties, including cancer therapy. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, impose stringent restrictions on manufacturers' communications regarding off-label use. •

Foreign Regulation

In addition to regulations in the United States, we are subject to foreign regulations governing clinical trials and commercial sales and distribution of vosaroxin or our future drug candidates, if any. Our VALOR trial is enrolling patients in Europe, Canada, Australia and New Zealand. We may in the future initiate clinical trials in other countries throughout the world. Whether or not we obtain FDA approval for a product, we must obtain approval of a product by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product in those countries. The approval process varies from country to country, and the time may be longer or shorter than that required for FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

Under European Union regulatory systems, permission to conduct clinical research is granted by the Competent Authority of each European Member State, or MS, and the applicable Ethics Committees, or EC, through the submission of a Clinical Trial Application. An EC in the European Union serves the same function as an IRB in the United States. The review times vary by MS but may not exceed 60 days. The EC has a maximum of 60 days to give its opinion on the acceptability of the Clinical Trial Application to both the governing MS and the sponsor applicant. If the application is deemed acceptable, the MS informs the applicant (or does not within the 60-day window inform the applicant of non-acceptance) and the company may proceed with the clinical trial.

Under the European Union regulatory systems, marketing authorizations may be submitted either under a centralized or mutual recognition procedure. The centralized procedure provides for the grant of a single marketing authorization that is valid for all European Union member states. The mutual recognition procedure provides for mutual recognition of national approval decisions. Under this procedure, the holder of a national marketing authorization may submit an application to the remaining member states. Within 90 days of receiving the application and assessment report, each member state must decide whether to recognize approval.

Under the Canadian regulatory system, Health Canada is the regulatory body that governs the sale of drugs for the purposes of use in clinical trials. Accordingly, any company that wishes to conduct a clinical trial in Canada must submit a clinical trial application to Health Canada. Health Canada reviews the application and notifies the company within 30 days if the application is found to be deficient. If the application is deemed acceptable, Health Canada will issue a no objection letter to the company within the 30-day review period which means the company may proceed with its clinical trial(s).

In addition to regulations in the United States, the European Union and Canada, we will be subject to a variety of other foreign regulations governing clinical trials and commercial distribution of our product candidates. Our ability to sell drugs will also depend on the availability of reimbursement from government and private practice insurance companies.

Research and Development Expenses

We incurred $22.6 million, $14.4 million and $13.2 million of research and development expenses in 2011, 2010 and 2009, respectively. We do not anticipate incurring any significant additional research expenses related to the discovery of additional product candidates, the development or application of fragment-based drug discovery methods, the development of in-house research capabilities, or on the clinical development of product candidates other than vosaroxin. In addition, we are no longer conducting any research activities in connection with collaboration agreements. However, we have incurred and expect to continue to incur increased levels of research and development expenses to conduct further clinical and related development of vosaroxin.

Environment

We have made, and will continue to make, expenditures for environmental compliance and protection. We do not expect that such expenditures will have a material effect on our capital expenditures or results of operations in the foreseeable future.

Employees

As of December 31, 2011, our workforce consisted of 31 full-time employees. Of our total workforce, 21 are engaged in research and development and 10 are engaged in general and administrative functions. We have no collective bargaining agreements with our employees, and we have not experienced any work stoppages.

Corporate Background

We were incorporated in Delaware in February 1998 as Mosaic Pharmaceuticals, Inc., and subsequently changed our name to Sunesis Pharmaceuticals, Inc. Our offices are headquartered at 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080, and our telephone number is (650) 266-3500. Our website address is *www.sunesis.com*. Information contained in, or accessible through, our website is not incorporated by reference into and does not form a part of this report.

ITEM 1A. *RISK FACTORS*

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below and all information contained in this report in weighing a decision to purchase our common stock. If any of the possible adverse events described below actually occurs, we may be unable to conduct our business as currently planned and our financial condition and operating results could be adversely affected. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations. In addition, the trading price of our common stock could decline due to the occurrence of any of these risks, and you may lose all or part of your investment. Please see "Special Note Regarding Forward-Looking Statements."

Risks Related to Our Business

We need to raise substantial additional funding to complete the development and potential commercialization of vosaroxin.

We believe that with $44.1 million in cash and investments as of December 31, 2011, we currently have the resources to fund our operations until the planned unblinding of the VALOR trial in 2013. To the extent that the costs of the VALOR trial exceed our current estimates or unblinding does not occur within the currently anticipated timeframe and we are unable to raise sufficient additional capital to cover such additional costs, we will need to reduce operating expenses, enter into a collaboration or other similar arrangement with respect to development and/or commercialization rights to vosaroxin, outlicense intellectual property rights to vosaroxin, sell assets, or a combination of the above.

In addition, we will need to raise substantial additional capital to:

- complete the development and potential commercialization of vosaroxin;
- fund additional clinical trials of vosaroxin and seek regulatory approvals;
- expand our development activities;
- implement additional internal systems and infrastructure; and
- build or access commercialization and additional manufacturing capabilities and supplies.

Our future funding requirements and sources will depend on many factors, including but not limited to:

- the rate of progress and cost of our clinical trials, including the VALOR trial in particular;
- the need for additional or expanded clinical trials (including in particular potential expansion of the number of patients included in the VALOR trial based on the pre-specified interim analysis of data from the trial by the DSMB);
- the timing, economic and other terms of any licensing, collaboration or other similar arrangement into which we may enter;
- the costs and timing of seeking and obtaining FDA and other regulatory approvals;
- the extent of our other development activities;
- the costs associated with building or accessing commercialization and additional manufacturing capabilities and supplies;

- the costs of acquiring or investing in businesses, product candidates and technologies, if any;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights;
- the effect of competing technological and market developments; and
- the costs, if any, of supporting our arrangements with Biogen Idec and Millennium or any potential future licensees or partners.

Until we can generate a sufficient amount of licensing or collaboration or product revenue to finance our cash requirements, which we may never do, we expect to finance future cash needs primarily through equity issuances, debt arrangements, a possible license, collaboration or other similar arrangement with respect to development and/or commercialization rights to vosaroxin, or a combination of the above. Any issuance of convertible debt securities, preferred stock or common stock may be at a discount from the then-current trading price of our common stock. If we issue additional common or preferred stock or securities convertible into common stock, our stockholders will experience additional dilution, which may be significant. Further, we do not know whether additional funding will be available on acceptable terms, or at all. If we are unable to raise substantial additional funding on acceptable terms or at all, we will be forced to delay or reduce the scope of our vosaroxin development program, potentially including the VALOR trial, and/or limit or cease our operations.

We have incurred losses since inception and anticipate that we will continue to incur losses for the foreseeable future. We may not ever achieve or sustain profitability.

We are not profitable and have incurred losses in each year since our inception in 1998. Our net losses for the years ended December 31, 2011, 2010 and 2009 were $20.1 million, $24.6 million and $40.2 million, respectively. As of December 31, 2011, we had an accumulated deficit of $401.1 million. We do not currently have any products that have been approved for marketing, and we continue to incur substantial development and general and administrative expenses related to our operations. We expect to continue to incur losses for the foreseeable future, and we expect these losses to increase significantly as the VALOR trial progresses, as we seek regulatory approvals for vosaroxin, and as we commercialize vosaroxin, if approved. Our losses, among other things, have caused and will continue to cause our stockholders' equity and working capital to decrease.

To date, we have derived substantially all of our revenue from research collaboration agreements with Biogen Idec, Merck & Co., Inc. and Johnson & Johnson Pharmaceutical Research & Development LLC. On March 31, 2011, the only remaining collaboration agreement, which was with Biogen Idec, was amended and restated to provide for the discovery, development and commercialization of small molecule inhibitors of a unique preclinical kinase inhibitor program involved in immunology. Concurrently, we entered into a license agreement with Millennium, under which we granted Millennium exclusive licenses for the development of our oral, selective pan-Raf kinase inhibitor and one additional undisclosed kinase inhibitor program in oncology. While we are entitled to certain milestone and royalty payments under each of the Restated Biogen Idec Agreement and Millennium Agreement, we cannot predict whether we will receive any such payments under these agreements in the foreseeable future, or at all. Additionally, the research phase of the Original Biogen Idec Agreement was terminated as of June 30, 2008; we do not have research obligations under the Restated Biogen Idec Agreement and we do not anticipate receiving any research revenue under the Restated Biogen Idec Agreement in the future. Moreover, we do not expect to enter into any new collaboration agreement that will result in research revenue for us. We also do not anticipate that we will generate revenue from the sale of products for the foreseeable future. In the absence of additional sources of capital, which may not be available to us on acceptable terms, or at all, the development of vosaroxin or future product candidates, if any, may be reduced in scope, delayed or terminated. If our product candidates or those of our collaborators fail in clinical trials or do not gain regulatory approval, or if our future products do not achieve market acceptance, we may never become profitable. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods.

The development of vosaroxin could be halted or significantly delayed for various reasons; our clinical trials for vosaroxin may not demonstrate safety or efficacy or lead to regulatory approval.

Vosaroxin is vulnerable to the risks of failure inherent in the drug development process. We need to conduct significant additional preclinical studies and clinical trials before we can attempt to demonstrate that vosaroxin is safe and effective to the satisfaction of the FDA and other regulatory authorities. Failure can occur at any stage of the development process, and successful preclinical studies and early clinical trials do not ensure that later clinical trials will be successful. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier trials.

For example, we terminated two Phase 2 clinical trials of vosaroxin in small cell and non-small cell lung cancer. If our clinical trials result in unacceptable toxicity or lack of efficacy, we may have to terminate them. If clinical trials are halted, or if they do not show that vosaroxin is safe and effective in the indications for which we are seeking regulatory approval, our future growth will be limited and we may not have any other product candidates to develop.

We do not know whether our ongoing clinical trials or any other future clinical trials with vosaroxin or any of our product candidates, including the VALOR trial in particular, will be completed on schedule, or at all, or whether our ongoing or planned clinical trials will begin or progress on the time schedule we anticipate. The commencement of future clinical trials could be substantially delayed or prevented by several factors, including:

- delays or failures to raise additional funding;
- results of meetings with the FDA and/or other regulatory bodies;
- a limited number of, and competition for, suitable patients with particular types of cancer for enrollment in our clinical trials;
- delays or failures in obtaining regulatory approval to commence a clinical trial;
- delays or failures in obtaining sufficient clinical materials;
- delays or failures in obtaining approval from independent institutional review boards to conduct a clinical trial at prospective sites; or
- delays or failures in reaching acceptable clinical trial agreement terms or clinical trial protocols with prospective sites.

The completion of our clinical trials, including the VALOR trial, could be substantially delayed or prevented by several factors, including:

- delays or failures to raise additional funding;
- slower than expected rates of patient recruitment and enrollment;
- failure of patients to complete the clinical trial;
- delays or failures in reaching the number of events pre-specified in the trial design;
- the need to expand the clinical trial (including, in particular, potential expansion of the number of patients included in our VALOR trial based on the pre-specified interim analysis of data by the DSMB);

- delays or failures in obtaining sufficient clinical materials, including vosaroxin, its matching placebo and cytarabine;
- unforeseen safety issues;
- lack of efficacy during clinical trials;
- inability or unwillingness of patients or clinical investigators to follow our clinical trial protocols; and
- inability to monitor patients adequately during or after treatment.

Additionally, our clinical trials may be suspended or terminated at any time by the FDA, other regulatory authorities, or ourselves. Any failure to complete or significant delay in completing clinical trials for our product candidates could harm our financial results and the commercial prospects for our product candidates.

We rely on a limited number of third-party manufacturers that are capable of manufacturing the vosaroxin API and FDP to supply us with our vosaroxin API and FDP and the placebo used in the VALOR trial. If we fail to obtain sufficient quantities of these materials, the VALOR trial and the development of vosaroxin could be halted or significantly delayed. In addition, we have previously identified product impurities in the vosaroxin API, and there is no assurance they will not occur in the future.

We do not currently own or operate manufacturing facilities and lack the capability to manufacture vosaroxin on a clinical or commercial scale. As a result, we rely on third parties to manufacture vosaroxin API and FDP and the placebo product used in the VALOR trial. The vosaroxin API is classified as a cytotoxic substance, limiting the number of available manufacturers.

We currently rely on two contract manufacturers for the vosaroxin API. We also currently rely on a single contract manufacturer to formulate the vosaroxin API and fill and finish vials of the vosaroxin FDP. If our third-party vosaroxin API or FDP manufacturers are unable or unwilling to produce the vosaroxin API or FDP or placebo we require, we would need to establish arrangements with one or more alternative suppliers. However, establishing a relationship with an alternative supplier would likely delay our ability to produce vosaroxin API or FDP by six to nine months. Our ability to replace an existing manufacturer would also be difficult and time consuming because the number of potential manufacturers is limited and the FDA must approve any replacement manufacturer before it can be an approved commercial supplier. Such approval would require new testing and compliance inspections. It may be difficult or impossible for us to identify and engage a replacement manufacturer on acceptable terms in a timely manner, or at all. We expect to continue to depend on third-party contract manufacturers for all our vosaroxin API, FDP and placebo needs for the foreseeable future.

Vosaroxin requires precise, high quality manufacturing. We have observed visible particles during stability studies of two vosaroxin FDP lots. We have since identified a process impurity in the vosaroxin API that, when formulated into the packaged vial of the vosaroxin FDP, can result in the formation of particles over time. As a response to these findings, we implemented a revised manufacturing process to seek to control the impurity and thereby prevent particle formation. Two lots of vosaroxin API manufactured using a revised manufacturing process were formulated into FDP lots that have both completed up to 24 months of stability testing at room temperature without formation of particles. Three additional lots of API have been manufactured using this improved process, and four lots of FDP have been successfully manufactured using the API resulting from the improved process. All FDP lots made with the new API have passed quality testing and have been released for use in the VALOR trial. All lots have been placed on an International Committee on Harmonization, or ICH, compliant stability program. It will take time to evaluate whether or not our revised manufacturing process for vosaroxin API will be successful in stopping the formation of particles in FDP lots over the longer term, and to evaluate whether or not such control of particle formation can also be reliably and consistently

achieved in subsequent lots over the shorter or longer term. If our changes in the manufacturing process do not adequately control the formation of visible particles, we will need to discuss other possibilities with the FDA and/or other regulatory bodies, which could include a temporary clinical hold of the VALOR trial until the issue has been resolved to their satisfaction.

In addition to process impurities, the failure of our contract manufacturers to achieve and maintain high manufacturing standards in compliance with cGMP regulations could result in other manufacturing errors leading to patient injury or death, product recalls or withdrawals, delays or interruptions of production or failures in product testing or delivery. Although contract manufacturers are subject to ongoing periodic unannounced inspection by the FDA and corresponding state agencies to ensure strict compliance with cGMP and other applicable government regulations and corresponding foreign standards, any such performance failures on the part of a contract manufacturer could result in the delay or prevention of filing or approval of marketing applications for vosaroxin, cost overruns or other problems that could seriously harm our business. This would deprive us of potential product revenue and result in additional losses.

To date, vosaroxin has been manufactured in quantities appropriate for preclinical studies and clinical trials. New lots of API and FDP may need to be manufactured and released to support our VALOR trial, and for stability assessments required for regulatory approval. There can be no assurance that we will be able to obtain a sufficient supply of vosaroxin API and FDP to supply our VALOR trial at the anticipated rate of enrollment or to continue the trial without interruption. Prior to approval for commercial sale, we will need to manufacture registration batches of API and FDP, which will be accompanied by process validation studies, and will require FDA review prior to approval. If the results of these process validation studies do not meet preset criteria, the regulatory approval or commercial launch of vosaroxin may be delayed.

We rely on third-party distributors for the supply of cytarabine for our VALOR trial. Cytarabine has recently been in short supply throughout the world, and there is no guarantee we can procure sufficient quantities to supply our VALOR trial.

The cytarabine used in our VALOR trial is procured from third-party distributors. Cytarabine has recently been in short supply throughout the world. Additional procurement of cytarabine will be necessary to complete the VALOR trial if there is a sample size adjustment based on the pre-specified interim analysis by the DSMB. If we are unable to procure the necessary supplies to support our VALOR trial in a timely manner, the trial will be delayed. Any significant delay could seriously harm our business.

The failure to enroll patients for clinical trials may cause delays in developing vosaroxin.

We may encounter delays if we are unable to enroll enough patients to complete clinical trials of vosaroxin, including the VALOR trial. Patient enrollment depends on many factors, including the size of the patient population, the nature of the protocol, the proximity of patients to clinical sites, the number and nature of competing treatments and ongoing clinical trials of competing drugs for the same indication, and the eligibility criteria for the trial. Patients participating in our trials may elect to leave our trials and switch to alternative treatments that are available to them, either commercially or on an expanded access basis, or in other clinical trials. Competing treatments include nucleoside analogs, anthracyclines and hypomethylating agents. Moreover, when one product candidate is evaluated in multiple clinical trials simultaneously, patient enrollment in ongoing trials can be adversely affected by negative results from completed trials. In the VALOR trial, vosaroxin is being tested in patients with AML, which can be a difficult patient population to recruit.

The results of preclinical studies and clinical trials may not satisfy the requirements of the FDA or other regulatory agencies.

Prior to receiving approval to commercialize vosaroxin or future product candidates, if any, in the United States or abroad, we must demonstrate with substantial evidence from well-controlled clinical trials, to the

satisfaction of the FDA and other regulatory authorities, that such product candidates are safe and effective for their intended uses. The results from preclinical studies and clinical trials can be interpreted in different ways, and the favorable results from previous trials of vosaroxin may not be experienced in the VALOR trial. Even if we believe the preclinical or clinical data are promising, such data may not be sufficient to support approval by the FDA and other regulatory authorities. In addition, although we believe that our discussions with the FDA support the potential approval of vosaroxin for the treatment of AML based on positive results from the VALOR trial without the need to conduct additional clinical trials, the FDA has substantial discretion in the approval process and may not grant approval based on data from this trial.

We rely on third parties to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may be unable to obtain regulatory approval for or commercialize vosaroxin.

We rely on third parties, such as contract research organizations, medical institutions, clinical investigators and contract laboratories, to conduct our planned and existing clinical trials for vosaroxin. If the third parties conducting our clinical trials do not perform their contractual duties or obligations, do not meet expected deadlines or need to be replaced, or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical trial protocols or for any other reason, we may need to enter into new arrangements with alternative third parties and our clinical trials may be extended, delayed or terminated or may need to be repeated, and we may not be able to obtain regulatory approval for or commercialize the product candidate being tested in such trials.

We expect to expand our development capabilities, and any difficulties hiring or retaining key personnel or managing this growth could disrupt our operations.

We are highly dependent on the principal members of our development staff. We expect to expand our development capabilities by increasing expenditures in these areas, hiring additional employees and potentially expanding the scope of our current operations. Future growth will require us to continue to implement and improve our managerial, operational and financial systems and continue to retain, recruit and train additional qualified personnel, which may impose a strain on our administrative and operational infrastructure. The competition for qualified personnel in the biopharmaceutical field is intense. We are highly dependent on our continued ability to attract, retain and motivate highly qualified management and specialized personnel required for clinical development. Due to our limited resources, we may not be able to effectively manage any expansion of our operations or recruit and train additional qualified personnel. If we are unable to retain key personnel or manage our growth effectively, we may not be able to implement our business plan.

If we are sued for infringing intellectual property rights of third parties, litigation will be costly and time consuming and could prevent us from developing or commercializing vosaroxin.

Our commercial success depends on not infringing the patents and other proprietary rights of third parties and not breaching any collaboration or other agreements we have entered into with regard to our technologies and product candidates. If a third party asserts that we are using technology or compounds claimed in issued and unexpired patents owned or controlled by the third party, we may need to obtain a license, enter into litigation to challenge the validity of the patents or incur the risk of litigation in the event that a third party asserts that we infringe its patents.

If a third party asserts that we infringe its patents or other proprietary rights, we could face a number of challenges that could seriously harm our competitive position, including:

- infringement and other intellectual property claims, which would be costly and time consuming to litigate, whether or not the claims have merit, and which could delay the regulatory approval process and divert management's attention from our business;

- substantial damages for past infringement, which we may have to pay if a court determines that vosaroxin or any future product candidates infringe a third party's patent or other proprietary rights;

- a court order prohibiting us from selling or licensing vosaroxin or any future product candidates unless a third party licenses relevant patent or other proprietary rights to us, which it is not required to do; and

- if a license is available from a third party, we may have to pay substantial royalties or grant cross-licenses to our patents or other proprietary rights.

If our competitors develop and market products that are more effective, safer or less expensive than vosaroxin, our commercial opportunities will be negatively impacted.

The life sciences industry is highly competitive, and we face significant competition from many pharmaceutical, biopharmaceutical and biotechnology companies that are researching, developing and marketing products designed to address the treatment of cancer, including AML. Many of our competitors have significantly greater financial, manufacturing, marketing and drug development resources than we do. Large pharmaceutical companies in particular have extensive experience in the clinical testing of, obtaining regulatory approvals for, and marketing drugs.

We believe that our ability to successfully compete in the marketplace with vosaroxin and any future product candidates, if any, will depend on, among other things:

- our ability to develop novel compounds with attractive pharmaceutical properties and to secure, protect and maintain intellectual property rights based on our innovations;

- the efficacy, safety and reliability of our product candidates;

- the speed at which we develop our product candidates;

- our ability to design and successfully execute appropriate clinical trials;

- our ability to maintain a good relationship with regulatory authorities;

- our ability to obtain, and the timing and scope of, regulatory approvals;

- our ability to manufacture and sell commercial quantities of future products to the market; and

- acceptance of future products by physicians and other healthcare providers.

Vosaroxin is a small molecule therapeutic that will compete with other drugs and therapies currently used for AML, such as nucleoside analogs, anthracyclines, hypomethylating agents, Flt-3 inhibitors, other inhibitors of topoisomerase II, and other novel agents. Additionally, other compounds currently in development could become potential competitors of vosaroxin, if approved for marketing.

We expect competition for vosaroxin for the treatment of AML to increase as additional products are developed and approved in various patient populations. If our competitors market products that are more effective, safer or less expensive than vosaroxin or our other future products, if any, or that reach the market sooner we may not achieve commercial success or substantial market penetration. In addition, the biopharmaceutical industry is characterized by rapid change. Products developed by our competitors may render vosaroxin or any future product candidates obsolete.

Our proprietary rights may not adequately protect vosaroxin or future product candidates, if any.

Our commercial success will depend on our ability to obtain patents and maintain adequate protection for vosaroxin and any future product candidates in the United States and other countries. We own, co-own or have rights to a significant number of issued U.S. and foreign patents and pending U.S. and foreign patent applications. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies and future products are covered by valid and enforceable patents or are effectively maintained as trade secrets.

We apply for patents covering both our technologies and product candidates, as we deem appropriate. However, we may fail to apply for patents on important technologies or product candidates in a timely fashion, or at all. Our existing patents and any future patents we obtain may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products and technologies. In addition, we generally do not exclusively control the patent prosecution of subject matter that we license to or from others. Accordingly, in such cases we are unable to exercise the same degree of control over this intellectual property as we would over our own. Moreover, the patent positions of biopharmaceutical companies are highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. As a result, the validity and enforceability of patents cannot be predicted with certainty. In addition, we do not know whether:

- we, our licensors or our collaboration partners were the first to make the inventions covered by each of our issued patents and pending patent applications;
- we, our licensors or our collaboration partners were the first to file patent applications for these inventions;
- others will independently develop similar or alternative technologies or duplicate any of our technologies;
- any of our or our licensors' or our collaboration partners' pending patent applications will result in issued patents;
- any of our, our licensors' or our collaboration partners' patents will be valid or enforceable;
- any patents issued to us, our licensors or our collaboration partners will provide us with any competitive advantages, or will be challenged by third parties;
- we will develop additional proprietary technologies that are patentable; or
- the patents of others will have an adverse effect on our business.

We also rely on trade secrets to protect some of our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to maintain. While we use reasonable efforts to protect our trade secrets, our or our collaboration partners' employees, consultants, contractors or scientific and other advisors, or those of our licensors, may unintentionally or willfully disclose our proprietary information to competitors. Enforcement of claims that a third party has illegally obtained and is using trade secrets is expensive, time consuming and uncertain. In addition, foreign courts are sometimes less willing than U.S. courts to protect trade secrets. If our competitors independently develop equivalent knowledge, methods and know-how, we would not be able to assert our trade secret protection against them and our business could be harmed.

The composition of matter patents covering vosaroxin are due to expire in 2015. Even if vosaroxin is approved by the FDA and foreign equivalents thereof, we may not be able to recover our development costs prior to the expiration of these patents.

The vosaroxin composition of matter is covered by U.S. Patent No. 5,817,669 and its counterpart patents in 43 foreign jurisdictions. This patent is due to expire in October 2015, and most of its foreign counterparts are due to expire in June 2015. In November 2010, the USPTO granted us a patent covering pharmaceutical compositions of vosaroxin, including the formulation used in our VALOR trial. In January 2011, the EPO granted us a similar patent, which has been validated in multiple EPC member states. These patents provide coverage to 2025. In December 2009, the EPO granted us a patent covering combinations of vosaroxin with cytarabine, which provides coverage to 2025 in multiple EPC member states. In June 2011, the USPTO granted us a similar patent, which provides coverage to 2026. In August 2011, the USPTO granted us a patent covering methods of use for vosaroxin at clinically relevant dose ranges and schedules for the treatment of leukemia. This patent has been granted a two year patent term adjustment, which extends coverage through 2026. In February 2012, the USPTO granted us a patent covering certain vosaroxin hydrate forms, which is due to expire in 2028. In February 2012, the USPTO mailed a notice of allowance for a patent application covering certain compositions related to vosaroxin. Although we expect that this patent will be granted in 2012, and that it will be due to expire in 2030, we do not know if this will occur. We also do not know whether patent term extensions and data exclusivity periods will be available in the future. Vosaroxin must undergo extensive clinical trials before it can be approved by the FDA. We do not know when, if ever, vosaroxin will be approved by the FDA. Even if vosaroxin is approved by the FDA in the future, we may not have sufficient time to commercialize our vosaroxin product to enable us to recover our development costs prior to the expiration of the U.S. and foreign patents covering vosaroxin. Our obligation to pay royalties to Dainippon, the company from which we licensed vosaroxin, may extend beyond the patent expiration, which would further erode the profitability of this product.

Any future workforce and expense reductions may have an adverse impact on our internal programs, our ability to hire and retain key personnel and may be distracting to management.

We have, in the past, implemented a number of workforce reductions. Depending on our need for additional funding and expense control, we may be required to implement further workforce and expense reductions in the future. Further workforce and expense reductions could result in reduced progress on our internal programs. In addition, employees, whether or not directly affected by a reduction, may seek future employment with our business partners or competitors. Although our employees are required to sign a confidentiality agreement at the time of hire, the confidential nature of certain proprietary information may not be maintained in the course of any such future employment. Further, we believe that our future success will depend in large part upon our ability to attract and retain highly skilled personnel. We may have difficulty retaining and attracting such personnel as a result of a perceived risk of future workforce and expense reductions. In addition, the implementation of expense reduction programs may result in the diversion of efforts of our executive management team and other key employees, which could adversely affect our business.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed alleged trade secrets of our employees' former employers.

Many of our employees were previously employed at biotechnology or pharmaceutical companies, including our competitors or potential competitors. We may be subject to claims that we or our employees have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A loss of key personnel or the work product of current or former personnel could hamper or prevent our ability to commercialize vosaroxin, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

We currently have limited marketing staff and no sales or distribution organization. If we are unable to develop a sales and marketing and distribution capability on our own or through collaborations with marketing partners, we will not be successful in commercializing vosaroxin.

We currently have no sales or distribution capabilities and limited marketing staff. We intend to establish our own sales and marketing organization with technical expertise and supporting distribution capabilities to commercialize vosaroxin in North America, which will be expensive and time consuming. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of these products. We plan to collaborate with third parties that have direct sales forces and established distribution systems to commercialize vosaroxin. To the extent that we enter into co-promotion or other licensing arrangements, our product revenue is likely to be lower than if we marketed or sold vosaroxin directly. In addition, any revenue we receive will depend upon the efforts of third parties, which may not be successful and are only partially within our control. If we are unable to enter into such arrangements on acceptable terms or at all, we may not be able to successfully commercialize vosaroxin. If we are not successful in commercializing vosaroxin or our future product candidates, if any, either on our own or through collaborations with one or more third parties, our future product revenue will suffer and we may incur significant additional losses.

We depend on various consultants and advisors for the success and continuation of our development efforts.

We work extensively with various consultants and advisors, who provide advice and or services in various business and development functions, including clinical development, operations and strategy, regulatory matters, accounting and finance. The potential success of our drug development programs depends, in part, on continued collaborations with certain of these consultants and advisors. Our consultants and advisors are not our employees and may have commitments and obligations to other entities that may limit their availability to us. We do not know if we will be able to maintain such relationships or that such consultants and advisors will not enter into other arrangements with competitors, any of which could have a detrimental impact on our development objectives and our business.

If conflicts of interest arise between our current or future licensees or collaboration partners, if any, and us, any of them may act in their self-interest, which may be adverse to our interests.

If a conflict of interest arises between us and one or more of our current or potential future licensees or collaboration partners, if any, they may act in their own self-interest or otherwise in a way that is not in the interest of our company or our stockholders. Biogen Idec, Millennium, or potential future licensees or collaboration partners, if any, are conducting or may conduct product development efforts within the disease area that is the subject of a license or collaboration with our company. In current or potential future licenses or collaborations, if any, we have agreed or may agree not to conduct, independently or with any third party, any research that is competitive with the research conducted under our licenses or collaborations. Our licensees or collaboration partners, however, may develop, either alone or with others, products in related fields that are competitive with the product candidates that are the subject of these licenses or collaborations. Competing products, either developed by our licensees or collaboration partners or to which our licensees or collaboration partners have rights, may result in their withdrawal of support for a product candidate covered by the license or collaboration agreement.

If one or more of our current or potential future licensees or collaboration partners, if any, were to breach or terminate their license or collaboration agreements with us or otherwise fail to perform their obligations thereunder in a timely manner, the preclinical or clinical development or commercialization of the affected product candidates could be delayed or terminated. We do not know whether our licensees or collaboration partners will pursue alternative technologies or develop alternative product candidates, either on their own or in collaboration with others, including our competitors, as a means for developing treatments for the diseases targeted by licenses or collaboration agreements with our company.

Compliance with changing regulation of corporate governance and public disclosure may result in additional expenses.

Changing laws, regulations and standards relating to corporate governance and public disclosure may create uncertainty regarding compliance matters. New or changed laws, regulations and standards are subject to varying interpretations in many cases. As a result, their application in practice may evolve over time. We are committed to maintaining high standards of corporate governance and public disclosure. Complying with evolving interpretations of new or changed legal requirements may cause us to incur higher costs as we revise current practices, policies and procedures, and may divert management time and attention from potential revenue-generating activities to compliance matters. If our efforts to comply with new or changed laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, our reputation may also be harmed. Further, our board members, chief executive officer and chief financial officer could face an increased risk of personal liability in connection with the performance of their duties. As a result, we may have difficulty attracting and retaining qualified board members and executive officers, which could harm our business.

Raising funds through lending arrangements may restrict our operations or produce other adverse results.

Our loan and security agreement with Oxford Finance LLC, Silicon Valley Bank and Horizon Technology Finance Corporation, which we entered into on October 18, 2011, contains a variety of affirmative and negative covenants, including required financial reporting, limitations on certain dispositions of assets, limitations on the incurrence of additional debt and other requirements. To secure our performance of our obligations under this loan and security agreement, we granted a perfected first priority security interest in substantially all of our assets, other than intellectual property assets, to the lenders. Our failure to comply with the covenants in the loan and security agreement, the occurrence of a material impairment in our prospect of repayment or in the perfection or priority of the lender's lien on our assets, as determined by the lenders, or the occurrence of certain other specified events could result in an event of default that, if not cured or waived, could result in the acceleration of all or a substantial portion of our debt, potential foreclosure on our assets and other adverse results.

Economic conditions may make it costly and difficult to raise additional capital.

There has been turmoil in the world economy, which has led to volatility on the U.S. stock market and reduced credit availability. Investors have been unwilling to buy certain corporate stocks and bonds. If economic conditions continue to affect the capital markets, our ability to raise capital, via our existing controlled equity facilities, debt facility or otherwise, may be adversely affected.

We are exposed to risks related to foreign currency exchange rates and European sovereign debt.

Some of our costs and expenses are denominated in foreign currencies. Most of our foreign expenses are associated with activities related to the VALOR trial that are occurring outside of the United States, and in particular in Western Europe. When the U.S. dollar weakens against the Euro or British pound, the U.S. dollar value of the foreign currency denominated expense increases, and when the U.S. dollar strengthens against the Euro or British pound, the U.S. dollar value of the foreign currency denominated expense decreases. Consequently, changes in exchange rates, and in particular a weakening of the U.S. dollar, may adversely affect our results of operations. We have and may continue to purchase certain European currencies or highly-rated investments denominated in such currencies to manage the risk of future movements in foreign exchange rates that would affect such payables, in accordance with our investment policy. However, there is no guarantee that the related gains and losses will substantially offset each other, and we may be subject to significant exchange gains or losses as currencies fluctuate from quarter to quarter.

In addition, the current sovereign debt crisis concerning certain European countries, including Greece, Italy, Ireland, Portugal and Spain, and related European financial restructuring efforts, may cause the value of European currencies, including the Euro, to deteriorate. Such deterioration could adversely impact our investments denominated in Euros, which had an aggregate fair value of $5.1 million as of December 31, 2011. Of this amount, $1.5 million and $2.1 million were invested in securities backed by the governments of Germany and the Netherlands, respectively, and $1.5 million was invested in corporate debt securities. Recent rating agency downgrades on European sovereign debt and growing concern over the potential default of European government issuers has further contributed to this uncertainty. Should governments default on their obligations, we may experience loss of principal on our investments in European sovereign debt.

Our facilities are located near known earthquake fault zones, and the occurrence of an earthquake or other catastrophic disaster could cause damage to our facilities and equipment, which could require us to cease or curtail operations.

Our facilities are located in the San Francisco Bay Area near known earthquake fault zones and are vulnerable to significant damage from earthquakes. We are also vulnerable to damage from other types of disasters, including fires, floods, power loss, communications failures and similar events. If any disaster were to occur, our ability to operate our business at our facilities may be seriously or completely impaired and our data could be lost or destroyed.

Risks Related to Our Industry

The regulatory approval process is expensive, time consuming and uncertain and may prevent us from obtaining approval for the commercialization of vosaroxin.

The research, testing, manufacturing, selling and marketing of product candidates are subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries, which regulations differ from country to country. Neither we nor our collaboration partners are permitted to market our product candidates in the United States until we receive approval of an NDA from the FDA, or in any other country without the equivalent marketing approval from such country. We have not received marketing approval for vosaroxin in any jurisdiction. None of our collaboration partners have had a product resulting from our collaboration enter clinical trials. In addition, failure to comply with FDA and other applicable U.S. and foreign regulatory requirements may subject us to administrative or judicially imposed sanctions, including warning letters, civil and criminal penalties, injunctions, product seizure or detention, product recalls, total or partial suspension of production, and refusal to approve pending NDAs, supplements to approved NDAs or their foreign equivalents.

Regulatory approval of an NDA or NDA supplement or a foreign equivalent is not guaranteed, and the approval process is expensive, uncertain and may take several years. Furthermore, the development process for oncology products may take longer than in other therapeutic areas. Regulatory authorities have substantial discretion in the drug approval process. Despite the time and expense exerted, failure can occur at any stage, and we could encounter problems that cause us to abandon clinical trials or to repeat or perform additional preclinical studies and clinical trials. The number of preclinical studies and clinical trials that will be required for marketing approval varies depending on the drug candidate, the disease or condition that the drug candidate is designed to address, and the regulations applicable to any particular drug candidate. In particular, although we believe that our discussions with the FDA support the potential approval of vosaroxin for the treatment of AML based on positive results from the VALOR trial without the need to conduct additional clinical trials, the FDA has substantial discretion in the approval process and may not grant approval based on data from this trial.

The FDA or a foreign regulatory authority can delay, limit or deny approval of a drug candidate for many reasons, including:

- the drug candidate may not be deemed safe or effective;

- regulatory officials may not find the data from preclinical studies and clinical trials sufficient;
- the FDA or foreign regulatory authority might not approve our or our third-party manufacturers' processes or facilities; or
- the FDA or foreign regulatory authority may change its approval policies or adopt new regulations.

We may be subject to costly claims related to our clinical trials and may not be able to obtain adequate insurance.

Because we conduct clinical trials in humans, we face the risk that the use of vosaroxin or future product candidates, if any, will result in adverse side effects. We cannot predict the possible harms or side effects that may result from our clinical trials. Although we have clinical trial liability insurance for up to $10.0 million in aggregate, our insurance may be insufficient to cover any such events. We do not know whether we will be able to continue to obtain clinical trial coverage on acceptable terms, or at all. We may not have sufficient resources to pay for any liabilities resulting from a claim excluded from, or beyond the limit of, our insurance coverage. There is also a risk that third parties that we have agreed to indemnify could incur liability. Any litigation arising from our clinical trials, even if we were ultimately successful, would consume substantial amounts of our financial and managerial resources and may create adverse publicity.

Even if we receive regulatory approval to sell vosaroxin, the market may not be receptive to vosaroxin.

Even if vosaroxin obtains regulatory approval, it may not gain market acceptance among physicians, patients, healthcare payors and/or the medical community. We believe that the degree of market acceptance will depend on a number of factors, including:

- timing of market introduction of competitive products;
- efficacy of our product;
- prevalence and severity of any side effects;
- potential advantages or disadvantages over alternative treatments;
- strength of marketing and distribution support;
- price of vosaroxin, both in absolute terms and relative to alternative treatments; and
- availability of reimbursement from health maintenance organizations and other third-party payors.

For example, the potential toxicity of single and repeated doses of vosaroxin has been explored in a number of animal studies that suggest the dose-limiting toxicities in humans receiving vosaroxin may be similar to some of those observed with approved cytotoxic agents, including reversible toxicity to bone marrow cells, the gastrointestinal system and other systems with rapidly dividing cells. In our Phase 1 and Phase 2 clinical trials of vosaroxin, we have witnessed the following side effects, irrespective of causality, ranging from mild to more severe: lowered white blood cell count that may lead to a serious or possibly life-threatening infection, hair loss, mouth sores, fatigue, nausea with or without vomiting, lowered platelet count, which may lead to an increase in bruising or bleeding, lowered red blood cell count (anemia), weakness, tiredness, shortness of breath, diarrhea and intestinal blockage.

If vosaroxin fails to achieve market acceptance, due to unacceptable side effects or any other reasons, we may not be able to generate significant revenue or to achieve or sustain profitability.

Even if we receive regulatory approval for vosaroxin, we will be subject to ongoing FDA and other regulatory obligations and continued regulatory review, which may result in significant additional expense and limit our ability to commercialize vosaroxin.

Any regulatory approvals that we or our potential future collaboration partners receive for vosaroxin or our future product candidates, if any, may also be subject to limitations on the indicated uses for which the product may be marketed or contain requirements for potentially costly post-marketing trials. In addition, even if approved, the labeling, packaging, adverse event reporting, storage, advertising, promotion and recordkeeping for any product will be subject to extensive and ongoing regulatory requirements. The subsequent discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, may result in restrictions on the marketing of the product, and could include withdrawal of the product from the market.

Regulatory policies may change and additional government regulations may be enacted that could prevent or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are not able to maintain regulatory compliance, we might not be permitted to market vosaroxin or our future products and we may not achieve or sustain profitability.

The coverage and reimbursement status of newly approved drugs is uncertain, and failure to obtain adequate coverage and reimbursement could limit our ability to market vosaroxin and decrease our ability to generate revenue.

There is significant uncertainty related to the third party coverage and reimbursement of newly approved drugs both nationally and internationally. The commercial success of vosaroxin and our future products, if any, in both domestic and international markets depends on whether third-party coverage and reimbursement is available for the ordering of our future products by the medical profession for use by their patients. Medicare, Medicaid, health maintenance organizations and other third-party payors are increasingly attempting to manage healthcare costs by limiting both coverage and the level of reimbursement of new drugs and, as a result, they may not cover or provide adequate payment for our future products. These payors may not view our future products as cost-effective, and reimbursement may not be available to consumers or may not be sufficient to allow our future products to be marketed on a competitive basis. Likewise, legislative or regulatory efforts to control or reduce healthcare costs or reform government healthcare programs could result in lower prices or rejection of our future products. Changes in coverage and reimbursement policies or healthcare cost containment initiatives that limit or restrict reimbursement for our future products may reduce any future product revenue.

Failure to obtain regulatory approval in foreign jurisdictions will prevent us from marketing vosaroxin abroad.

We intend to market vosaroxin in international markets either directly or through a potential future collaboration partner, if any. In order to market vosaroxin in the European Union, Canada and many other foreign jurisdictions, we or a potential future collaboration partner must obtain separate regulatory approvals. We have, and potential future collaboration partners may have, had limited interactions with foreign regulatory authorities, and the approval procedures vary among countries and can involve additional testing at significant cost. The time required to obtain approval may differ from that required to obtain FDA approval. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other foreign countries or by the FDA. The foreign regulatory approval processes may include all of the risks associated with obtaining FDA approval. We or a potential future collaboration partner may not obtain foreign regulatory approvals on a timely basis, if at all. We or a potential future collaboration partner may not be able to file for regulatory approvals and may not receive necessary approvals to commercialize vosaroxin or any other future products in any market.

Foreign governments often impose strict price controls, which may adversely affect our future profitability.

We intend to seek approval to market vosaroxin in both the United States and foreign jurisdictions either directly or through a potential future collaboration partner. If we or a potential future collaboration partner obtain approval in one or more foreign jurisdictions, we or a potential future collaboration partner will be subject to rules and regulations in those jurisdictions relating to vosaroxin. In some foreign countries, particularly in the European Union, prescription drug pricing is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a drug candidate. To obtain reimbursement or pricing approval in some countries, we or a potential future collaboration partner may be required to conduct a clinical trial that compares the cost-effectiveness of vosaroxin to other available therapies. If reimbursement of vosaroxin is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, we may be unable to achieve or sustain profitability.

We may incur significant costs complying with environmental laws and regulations, and failure to comply with these laws and regulations could expose us to significant liabilities.

We, through third-party contractors, use hazardous chemicals and radioactive and biological materials in our business and are subject to a variety of federal, state, regional and local laws and regulations governing the use, generation, manufacture, storage, handling and disposal of these materials. Although we believe our safety procedures for handling and disposing of these materials and waste products comply with these laws and regulations, we cannot eliminate the risk of accidental injury or contamination from the use, storage, handling or disposal of hazardous materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could significantly exceed our insurance coverage, which is limited for pollution cleanup and contamination.

Risks Related to Our Common Stock

The price of our common stock may continue to be volatile, and the value of an investment in our common stock may decline.

In 2011, our common stock traded as low as $1.01 and as high as $3.21. Factors that could cause continued volatility in the market price of our common stock include, but are not limited to:

- our ability to raise additional capital to carry through with our clinical development plans and current and future operations and the terms of any related financing arrangement;
- results from, and any delays in or discontinuance of, ongoing and planned clinical trials for vosaroxin;
- an expansion of the number of patients included in the VALOR trial based on the pre-specified interim analysis by the DSMB;
- announcements of FDA non-approval of vosaroxin, delays in filing regulatory documents with the FDA or other regulatory agencies, or delays in the review process by the FDA or other foreign regulatory agencies;
- announcements relating to restructuring and other operational changes;
- delays in the commercialization of vosaroxin or our future products, if any;
- market conditions in the pharmaceutical, biopharmaceutical and biotechnology sectors;
- issuance of new or changed securities analysts' reports or recommendations;

- developments or disputes concerning our intellectual property or other proprietary rights;
- clinical and regulatory developments with respect to potential competitive products;
- failure to maintain compliance with the covenants in our loan and security agreement with Oxford Finance LLC, Silicon Valley Bank and Horizon Technology Finance Corporation;
- introduction of new products by our competitors;
- issues in manufacturing vosaroxin drug substance or drug product, or future products, if any;
- market acceptance of vosaroxin or our future products, if any;
- announcements relating to our arrangements with Biogen Idec and Millennium;
- actual and anticipated fluctuations in our quarterly operating results;
- deviations in our operating results from the estimates of analysts;
- third-party healthcare reimbursement policies;
- FDA or other U.S. or foreign regulatory actions affecting us or our industry;
- litigation or public concern about the safety of vosaroxin or future products, if any;
- failure to develop or sustain an active and liquid trading market for our common stock;
- sales of our common stock by our officers, directors or significant stockholders; and
- additions or departures of key personnel.

If we fail to maintain compliance with the continued listing requirements of The NASDAQ Capital Market, our common stock may be delisted and the price of our common stock and our ability to access the capital markets could be negatively impacted.

Our common stock currently trades on The NASDAQ Capital Market under the symbol "SNSS." This market has continued listing standards that we must comply with in order to maintain the listing of our common stock. The continued listing standards include, among others, a minimum bid price requirement of $1.00 per share and any of: (i) a minimum stockholders' equity of $2.5 million; (ii) a market value of listed securities of at least $35.0 million; or (iii) net income from continuing operations of $500,000 in the most recently completed fiscal year or in the two of the last three fiscal years. Our results of operations and fluctuating stock price directly impact our ability to satisfy these continued listing standards. In the event we are unable to maintain these continued listing standards, our common stock may be subject to delisting from The NASDAQ Capital Market.

From March 31, 2010 until the close of trading on March 1, 2011, we were not in compliance with the minimum bid price requirement of $1.00 per share pursuant to NASDAQ Listing Rule 5550(a)(2). On February 14, 2011, we effected a one-for-six reverse split of our capital stock, or the Reverse Split, as previously authorized and approved at our annual meeting of stockholders on June 2, 2010. As a result of the Reverse Split, every six shares of our capital stock were combined into one share of capital stock. On February 15, 2011, our common stock began trading on The NASDAQ Capital Market on a post-Reverse Split basis, following which the bid price of our common stock closed at or above $1.00 for the 10 consecutive business days ended March 1, 2011. As a result, on March 2, 2011, we received a letter from NASDAQ indicating that we had regained compliance with the rule as the closing bid price of our common stock had been at $1.00 per share or greater for 10 consecutive trading days. As a result, we are currently in full compliance with the NASDAQ continued listing requirements.

As mentioned above, the price of our common stock can be volatile, and there can be no assurance that we will continue to meet the minimum $1.00 bid price requirement or the other NASDAQ continued listing requirements in the future, and we may be subject to delisting as a result. If we are delisted, we would expect our common stock to be traded in the over-the-counter market, which could adversely affect the liquidity of our common stock. Additionally, we could face significant material adverse consequences, including:

- a limited availability of market quotations for our common stock;
- a reduced amount of analyst coverage for us;
- a decreased ability to issue additional securities or obtain additional financing in the future;
- reduced liquidity for our stockholders;
- potential loss of confidence by collaboration partners and employees; and
- loss of institutional investor interest.

Provisions of our charter documents or Delaware law could delay or prevent an acquisition of our company, even if the acquisition would be beneficial to our stockholders, and could make it more difficult to change management.

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws may discourage, delay or prevent a merger, acquisition or other change in control that stockholders might otherwise consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. In addition, these provisions may frustrate or prevent any attempt by our stockholders to replace or remove our current management by making it more difficult to replace or remove our board of directors. These provisions include:

- a classified board of directors so that not all directors are elected at one time;
- a prohibition on stockholder action through written consent;
- limitations on our stockholders' ability to call special meetings of stockholders;
- an advance notice requirement for stockholder proposals and nominations; and
- the authority of our board of directors to issue preferred stock with such terms as our board of directors may determine.

In addition, Delaware law prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person who, together with its affiliates, owns or within the last three years has owned 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. Accordingly, Delaware law may discourage, delay or prevent a change in control of our company.

Provisions in our charter documents and provisions of Delaware law could limit the price that investors are willing to pay in the future for shares of our common stock.

The ownership of our capital stock is highly concentrated, and your interests may conflict with the interests of our existing stockholders.

Our executive officers and directors and their affiliates beneficially owned approximately 36.8% of our outstanding capital stock as of December 31, 2011, assuming the exercise in full of the outstanding warrants to purchase common stock held by these stockholders as of such date. Accordingly, these stockholders, acting as a group, could have significant influence over the outcome of corporate actions requiring stockholder approval, including the election of directors, any merger, consolidation or sale of all or substantially all of our assets or any other significant corporate transaction. The significant concentration of stock ownership may adversely affect the trading price of our common stock due to investors' perception that conflicts of interest may exist or arise.

We have never paid dividends on our capital stock and we do not anticipate paying any cash dividends in the foreseeable future.

We have never declared or paid cash dividends on our capital stock. We do not anticipate paying any cash dividends on our capital stock in the foreseeable future. In addition, under the terms of our loan and security agreement with Oxford Finance LLC, Silicon Valley Bank and Horizon Technology Finance Corporation, we are precluded from paying cash dividends without the prior written consent of the lenders. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. As a result, capital appreciation, if any, of our common stock will be our stockholders' sole source of gain for the foreseeable future.

We are at risk of securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because biotechnology companies have experienced greater than average stock price volatility in recent years. These broad market fluctuations may adversely affect the trading price or liquidity of our common stock. In the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the issuer. If any of our stockholders were to bring such a lawsuit against us, we could incur substantial costs defending the lawsuit and the attention of our management would be diverted from the operation of our business.

ITEM 1B. *UNRESOLVED STAFF COMMENTS*

None.

ITEM 2. *PROPERTIES*

In December 2006, we leased 15,000 square feet of office space in a building at 395 Oyster Point Boulevard in South San Francisco, California, which is currently our corporate headquarters. This lease expires in April 2013, subject to our option to extend the lease through February 2014. We believe that our current facility will be sufficient to meet our needs through at least 2012.

ITEM 3. *LEGAL PROCEEDINGS*

From time to time, we may be involved in routine legal proceedings, as well as demands, claims and threatened litigation, which arise in the normal course of our business. The ultimate outcome of any litigation is uncertain and unfavorable outcomes could have a negative impact on our results of operations and financial condition. Regardless of outcome, litigation can have an adverse impact on us because of the defense costs, diversion of management resources and other factors.

We believe there is no litigation pending that could, individually or in the aggregate, have a material adverse effect on our results of operations or financial condition.

ITEM 4. *MINE SAFETY DISCLOSURES*

Not applicable.

PART II

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

Our common stock is listed on The NASDAQ Capital Market under the symbol "SNSS." From our initial public offering on September 27, 2005 until August 3, 2009 our common stock was listed on The NASDAQ Global Market under the same symbol. The following table sets forth the range of the high and low sales prices by quarter, as reported by NASDAQ, after giving retroactive effect to the one-for-six reverse split of shares of our capital stock, or the Reverse Split, outstanding immediately prior to the effective time of the Reverse Split on February 14, 2011.

Year-Ended December 31, 2010	**High**	**Low**
First Quarter	$9.72	$4.26
Second Quarter	$7.38	$2.64
Third Quarter	$3.30	$2.22
Fourth Quarter	$3.69	$1.75

Year-Ended December 31, 2011	**High**	**Low**
First Quarter	$3.21	$1.66
Second Quarter	$3.16	$1.88
Third Quarter	$2.15	$1.17
Fourth Quarter	$1.50	$1.01

As of February 29, 2012, there were approximately 174 holders of record of our common stock. In addition, we believe that a significant number of beneficial owners of our common stock hold their shares in nominee or in "street name" accounts through brokers. On February 29, 2012, the last sale price reported on The NASDAQ Capital Market for our common stock was $1.74 per share.

Dividend Policy

We have never paid cash dividends on our common stock. We do not anticipate paying any cash dividends on our capital stock in the foreseeable future. While subject to periodic review, the current policy of our board of directors is to retain cash and investments primarily to provide funds for our future growth. In addition, under the terms of our loan and security agreement with Oxford Finance LLC, Silicon Valley Bank and Horizon Technology Finance Corporation, we are precluded from paying cash dividends without the prior written consent of the lenders.

Unregistered Sales of Equity Securities

Loan Facility

On October 18, 2011, we entered into a loan and security agreement, or the Loan Agreement, with a syndicate led by Oxford Finance LLC and partnered with Silicon Valley Bank and Horizon Technology Finance Corporation, or, collectively, the Lenders, under which we may borrow up to $25.0 million in two tranches. In connection with the Loan Agreement, we agreed to issue to the Lenders warrants to purchase shares of our common stock upon the drawdown of each tranche in the amount equal to 5.00% of the amount drawn at such tranche, divided by the exercise price per share for that tranche. The exercise price per share is determined in each case as the lower of (a) the average closing price per share of our common stock as reported on The NASDAQ Capital Market for the ten (10) trading days prior to the drawdown or (b) the closing price per share of our common stock as reported on The NASDAQ Capital Market on the day before the drawdown. As a result of the drawdown of the first tranche on October 18, 2011, we issued to the Lenders warrants that are initially

exercisable for an aggregate of 386,100 shares of our common stock at a per share exercise price of $1.30, or the Warrants. Each Warrant may be exercised on a cashless basis in whole or in part. The Warrants will terminate on the earlier of the fifth anniversary of their respective issuance or the closing of certain merger or other sale or consolidation transactions in which the consideration is cash, stock of a publicly traded acquirer, or a combination thereof. The sale of the Warrants was to accredited investors and was exempt from the registration requirements of the Securities Act of 1933, as amended, pursuant to Rule 506 of Regulation D promulgated thereunder. We expect to use the proceeds from the loan to support our clinical development activities related to vosaroxin, including the VALOR trial, as well as for other working capital and general corporate purposes.

ITEM 6. *SELECTED FINANCIAL DATA*

The following selected financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and notes to those statements included elsewhere in this report.

	Year Ended December 31,				
Consolidated Statement of Operations:	**2011**	**2010**	**2009**	**2008**	**2007**
	(In thousands, except per share amounts)				
Revenue:					
Collaboration revenue	$ —	$ 27	$ 1,550	$ 4,917	$ 9,163
License and other revenue	5,000	6	2,212	500	500
Total revenues	5,000	33	3,762	5,417	9,663
Operating expenses:					
Research and development	22,563	14,433	13,247	26,285	36,060
General and administrative	8,303	7,005	7,748	11,524	13,570
Restructuring charges	—	—	1,916	5,783	1,563
Total operating expenses	30,866	21,438	22,911	43,592	51,193
Loss from operations	(25,866)	(21,405)	(19,149)	(38,175)	(41,530)
Other income (expense), net(1)	5,725	(3,182)	(21,077)	989	2,769
Net loss	(20,141)	(24,587)	(40,226)	(37,186)	(38,761)
Deemed distribution to preferred stockholders(2)	—	—	(27,563)	—	—
Loss attributable to common stockholders	$(20,141)	$(24,587)	$(67,789)	$(37,186)	$(38,761)
Shares used in computing basic and diluted loss attributable to common stockholders per common share	46,412	24,860	5,747	5,731	5,390
Basic and diluted loss attributable to common stockholders per common share	$ (0.43)	$ (0.99)	$ (11.80)	$ (6.49)	$ (7.19)

(1) During 2011, we recorded net non-cash credits of $5.9 million, and during 2010 we recorded a non-cash charge of $3.7 million, related to the revaluation of the liability for warrants issued in connection with the underwritten offering in October 2010 (see Note 10 of the accompanying consolidated financial statements).

During 2009, we recorded non-cash charges of $21.0 million related to the accounting for the fair values of securities issued as part of the Private Placement (see Note 10 of the accompanying consolidated financial statements). The non-cash charges consisted of $7.5 million recorded upon the initial closing of $10.0 million of units in April 2009 and $13.5 million upon the revaluation in June 2009 of the options to participate in the second closing of $5.0 million of units and the third closing of up to $28.5 million of common stock, which occurred in October 2009 and June 2010, respectively.

(2) During 2009, we recorded deemed distributions to preferred stockholders totaling $27.6 million, related to the accounting for the Private Placement. Of this amount, $26.4 million was due to the revaluation of certain securities upon an amendment of the Private Placement agreements in June 2009, and $1.2 million was due to the write-off of a discount for a beneficial conversion feature on the convertible preferred stock issued as part of the second closing of the Private Placement in October 2009.

	As of December 31,				
Consolidated Balance Sheet Data:	**2011**	**2010**	**2009**	**2008**	**2007**
			(In thousands)		
Cash, cash equivalents and marketable securities	$ 44,115	$ 53,396	$ 4,259	$ 10,619	$ 47,684
Working capital	37,282	42,118	1,807	5,371	39,707
Total assets	45,869	54,858	5,169	12,784	53,246
Non-current portion of equipment leases	—	—	—	—	1,353
Non-current portion of notes payable	9,453	—	—	—	—
Convertible preferred stock	—	—	60,005	—	—
Common stock and additional paid-in capital	429,147	423,267	298,473	322,675	320,583
Accumulated deficit	(401,146)	(381,005)	(356,418)	(316,192)	(279,006)
Total stockholders' equity	28,020	42,247	2,060	6,491	41,394

ITEM 7. *MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS*

The following discussion and analysis of our financial condition as of December 31, 2011 and results of operations for the year ended December 31, 2011 should be read together with our consolidated financial statements and related notes included elsewhere in this report. This discussion and analysis contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which involve risks, uncertainties and assumptions. All statements, other than statements of historical facts, are "forward-looking statements" for purposes of these provisions, including without limitation any statements relating to our strategy, including our plans with respect to unblinding the VALOR trial, the planned interim analysis of the VALOR trial, presenting clinical data and initiating clinical trials, our future research and development activities, including clinical testing and the costs and timing thereof, sufficiency of our cash resources, our ability to raise additional funding when needed, any statements concerning anticipated regulatory activities or licensing or collaborative arrangements, our research and development and other expenses, our operations and legal risks, and any statement of assumptions underlying any of the foregoing. In some cases, forward-looking statements can be identified by the use of terminology such as "anticipates," "believe," "continue," "estimates," "expects," "intend," "look forward," "may," "could," "seeks," "plans," "potential," or "will" or the negative thereof or other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements contained herein are reasonable, there can be no assurance that such expectations or any of the forward-looking statements will prove to be correct, and actual results could differ materially from those projected or assumed in the forward-looking statements. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of many factors, including but not limited to those set forth under "Risk Factors," and elsewhere in this report. We urge you not to place undue reliance on these forward-looking statements, which speak only as of the date of this report. All forward-looking statements included in this report are based on information available to us on the date of this report, and we assume no obligation to update any forward-looking statements contained in this report.

Overview

We are a biopharmaceutical company focused on the development and commercialization of new oncology therapeutics for the treatment of solid and hematologic cancers. Our efforts are currently focused primarily on the development of vosaroxin for the treatment of acute myeloid leukemia, or AML. In December 2010, we commenced enrollment of a Phase 3, multi-national, randomized, double-blind, placebo-controlled, pivotal trial of vosaroxin in combination with cytarabine in patients with relapsed or refractory AML, or the VALOR trial.

The VALOR trial is designed to evaluate the effect of vosaroxin in combination with cytarabine, a widely used chemotherapy in AML, on overall survival as compared to placebo in combination with cytarabine. We expect to enroll 450 evaluable patients in the VALOR trial at more than 100 study sites in the U.S., Canada, Europe, Australia and New Zealand. The trial is designed to have a 90% probability of detecting a 40% difference in overall survival, and includes a single pre-specified interim analysis by the independent Data and Safety Monitoring Board, or DSMB, which is expected to occur in the third quarter of 2012. The DSMB will examine pre-specified efficacy and safety data sets and decide whether to: (i) stop the trial early for efficacy or for futility; (ii) continue the study to its planned unblinding, which is expected in mid-2013 in this event; or (iii) recommend a one-time sample size adjustment of 225 additional evaluable patients if deemed beneficial to maintain adequate statistical power across a range of clinically meaningful and statistically significant outcomes. In this event, trial unblinding is expected in early 2014. In December 2011, we announced that the DSMB had completed a planned periodic safety review and recommended that the trial continue as planned without changes to study conduct.

We are also completing data analysis in preparation for database lock for two fully-enrolled clinical trials of vosaroxin: (a) the Phase 2 portion of a Phase 1b/2 trial of vosaroxin in combination with cytarabine for the

treatment of patients with relapsed or refractory AML, and (b) a Phase 2 trial in previously untreated patients age 60 years or older with AML, or REVEAL-1, which explored three dose schedules. In addition, we completed a Phase 2 single-agent trial of vosaroxin in patients with platinum-resistant ovarian cancer in 2010, which explored three doses and two different schedules of vosaroxin.

In December 2011, we announced our participation in the LI-1 Trial, a Phase 2/3 randomized, controlled, multi-center trial evaluating novel treatment regimens against low-dose cytarabine, or LD Ara-C, in patients older than 60 years with AML or high-risk myelodysplastic syndrome, or MDS. Several treatments, including two regimens containing vosaroxin, will be evaluated in a randomized Phase 2 design with key endpoints including complete remission, 12-month survival, and overall survival. Treatment arms exhibiting promising results on the basis of these endpoints may continue to enroll in a Phase 3 portion of the trial with a primary endpoint of overall survival. In March 2012, the first patient was enrolled in this trial.

We own worldwide development and commercialization rights to vosaroxin. In 2009, the U.S. Food and Drug Administration, or FDA, granted orphan drug designation to vosaroxin for the treatment of AML. In February 2011, the FDA granted fast track designation to vosaroxin for the potential treatment of relapsed or refractory AML in combination with cytarabine. In the last three years, we have been granted, or notified of allowance of, a number of key patents for vosaroxin, as follows:

- In December 2009, the European Patent Office, or EPO, granted us a patent covering combinations of vosaroxin with cytarabine, which is due to expire in 2025 and has been validated in multiple EPC member states. In June 2011, the U.S. Patent and Trademark Office, or USPTO, granted us a patent in the same family, which is due to expire in 2026. In March 2011, Australia also granted us a patent in this family, which is due to expire 2025. Corresponding applications are pending in other major markets, including Japan and Canada.

- In November 2010, the USPTO granted us a patent covering pharmaceutical compositions of vosaroxin, including the formulation used in our VALOR trial. This patent is due to expire in 2025. In January 2011, the EPO granted us a patent in the same family, which has been validated in multiple European Patent Convention, or EPC, member states. In September 2011, Australia also granted us a patent in this family. These patents are due to expire in 2025. Corresponding applications are pending in other major markets, including Japan and Canada.

- In August 2011, the USPTO granted us a patent covering methods of use of vosaroxin at clinically relevant dose ranges and schedules for the treatment of leukemia. This patent is due to expire in 2026. Corresponding applications are pending in other major markets, including Europe, Japan, Australia and Canada.

- In February 2012, the USPTO granted us a patent covering certain vosaroxin hydrate forms, which is due to expire in 2028. Corresponding applications are pending in other major markets, including Europe, Japan, Australia and Canada.

- In February 2012, the USPTO mailed a notice of allowance for a patent application covering certain compositions related to vosaroxin. We expect that this patent will be granted in 2012, and that it will be due to expire in 2030. Corresponding patent applications are pending in the U.S. and internationally.

In March 2011, we entered into three agreements as part of a series of agreements between Biogen Idec MA Inc., or Biogen Idec, Millennium Pharmaceuticals, Inc., a wholly-owned subsidiary of Takeda Pharmaceutical Company Limited, or Millennium, and ourselves:

- A license agreement with Millennium, or the Millennium Agreement, pursuant to which we granted Millennium exclusive licenses for the development of our oral, selective pan-Raf kinase inhibitor

and one additional undisclosed kinase inhibitor program in oncology that were previously a part of the Original Biogen Idec Agreement. Under this agreement, we may in the future receive up to $59.3 million in pre-commercialization milestone payments related to the development of the first two indications for each of the licensed products directed against the two exclusively licensed targets, and royalty payments depending on future product sales. The agreement also provides us with future co-development and co-promotion rights. In September 2011, we announced that Millennium had initiated a Phase 1 clinical study of an oral investigative drug selective for pan-Raf kinase inhibition, MLN2480, which was licensed to them under this agreement.

- An amendment and restatement of the Original Biogen Idec Agreement, or the Restated Biogen Idec Agreement, to provide for the discovery, development and commercialization of small molecule inhibitors of a unique preclinical kinase inhibitor program involved in immunology. Under this agreement, we continue to be eligible to receive up to $60.0 million in pre-commercialization milestone payments related to the development of the first two indications for licensed products against the specified immunology target, and royalty payments depending on future product sales. We also retain future co-development and co-promotion rights.

- A termination and transition agreement with Biogen Idec and Millennium, which provides for the termination of Biogen Idec's exclusive rights under the Original Biogen Idec Agreement to all discovery programs under such agreement other than a preclinical kinase inhibitor program involved in immunology, the permitted assignment of assets and rights to Millennium as provided in the Millennium Agreement, and the upfront, non-refundable payment of $4.0 million to us as consideration for the above, which was received in April 2011.

In March 2006, we licensed our LFA-1 patents and related know-how to SARcode Bioscience, Inc., or SARcode, a privately-held biopharmaceutical company. In March 2009, the license agreement was terminated and SARcode paid us $2.0 million in cash for this intellectual property. In August 2011, SARcode repaid three promissory notes that had been issued to us upon entering into the original license agreement. The total amount received was $1.2 million, which comprised the aggregate principal value of the three notes of $1.0 million, plus $0.2 million of accrued interest.

Recent Financial History

On October 18, 2011, we entered into the Loan Agreement with a syndicate led by Oxford Finance LLC and partnered with Silicon Valley Bank and Horizon Technology Finance Corporation, under which we may borrow up to $25.0 million in two tranches. The first tranche of $10.0 million was funded at closing. The second tranche of $15.0 million may be drawn at our option between June 30, 2012 and September 30, 2012, subject to our continued compliance with the Loan Agreement and contingent upon the recommendation by the DSMB following the interim analysis of the VALOR trial to either: (a) discontinue the trial due to positive efficacy, or (b) continue the trial. In connection with the drawdown of the first tranche of $10.0 million, we issued warrants to purchase 386,100 shares of our common stock to the Lenders at an exercise price of $1.30 per share. The interest rate for the first tranche is 8.95% per annum, and the interest rate for the second tranche will be fixed upon drawdown at a per annum rate equal to the greater of 8.95% or 8.61% plus the then effective three-month U.S. LIBOR rate. Payments under the Loan Agreement are interest-only through February 1, 2013, followed by 32 equal monthly payments of principal and interest through the scheduled maturity date of October 1, 2015. In addition, a final payment equal to 3.75% of the aggregate amount drawn will be due on October 1, 2015, or such earlier date specified in the Loan Agreement. We have paid the Lenders a facility fee of $250,000. In addition, if we repay all or a portion of the loan prior to maturity, we will pay the Lenders a prepayment fee, based on a percentage of the then outstanding principal balance, equal to 3.00% if the prepayment occurs on or prior to October 18, 2012, 2.00% if the prepayment occurs on or prior to October 18, 2013, or 1.00% if the prepayment occurs prior to October 18, 2014.

In April 2010, we entered into a controlled equity offering sales agreement with Cantor Fitzgerald & Co., or Cantor, pursuant to which we may issue and sell shares of our common stock having an aggregate offering price of up to $20.0 million from time to time through Cantor acting as agent and/or principal. In the year ended December 31, 2011, we sold an aggregate of 1,302,383 shares of common stock at an average price of approximately $2.93 per share for gross proceeds of $3.8 million and net proceeds of $3.7 million, after deducting Cantor's commission. As of December 31, 2011, $2.0 million of common stock remained available to be sold, subject to certain conditions as specified in the agreement.

In August 2011, we entered into an additional controlled equity offering sales agreement with Cantor, pursuant to which we may issue and sell shares of our common stock having an aggregate offering price of up to $20.0 million from time to time through Cantor acting as agent and/or principal. As of December 31, 2011, no sales had been made under this facility, and $20.0 million of common stock remained available to be sold, subject to certain conditions as specified in the agreement.

In February 2011, we effected a one-for-six reverse split of our capital stock, or the Reverse Split. As a result of the Reverse Split, every six shares of our capital stock were combined into one share of capital stock. The Reverse Split affected the shares of our common stock: (a) outstanding immediately prior to the effective time of the Reverse Split, (b) available for issuance under our equity incentive plans, and (c) issuable upon the exercise of outstanding stock options and warrants. All share and per share amounts in this Annual Report on Form 10-K have been adjusted to give effect to the Reverse Split.

We have incurred significant losses in each year since our inception. As of December 31, 2011, we had cash, cash equivalents and marketable securities of $44.1 million and an accumulated deficit of $401.1 million. We expect to continue to incur significant losses for the foreseeable future as we continue the development process and seek regulatory approvals for vosaroxin.

Capital Requirements

While we believe that we currently have the resources to fund our operations until the planned unblinding of the VALOR trial in 2013, we may need to raise additional capital if the costs of the trial exceed our current estimates or unblinding does not occur within the currently anticipated timeframe. We will need to raise substantial additional capital to complete development and the potential commercialization of vosaroxin.

We expect to finance our future cash needs primarily through equity issuances, debt arrangements, a possible license, collaboration or other similar arrangement with respect to development and/or commercialization rights to vosaroxin, or a combination of the above. However, we do not know whether additional funding will be available on acceptable terms, or at all. If we are unable to raise required funding on acceptable terms or at all, we will need to reduce operating expenses, enter into a collaboration or other similar arrangement with respect to development and/or commercialization rights to vosaroxin, outlicense intellectual property rights to vosaroxin, sell assets, or a combination of the above, or be forced to delay or reduce the scope of our vosaroxin development program, potentially including the VALOR trial, and/or limit or cease our operations.

Critical Accounting Policies and the Use of Estimates

The accompanying discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements and the related disclosures, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these consolidated financial statements requires our management to make estimates, assumptions and judgments that affect the amounts reported in our financial statements and accompanying notes, including reported amounts of assets, liabilities and expenses and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, as well as revenue and expenses during the reporting periods. We evaluate our estimates, assumptions and judgments on an

ongoing basis. We base our estimates on historical experience and on various other assumptions we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Management has discussed the development, selection and disclosure of these estimates with the Audit Committee of our Board of Directors. Actual results could differ materially from these estimates under different assumptions or conditions.

Our significant accounting policies are more fully described in Note 1 to our consolidated financial statements included elsewhere in this report. We believe the following critical accounting policies reflect our more significant estimates and assumptions used in the preparation of our consolidated financial statements.

Accounting for Equity Financings

The accounting for the initial and second closing of the sale of $10.0 million and $5.0 million of units, respectively, under our Private Placement, and subsequent revaluations of the related financial instruments, required fair values to be established at different dates, either individually or in aggregate, for the four primary components of the Private Placement: (a) the Series A convertible preferred stock, (b) the warrants to purchase common stock, (c) the option for the investors to participate in the second closing, or the Second Closing Option, and (d) the option for the investors to participate in the common equity closing, or the Common Equity Closing Option. The Option-Pricing Method, which utilizes the Black-Scholes model, was selected to determine these fair values, which were calculated as a series of call options on the potential enterprise value of the company at different valuation points at which the claims of the different stakeholder groups on the enterprise value would change. The results of the Black-Scholes model were affected by the company's stock price, as well as assumptions regarding a number of highly subjective variables. These variables included the expected term of the financial instruments and our expected stock price volatility, risk-free interest rate and dividend rate over the expected term. Alternative models could have been selected to calculate these fair values, which may have produced significantly different results.

In October 2010, we completed an underwritten offering, or the 2010 Offering, in which we sold our common stock and warrants to purchase our common stock for aggregate gross proceeds of $15.5 million. Due to the potential for the warrants to be settled in cash upon the occurrence of certain transactions specified in the warrant agreements, the warrants are being accounted for as a derivative liability as opposed to permanent equity. Outstanding warrants under this arrangement are revalued to their fair value each period end, with the change in fair value recorded to other income (expense) in the statement of operations and comprehensive income (loss). The Black-Scholes model was selected as the most appropriate method to estimate both the initial and subsequent fair values of the warrants. The determination of initial and subsequent fair values is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables, as noted above. Changes in these input variables have, and will continue to, affect the income or expense recorded each period for the revaluation of outstanding warrants. As a result, fluctuations in our stock price or other input variables may significantly affect our financial results.

Revenue Recognition

Revenue arrangements with multiple deliverables are accounted for in accordance with Financial Accounting Standards Board Accounting Standards Codification Subtopic 605-25, *Multiple-Element Arrangements*, or ASC 605-25. Under ASC 605-25, revenue arrangements with multiple deliverables are divided into separate units of accounting based on whether certain criteria are met, including whether the delivered item has stand-alone value to the customer. Consideration is allocated among the separate units of accounting based on their respective fair value, and the applicable revenue recognition is applied to each of the separate units.

Non-refundable fees where we have no continuing performance obligations are recognized as revenues when collection is reasonably assured. In situations where continuing performance obligations exist, non-refundable fees are deferred and recognized ratably over the projected performance period.

Milestone payments from license or collaboration agreements which are substantive and at risk at the time the agreement is executed are recognized upon completion of the applicable milestone event. Royalty revenues, if any, will be recognized based on reported product sales by third-party licensees. Research funding from any future agreement will be recognized as the related research services are performed.

Clinical Trial Accounting

We record accruals for estimated clinical trial costs, which include payments for work performed by contract research organizations, or CROs, and participating clinical trial sites. These costs are generally a significant component of research and development expense. Costs incurred for setting up clinical trial sites for participation in trials are generally non-refundable, and are expensed immediately, with any refundable advances related to enrollment of the first patient recorded as prepayments and assessed for recoverability on a quarterly basis. Costs related to patient enrollment are accrued as patients progress through the clinical trial, including amortization of any first-patient prepayments. This amortization generally matches when the related services are rendered, however, these cost estimates may or may not match the actual costs incurred by the CROs or clinical trial sites, and if we have incomplete or inaccurate information, our clinical trial accruals may not be accurate. The difference between accrued expenses based on our estimates and actual expenses have not been material to date.

Overview of Revenues

We have not generated, and do not expect to generate in the near future, any revenue from sales of commercial products.

Collaboration Revenue

Over the past three years, our collaboration revenue was primarily from a $1.5 million cash milestone payment that we received in July 2009 under the Original Biogen Idec Agreement as a result of Biogen Idec's selection of a Raf kinase inhibitor development candidate for the treatment of cancer. In March 2011, we entered into the Restated Biogen Idec Agreement, which amended and restated the Original Biogen Idec Agreement.

Under the Restated Biogen Idec Agreement, we continue to be eligible to receive up to $60.0 million in pre-commercialization milestone payments related to the development of the first two indications for licensed products against the specified immunology target, and royalty payments depending on future product sales. We also retain future co-development and co-promotion rights.

License and other revenue

In March 2011, we entered into the Millennium Agreement, pursuant to which we granted Millennium exclusive licenses for the development of our oral, selective pan-Raf kinase inhibitor and one additional undisclosed kinase inhibitor program in oncology. We concurrently entered into a termination and transition agreement with Biogen Idec and Millennium, pursuant to which we received an upfront, non-refundable payment of $4.0 million from Millennium that was recorded as revenue.

Under the Millennium Agreement, we may in the future receive up to $59.3 million in pre-commercialization milestone payments related to the development of the first two indications for each of the licensed products directed against the two exclusively licensed targets, and royalty payments depending on future product sales. The agreement also provides us with future co-development and co-promotion rights.

In March 2006, we licensed our LFA-1 patents and related know-how to SARcode, a privately-held biopharmaceutical company. In March 2009, the license agreement was terminated and SARcode paid us $2.0 million in cash for this intellectual property, which was recorded as revenue in April 2009. In August 2011,

SARcode repaid three promissory notes that had been issued to us upon entering into the original license agreement. The total amount received was $1.2 million, which comprised the aggregate principal value of the three notes of $1.0 million, plus $0.2 million of accrued interest, which we recorded as revenue and interest income, respectively, upon receipt.

Overview of Operating Expenses

Research and development expense. Most of our operating expenses to date have been for research and development activities, and include costs incurred:

- in the preparation and execution of clinical trials, including those for vosaroxin;
- in the discovery and development of novel small molecule therapeutics;
- in the development of novel fragment-based drug discovery methods;
- in the development and use of in-house research, preclinical study and development capabilities;
- in connection with in-licensing activities; and
- in the conduct of activities related to strategic collaborations.

We expense all research and development costs as they are incurred.

We are currently focused on the development of vosaroxin for the treatment of AML. Based on results of translational research, clinical results, regulatory and competitive concerns and our overall financial resources, we anticipate that we will make determinations as to which indications to pursue and patient populations to treat in the future, and how much funding to direct to each indication, which will affect our research and development expense.

We do not anticipate incurring any significant additional research expenses related to the discovery of additional product candidates, the development or application of fragment-based drug discovery methods, the development of in-house research capabilities, or on the clinical development of product candidates other than vosaroxin. In addition, we are no longer conducting any research activities in connection with collaboration agreements. However, we have incurred and expect to continue to incur increased levels of research and development expenses to conduct further clinical and related development of vosaroxin.

If we engage a development or commercialization partner for our vosaroxin program, or if, in the future, we acquire additional product candidates, our research and development expenses could be significantly affected. We cannot predict whether future licensing or collaborative arrangements will be secured, if at all, and to what degree such arrangements would affect our development plans and capital requirements.

Under the Restated Biogen Idec Agreement and the Millennium Agreement, we have the right to participate in co-development and co-promotion activities for the related product candidates. If we were to exercise our option on one or more product candidates, our research and development expense would increase significantly.

As of December 31, 2011, we had incurred $100.6 million of expenses in the development of vosaroxin since it was licensed from Dainippon Sumitomo Pharma Co., Ltd., or Dainippon, in October 2003. We expect to continue to incur significant expenses related to the development of vosaroxin in 2012 and future years. Due to the above uncertainties and other risks inherent in the development process, we are unable to estimate the costs we will incur in the vosaroxin development program in the future.

General and administrative expense. General and administrative expense consists primarily of personnel costs for the related employees, including non-cash stock-based compensation; professional service costs, including fees paid to outside legal advisors, marketing consultants and our independent registered public accounting firm; facilities expenses; and other administrative costs.

Results of Operations

Years Ended December 31, 2011 and 2010

Revenue. Total revenue was $5.0 million in 2011 as compared to $33,000 in 2010. Revenue in 2011 was comprised of an upfront payment of $4.0 million that we received from Millennium in relation to the termination and transition agreement that we entered into with Biogen Idec and Millennium in March 2011, and $1.0 million that we received as a result of the repayment by SARcode of three promissory notes that had been issued to us upon entering into a license agreement with them in March 2006. We expect our revenue to be lower in 2012 than in 2011.

Research and development expense. Research and development expense was $22.6 million in 2011 as compared to $14.4 million in 2010, substantially all relating to the vosaroxin development program in each year. The increase of $8.2 million in 2011 was primarily due to increases of $7.0 million in clinical trial expenses as a result of the ramp-up of the VALOR trial and $1.6 million for drug manufacturing activities, partially offset by a reduction in milestone payments of $0.5 million. We expect research and development expense to be higher in 2012 as compared to 2011 as we continue to conduct further clinical and related development of vosaroxin.

General and administrative expense. General and administrative expense was $8.3 million in 2011 as compared to $7.0 million in 2010. The increase of $1.3 million in 2011 was primarily due to increases of $0.6 million in personnel costs and $0.5 million in professional service costs.

Other income (expense), net. Net other income was $5.7 million in 2011 as compared to net other expense of $3.2 million in 2010. Net other income in 2011 was primarily comprised of net non-cash credits of $5.9 million for the revaluation of warrants issued in the 2010 Offering to their fair value as of December 31, 2011. Net other expense in 2010 was primarily due to a non-cash charge of $3.7 million for the revaluation of warrants issued in the 2010 Offering to their fair value as of December 31, 2010, partially offset by the receipt of a tax credit of $0.2 million under the IRS Qualifying Therapeutic Discovery Project program.

Years Ended December 31, 2010 and 2009

Revenue. Total revenue decreased to $33,000 in 2010 from $3.8 million in 2009. Collaboration revenue of $1.6 million in 2009 was primarily comprised of a $1.5 million milestone earned from Biogen Idec's selection of a Raf kinase inhibitor development candidate for the treatment of cancer. License and other revenue of $2.2 million in 2009 was primarily comprised of $2.0 million from the sale to SARcode of our interest in all patents and related know-how that had previously been the subject of a license agreement with them.

Research and development expense. Research and development expense increased to $14.4 million in 2010 from $13.2 million in 2009, with substantially all of the expense in each period relating to the vosaroxin development program. The increase in 2010 was primarily due to an increase in clinical trial expenses, primarily related to the launch of the VALOR trial, of $1.0 million and the accrual of a $0.5 million milestone payment due to Dainippon as a result of the initiation of the VALOR trial in December 2010, which we partially offset by a reduction in facility costs of $0.3 million.

General and administrative expense. General and administrative expense decreased to $7.0 million in 2010 from $7.7 million in 2009. The decrease in 2010 was primarily due to a restructuring plan initiated in March 2009, or the 2009 Restructuring, which resulted in a reduction of $0.8 million in headcount-related expenses, including $0.5 million related to non-cash stock compensation expense.

Restructuring charges. There were no restructuring charges in 2010. Restructuring charges were $1.9 million in 2009, which included $1.3 million for lease termination activities related to a corporate realignment initiated in June 2008, or the 2008 Restructuring, and $0.6 million for employee severance and related benefit costs related to the 2009 Restructuring.

Other income (expense), net. Other expense, net was $3.2 million in 2010 as compared to $21.1 million in 2009. The net expense in 2010 was primarily due to a non-cash charge of $3.7 million for the revaluation of warrants issued in the 2010 Offering to their fair value as of December 31, 2010, partially offset by the receipt of a tax credit of $0.2 million under the IRS Qualifying Therapeutic Discovery Project program. The net expense in 2009 was primarily due to non-cash charges of $21.0 million related to the accounting for the Private Placement, which consisted of $7.5 million recorded upon the initial closing in April 2009 and $13.5 million upon the revaluation in June 2009 of the Second Closing Option and Common Equity Closing Option.

Income Taxes

Deferred tax assets or liabilities may arise from differences between the tax basis of assets or liabilities and their basis for financial reporting. Deferred tax assets or liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which temporary differences are expected to be recovered or settled. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized. Our policy is to recognize interest charges and penalties as other expense.

Since inception, we have incurred operating losses and, accordingly, have not recorded a provision for income taxes for any of the periods presented. As of December 31, 2011, we had net operating loss carry-forwards for federal and state income tax purposes of $278.2 million and $169.3 million, respectively. We also had federal and state research and development tax credit carry-forwards of $6.5 million and $5.9 million, respectively. If not utilized, the federal net operating loss and tax credit carry-forwards will expire at various dates beginning in 2018 and the state net operating loss will begin to expire in 2012. The state research and development tax credit carry-forwards do not expire. Utilization of these net operating loss and tax credits carry-forwards may be subject to a substantial annual limitation due to ownership change rules under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code. The limitations are applicable if an "ownership change," as defined in the Code, is deemed to have occurred or occurs in the future. The annual limitation may result in the expiration of net operating loss and credit carry-forwards before they can be utilized.

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have funded our operations primarily through the issuance of common and preferred stock, debt financings, the receipt of funds from our collaboration partners, and research grants.

Our cash, cash equivalents and marketable securities totaled $44.1 million as of December 31, 2011, as compared to $53.4 million as of December 31, 2010. The decrease of $9.3 million was primarily due to $22.8 million of net cash used in operating activities, partially offset by net proceeds of $9.6 million from the Loan Agreement as described below, and $4.1 million from sales of our common stock through Cantor (including $0.4 million from the settlement of sales made in 2010).

In October 2011, we entered into the Loan Agreement with the Lenders, under which we may borrow up to $25.0 million in two tranches. The first tranche of $10.0 million was funded at closing. The second tranche of $15.0 million may be drawn at our option between June 30, 2012 and September 30, 2012, subject to our continued compliance with the Loan Agreement and contingent upon recommendation by the DSMB following the interim analysis of the VALOR trial to either: (a) discontinue the trial due to positive efficacy, or (b) continue the trial.

In April 2010, we entered into a controlled equity offering sales agreement with Cantor, pursuant to which we may issue and sell shares of our common stock having an aggregate offering price of up to $20.0 million from time to time through Cantor acting as agent and/or principal. Cantor is entitled to a 3% commission rate of the gross sales price per share of any common stock sold through Cantor as agent under the sales agreement. In the year ended December 31, 2011, we sold an aggregate of 1,302,383 shares of common stock at an average price of approximately $2.93 per share for gross proceeds of $3.8 million and net proceeds of $3.7 million, after deducting Cantor's commission. As of December 31, 2011, $2.0 million of common stock remained available to be sold, subject to certain conditions as specified in the agreement.

In August 2011, we entered into an additional controlled equity offering sales agreement with Cantor, pursuant to which we may issue and sell shares of our common stock having an aggregate offering price of up to $20.0 million from time to time through Cantor acting as agent and/or principal. As of December 31, 2011, no sales had been made under this facility, and $20.0 million of common stock remained available to be sold, subject to certain conditions as specified in the agreement.

Cash Flows

Net cash used in operating activities was $22.8 million in 2011, compared to $19.4 million used in 2010 and $20.2 million in 2009. Net cash used in 2011 resulted primarily from the net loss of $20.1 million and net adjustments for non-cash items of $4.2 million (including a net credit of $5.9 million for the revaluation of warrants issued in the 2010 Offering, partially offset by $1.4 million of stock-based compensation), partially offset by changes in operating assets and liabilities of $1.5 million, primarily as a result of an increase in accrued clinical expenses related to the VALOR trial. Net cash used in 2010 resulted primarily from the net loss of $24.6 million, partially offset by net adjustments for non-cash items of $4.5 million (including $3.7 million of charges for the revaluation of warrants issued in the 2010 Offering). Net cash used in 2009 resulted primarily from the net loss of $40.2 million, and changes in operating assets and liabilities of $1.3 million, partially offset by net adjustments for non-cash items of $21.4 million (including $21.0 million of charges related to the Private Placement).

Net cash provided by investing activities was $4.2 million in 2011, compared to $39.1 million used in investing activities in 2010 and $4.7 million provided by investing activities in 2009. Net cash provided in 2011 consisted primarily of proceeds from maturities of marketable securities, partially offset by purchases of marketable securities. Net cash used in 2010 consisted primarily of purchases of marketable securities, partially offset by proceeds from maturities of marketable securities. Net cash provided in 2009 consisted primarily of proceeds from maturities of marketable securities.

Net cash provided by financing activities was $13.7 million in 2011, compared to $68.4 million in 2010 and $13.4 million in 2009. Net cash provided in 2011 consisted primarily of net proceeds of $9.6 million from the Loan Agreement and $4.1 million from sales of our common stock through Cantor. Net cash provided in 2010 consisted primarily of net proceeds of $27.5 million from sales of our common stock through Cantor, $26.7 million from sales of our common stock in the third and final closing of the Private Placement, and $14.2 million from the 2010 Offering. Net cash provided in 2009 consisted primarily of net proceeds from the initial and second closings of the Private Placement.

Operating Cash Requirements

We expect to continue to incur substantial operating losses in the future. We will not receive any product revenue until a product candidate has been approved by the FDA or similar regulatory agencies in other countries, and has been successfully commercialized, if at all. We need to raise substantial additional funding to complete the development and potential commercialization of vosaroxin. Additionally, we may evaluate in-licensing and acquisition opportunities to gain access to new drugs or drug targets that would fit with our strategy. Any such transaction would likely increase our funding needs in the future.

Our future funding requirements will depend on many factors, including but not limited to:

- the rate of progress and cost of our clinical trials, including the VALOR trial in particular;
- the need for additional or expanded clinical trials (including in particular potential expansion of the number of patients included in the VALOR trial based on the pre-specified interim analysis of data from the trial by the DSMB);
- the timing, economic and other terms of any licensing, collaboration or other similar arrangement into which we may enter;
- the costs and timing of seeking and obtaining FDA and other regulatory approvals;
- the extent of our other development activities;
- the costs associated with building or accessing commercialization and additional manufacturing capabilities and supplies;
- the costs of acquiring or investing in businesses, product candidates and technologies, if any;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights;
- the effect of competing technological and market developments; and
- the costs, if any, of supporting our arrangements with Biogen Idec and Millennium.

While we believe that we currently have the resources to fund our operations until the planned unblinding of the VALOR trial in 2013, we may need to raise additional capital if the costs of the trial exceed our current estimates or unblinding does not occur within the currently anticipated timeframe.

Until we can generate a sufficient amount of licensing or collaboration or product revenue to finance our cash requirements, which we may never do, we expect to finance our future cash needs primarily through equity issuances, debt arrangements, a possible license, collaboration or other similar arrangement with respect to development and/or commercialization rights to vosaroxin, or a combination of the above.

Our failure to raise significant additional capital in the future would force us to delay or reduce the scope of our vosaroxin development program, potentially including the VALOR trial, and/or limit or cease our operations. Any one of the foregoing would have a material adverse effect on our business, financial condition and results of operations.

Contractual Obligations

The following table summarizes our long-term contractual obligations as of December 31, 2011 (in thousands):

	Payments Due by Period				
	Total	Less Than 1 Year	1-3 Years	3-5 Years	After 5 Years
Long-term debt obligations, including interest(1)	$12,322	$895	$7,903	$3,524	$—
Operating lease obligations(2)	$ 540	$405	$ 135	$ —	$—

(1) Upon the occurrence of an event of default, as defined in the Loan Agreement, and following any applicable cure periods, a default interest rate of an additional 5% may be applied to the outstanding loan balances, and the Lenders may declare all outstanding obligations immediately due and payable and take such other actions as set forth in the Loan Agreement.

(2) Operating lease obligations relate solely to the lease of approximately 15,000 square feet of office space in a building at 395 Oyster Point Boulevard in South San Francisco, California, which is currently our corporate headquarters. The lease was entered into in December 2006, and expires in April 2013, subject to our option to extend the lease through February 2014.

The above amounts exclude potential payments under our 2003 license agreement with Dainippon, pursuant to which we are required to make certain milestone payments in the event we file new drug applications in the United States, Europe or Japan, and if we receive regulatory approvals in any of these regions, for cancer-related indications. If vosaroxin is approved for a non-cancer indication, an additional milestone payment becomes payable to Dainippon.

We also have agreements with CROs, clinical sites and other third party contractors for the conduct of our clinical trials. We generally make payments to these entities based upon the activities they perform related to the particular clinical trial. There are generally no penalty clauses for cancellation of these agreements if notice is duly given and payment is made for work performed by the third party under the related agreement.

Off-Balance Sheet Arrangements

Since our inception, we have not had any off-balance sheet arrangements or relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or variable interest entities, which are typically established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

ITEM 7A: ***QUALITATIVE AND QUANTITATIVE DISCLOSURES ABOUT MARKET RISK***

This item is not applicable to us as a smaller reporting company.

ITEM 8: *FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA*

Index to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

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

We have audited the accompanying consolidated balance sheets of Sunesis Pharmaceuticals, Inc. as of December 31, 2011 and 2010, and the related consolidated statements of operations and comprehensive income (loss), stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2011. These financial statements are the responsibility of Sunesis Pharmaceuticals, Inc.'s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's 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, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Sunesis Pharmaceuticals, Inc. at December 31, 2011 and 2010, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2011, in conformity with U.S. generally accepted accounting principles.

/s/ ERNST & YOUNG, LLP

Redwood City, California
March 14, 2012

SUNESIS PHARMACEUTICALS, INC.

CONSOLIDATED BALANCE SHEETS
(In thousands, except per share amounts)

	December 31, 2011	December 31, 2010
ASSETS		
Current assets:		
Cash and cash equivalents	$ 9,311	$ 14,223
Marketable securities	34,804	39,173
Prepaids and other current assets	1,550	1,286
Total current assets	45,665	54,682
Property and equipment, net	74	116
Deposits and other assets	130	60
Total assets	$ 45,869	$ 54,858
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 658	$ 416
Accrued clinical expense	2,370	1,574
Accrued compensation	1,274	1,013
Other accrued liabilities	1,805	1,406
Warrant liability	2,276	8,154
Total current liabilities	8,383	12,563
Non-current portion of notes payable	9,453	—
Non-current portion of deferred rent	13	48
Commitments		
Stockholders' equity:		
Common stock, $0.0001 par value; 400,000 shares authorized as of December 31, 2011 and 2010; 46,774 and 45,372 shares issued and outstanding as of December 31, 2011 and 2010, respectively	5	5
Additional paid-in capital	429,142	423,262
Accumulated other comprehensive income (loss)	19	(15)
Accumulated deficit	(401,146)	(381,005)
Total stockholders' equity	28,020	42,247
Total liabilities and stockholders' equity	$ 45,869	$ 54,858

See accompanying notes to consolidated financial statements.

SUNESIS PHARMACEUTICALS, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)
(In thousands, except per share amounts)

	Year Ended December 31,		
	2011	2010	2009
Revenue:			
Collaboration revenue	$ —	$ 27	$ 1,550
License and other revenue	5,000	6	2,212
Total revenues	5,000	33	3,762
Operating expenses:			
Research and development	22,563	14,433	13,247
General and administrative	8,303	7,005	7,748
Restructuring charges	—	—	1,916
Total operating expenses	30,866	21,438	22,911
Loss from operations	(25,866)	(21,405)	(19,149)
Other income (expense), net	5,725	(3,182)	(21,077)
Net loss	(20,141)	(24,587)	(40,226)
Unrealized gain (loss) on available-for-sale securities	34	(15)	(8)
Comprehensive loss	$(20,107)	$(24,602)	$(40,234)
Basic and diluted loss per common share:			
Net loss	$(20,141)	$(24,587)	$(40,226)
Deemed distribution to preferred stockholders	—	—	(27,563)
Loss attributable to common stockholders	$(20,141)	$(24,587)	$(67,789)
Shares used in computing basic and diluted loss attributable to common stockholders per common share	46,412	24,860	5,747
Basic and diluted loss attributable to common stockholders per common share	$ (0.43)	$ (0.99)	$ (11.80)

See accompanying notes to consolidated financial statements.

SUNESIS PHARMACEUTICALS, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In thousands)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2008	—	$ —	5,735	$ 3	$322,672	$ 8	$(316,192)	$ 6,491
Issuance of $10,000 of units consisting of preferred stock and warrants in initial closing of Private Placement, recorded in liabilities	483	—	—	—	—	—	—	—
Reclassification of preferred stock from liabilities to equity	—	—	—	—	20,126	—	—	20,126
Reclassification of second closing option of Private Placement from liabilities to equity and issuance of amended preferred stock instrument, net of issuance costs of $1,246	—	56,146	—	—	(46,501)	—	—	9,645
Issuance of $5,000 of units consisting of preferred stock and warrants in second closing of Private Placement, net of issuance costs of $321	242	2,670	—	—	2,009	—	—	4,679
Write-off of discount for beneficial conversion feature on second closing of Private Placement	—	1,189	—	—	(1,189)	—	—	—
Issuance of common stock pursuant to warrant exercises	—	—	245	—	—	—	—	—
Issuance of common stock pursuant to stock option exercises	—	—	1	—	7	—	—	7
Issuance of common stock under employee stock purchase plan	—	—	3	—	6	—	—	6
Stock-based compensation expenses—employees	—	—	—	—	1,311	—	—	1,311
Stock-based compensation expenses—non-employees	—	—	—	—	29	—	—	29
Net loss	—	—	—	—	—	—	(40,226)	(40,226)
Unrealized loss on available-for-sale securities	—	—	—	—	—	(8)	—	(8)
Balance as of December 31, 2009	725	60,005	5,984	3	298,470	—	(356,418)	2,060
Issuance of $28,500 of common stock in third closing of Private Placement, net of issuance costs of $1,787	—	—	17,273	10	26,703	—	—	26,713
Issuance of common stock upon conversion of preferred stock	(725)	(60,005)	7,246	4	60,001	—	—	—
Issuance of $28,820 of common stock through controlled equity offering facilities, net of issuance costs of $1,332	—	—	5,726	3	27,485	—	—	27,488
Issuance of $10,961 of common stock in 2010 Offering, net of issuance costs of $1,233	—	—	7,358	5	9,723	—	—	9,728
Issuance of common stock pursuant to warrant exercises	—	—	1,764	1	(1)	—	—	—
Issuance of common stock pursuant to stock option exercises	—	—	1	—	4	—	—	4
Issuance of common stock under employee stock purchase plan	—	—	4	—	6	—	—	6
Issuance of common stock to employees	—	—	16	—	(27)	—	—	(27)
Stock-based compensation expenses—employees	—	—	—	—	870	—	—	870
Stock-based compensation expenses—non-employees	—	—	—	—	7	—	—	7
Adjustment of common stock to par value as a result of Reverse Split	—	—	—	(23)	23	—	—	—
Net loss	—	—	—	—	—	—	(24,587)	(24,587)
Unrealized loss on available-for-sale securities	—	—	—	—	—	(15)	—	(15)
Balance as of December 31, 2010	—	—	45,372	5	423,262	(15)	(381,005)	42,247
Issuance of $4,178 of common stock through controlled equity offering facilities, net of issuance costs of $125	—	—	1,302	—	4,053	—	—	4,053
Issuance of common stock under employee stock purchase plans	—	—	62	—	68	—	—	68
Issuance of common stock to employees	—	—	38	—	—	—	—	—
Issuance of warrants to purchase common stock	—	—	—	—	371	—	—	371
Stock-based compensation expenses—employees	—	—	—	—	1,369	—	—	1,369
Stock-based compensation expenses—non-employees	—	—	—	—	19	—	—	19
Net loss	—	—	—	—	—	—	(20,141)	(20,141)
Unrealized gain on available-for-sale securities	—	—	—	—	—	34	—	34
Balance as of December 31, 2011	—	$ —	46,774	$ 5	$429,142	$ 19	$(401,146)	$ 28,020

See accompanying notes to consolidated financial statements.

SUNESIS PHARMACEUTICALS, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2011	2010	2009
	(In thousands)		
Cash flows from operating activities			
Net loss	$(20,141)	$(24,587)	$(40,226)
Adjustments to reconcile loss to net cash used in operating activities:			
Stock-based compensation expense	1,388	877	1,340
Depreciation and amortization	56	150	342
Amortization of debt discount and debt issuance costs	56	—	—
Change in fair value of warrant liability	(5,878)	3,664	—
Non-cash expense related to Private Placement	—	—	21,017
Non-cash restructuring (reversals) charges, net	—	—	(1,373)
Foreign exchange loss (gain) on marketable securities	244	(63)	—
(Gain) loss on sale or disposal of property and equipment	(33)	(82)	56
Other non-cash items	—	(27)	—
Changes in operating assets and liabilities:			
Prepaids and other assets	(343)	(659)	434
Accounts payable	242	55	(430)
Accrued clinical expense	796	444	(736)
Accrued compensation	261	284	192
Other accrued liabilities	516	564	(799)
Net cash used in operating activities	(22,836)	(19,380)	(20,183)
Cash flows from investing activities			
Purchases of property and equipment	(15)	(64)	(6)
Proceeds from sale of property and equipment	34	104	391
Purchases of marketable securities	(52,082)	(46,637)	(503)
Proceeds from sales or maturities of marketable securities	56,241	7,513	4,817
Net cash provided by (used in) investing activities	4,178	(39,084)	4,699
Cash flows from financing activities			
Proceeds from notes payable, net	9,625	—	—
Proceeds from issuance of common stock through controlled equity offering facilities, net	4,053	27,488	—
Proceeds from issuance of common stock in third closing of Private Placement, net	—	26,713	—
Proceeds from issuance of common stock and warrants in 2010 Offering, net	—	14,218	—
Proceeds from issuance of convertible preferred stock and warrants in Private Placement, net	—	—	13,433
Proceeds from exercise of stock options and employee stock purchase plans	68	9	13
Net cash provided by financing activities	13,746	68,428	13,446
Net increase (decrease) in cash and cash equivalents	(4,912)	9,964	(2,038)
Cash and cash equivalents at beginning of period	14,223	4,259	6,297
Cash and cash equivalents at end of period	$ 9,311	$ 14,223	$ 4,259
Supplemental disclosure of cash flow information			
Interest paid	$ 109	$ —	$ 1
Supplemental disclosure of non-cash activities			
Fair value of warrants issued in connection with notes payable	$ 371	$ —	$ —
Deemed distributions to preferred stockholders	$ —	$ —	$ 27,563
Beneficial conversion feature on preferred stock	$ —	$ —	$ 1,188
Cashless exercise of warrants	$ —	$ 3,064	$ 440
Conversion of preferred stock to common stock	$ —	$ 60,005	$ —

See accompanying notes to consolidated financial statements.

1. Company Overview

Description of Business

Sunesis Pharmaceuticals, Inc. (the "Company" or "Sunesis") was incorporated in the state of Delaware on February 10, 1998, and its facilities are located in South San Francisco, California. Sunesis is a biopharmaceutical company focused on the development and commercialization of new oncology therapeutics for the treatment of solid and hematologic cancers. The Company's primary activities since incorporation have been conducting research and development internally and through corporate collaborators, in-licensing and out-licensing pharmaceutical compounds and technology, conducting clinical trials and raising capital.

In December 2010, the Company commenced enrollment of a Phase 3, multi-national, randomized, double-blind, placebo-controlled, pivotal clinical trial of vosaroxin in combination with cytarabine in patients with relapsed or refractory acute myeloid leukemia (the "VALOR trial").

Significant Risks and Uncertainties

The Company has incurred significant losses and negative cash flows from operations since its inception, and as of December 31, 2011, had cash, cash equivalents and marketable securities totaling $44.1 million and an accumulated deficit of $401.1 million.

While the Company believes that it currently has the resources to fund its operations until the planned unblinding of the VALOR trial in 2013, the Company may need to raise additional capital if the costs of the trial exceed the Company's current estimates or unblinding does not occur within the currently anticipated timeframe. The Company will need to raise substantial additional capital to complete development and the potential commercialization of vosaroxin.

The Company expects to finance its future cash needs primarily through equity issuances, debt arrangements, a possible license, collaboration or other similar arrangement with respect to development and/or commercialization rights to vosaroxin, or a combination of the above.

Concentrations of Credit Risk

In accordance with its investment policy, the Company invests cash that is not currently being used for operational purposes. The policy allows for the purchase of low risk debt securities issued by the United States and certain European governments and government agencies and very highly rated banks and corporations domiciled in the United States and certain European countries, subject to certain concentration limits. The policy limits maturities of securities purchased to no longer than 18 months and the dollar-weighted average maturity of the portfolio to nine months. Management believes these guidelines ensure both the safety and liquidity of any investment portfolio the Company may hold.

Financial instruments that potentially subject the Company to concentrations of credit risk generally consist of cash, cash equivalents and marketable securities. The Company is exposed to credit risk in the event of default by the institutions holding its cash, cash equivalents and any marketable securities to the extent of the amounts recorded in the balance sheets.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The financial statements include a wholly owned

subsidiary, Sunesis Europe Limited, a United Kingdom corporation. Management has determined that the Company operates as a single reportable segment. Certain liabilities in the balance sheets and statements of cash flows have been reclassified to conform to the current year presentation.

Reverse Stock Split

On February 14, 2011, the Company effected a one-for-six reverse split of its capital stock (the "Reverse Split"), as previously authorized and approved at the annual meeting of stockholders on June 2, 2010. As a result of the Reverse Split, every six shares of capital stock were combined into one share of capital stock. The Reverse Split affected the shares of Company's common stock: (a) outstanding immediately prior to the effective time of the Reverse Split, (b) available for issuance under the Company's equity incentive plans, and (c) issuable upon the exercise of outstanding stock options and warrants. The accompanying financial statements and notes thereto give retroactive effect to the Reverse Split for all periods presented.

Significant Estimates and Judgments

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the Company's financial statements and notes thereto. Actual results could differ materially from these estimates. Significant estimates, assumptions and judgments made by management include those related to the valuation of equity and related instruments, revenue recognition, stock-based compensation and clinical trial accounting.

Cash Equivalents and Marketable Securities

The Company considers all highly liquid securities with original maturities of three months or less from the date of purchase to be cash equivalents, which generally consist of money market funds and corporate debt securities. Marketable securities consist of securities with original maturities of greater than three months, which may include U.S. and European government obligations and corporate debt securities.

Management determines the appropriate classification of securities at the time of purchase. The Company generally classifies its entire investment portfolio as available-for-sale. The Company views its available-for-sale portfolio as available for use in current operations. Accordingly, the Company classifies all investments as short-term, even though the stated maturity may be more than one year from the current balance sheet date. Available-for-sale securities are carried at fair value, with unrealized gains and losses reported in accumulated other comprehensive income (loss), which is a separate component of stockholders' equity.

The amortized cost of securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization and accretion is included in other income (expense) in the statements of operations and comprehensive income (loss). Realized gains and losses and declines in value judged to be other-than-temporary on available-for-sale securities, if any, are also recorded to other income (expense). The cost of securities sold is based on the specific-identification method.

As part of the VALOR trial, amounts are incurred for services that are originally denominated in foreign currencies, such as services performed outside of the United States by the Company's primary contract research organization, by clinical study sites, and for the provision of drug supply to those sites. To manage the risk of future movements in foreign exchange rates that would affect such amounts, the Company may purchase certain European currencies or highly-rated investments denominated in those currencies, subject to similar criteria as for other investments defined in the Company's investment policy. There is no guarantee that the related gains and losses will substantially offset each other, and the Company may be subject to significant exchange gains or losses as currencies fluctuate from quarter to quarter. As of December 31, 2011, the Company held investments denominated in Euros with an aggregate fair value of $5.1 million.

To date, the Company has purchased Euros and Euro-denominated obligations of foreign governments and corporate debt. These cash, cash equivalent and short-term investment balances are recorded at their fair value based on the current exchange rate as of each balance sheet date. The resulting exchange gains or losses and those from amounts payable for services originally denominated in foreign currencies are both recorded in other income (expense) in the statements of operations and comprehensive income (loss).

Fair Value Measurements

The Company measures cash equivalents, marketable securities and warrant liabilities at fair value on a recurring basis using the following hierarchy to prioritize valuation inputs, in accordance with applicable GAAP:

Level 1 - quoted prices (unadjusted) in active markets for identical assets and liabilities that can be accessed at the measurement date

Level 2 - inputs other than quoted prices included within Level 1 that are observable, either directly or indirectly

Level 3 - unobservable inputs

The Company's Level 2 valuations of marketable securities are generally based upon quoted prices in active markets for similar securities, with prices adjusted for yield and number of days to maturity.

The fair value of the Company's liability for warrants issued in connection with the 2010 Offering (see Note 10) is determined using the Black-Scholes model, which requires inputs such as the expected term of the warrants, share price volatility and risk-free interest rate. As some of these inputs are unobservable, and require significant analysis and judgment to measure, these variables are classified as Level 3.

The Company does not measure cash, prepayments, accounts payable, accrued liabilities and notes payable at fair value, as their carrying amounts approximated the fair value as of December 31, 2011 and 2010.

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation is determined using the straight-line method over the estimated useful lives of the respective assets, generally three to five years. Leasehold improvements are amortized on a straight-line basis over the shorter of their estimated useful lives or the term of the lease.

Accounting for Notes Payable

The accounting for certain fees and expenses related to the Loan Agreement (see Note 8) is as follows. The facility fee is being accounted for as a debt discount and classified within notes payable on the Company's balance sheet. Additionally, the fair value of the warrants issued in connection with the Loan Agreement have been recorded as a debt discount within notes payable and an increase to additional paid-in capital on the Company's balance sheet. The debt discount is being amortized as interest expense over the term of the loan using the effective interest method. The final payment is being accreted as interest expense over the term of the loan using the effective interest method. The legal fees are being accounted for as deferred debt issuance costs within assets on the Company's balance sheet and are being amortized as other income (expense) over the term of the loan using the effective interest method.

Accounting for Equity Financings

The accounting for the initial and second closing of the sale of $10.0 million and $5.0 million of units, respectively, in the Private Placement (see Note 10), and subsequent revaluations of the related financial

instruments, required fair values to be established at different dates, either individually or in aggregate, for the four primary components of the Private Placement: (a) the Series A convertible preferred stock, (b) the warrants to purchase common stock, (c) the option for the investors to participate in the second closing (the "Second Closing Option"), and (d) the option for the investors to participate in the common equity closing (the "Common Equity Closing Option"). The Option-Pricing Method, which utilizes the Black-Scholes model, was selected to determine these fair values, which were calculated as a series of call options on the potential enterprise value of the Company at different valuation points at which the claims of the different stakeholder groups on the enterprise value would change. The results of the Black-Scholes model were affected by the Company's stock price, as well as assumptions regarding a number of highly subjective variables. These variables included the expected term of the financial instruments and the Company's expected stock price volatility, risk-free interest rate and dividend rate over the expected term. On June 30, 2010, the Company completed the third and final closing of the Private Placement. In conjunction with this common equity closing, each of the outstanding shares of Series A convertible preferred stock issued in the initial and second closings of the Private Placement were converted into shares of common stock.

In October 2010, the Company completed the 2010 Offering (see Note 10), in which the Company sold its common stock and warrants to purchase its common stock for aggregate gross proceeds of $15.5 million. Due to the potential for the warrants to be settled in cash upon the occurrence of certain transactions specified in the warrant agreements, the warrants are being accounted for as a derivative liability as opposed to permanent equity. Outstanding warrants under this arrangement are revalued to their fair value each period end, with the change in fair value recorded to other income (expense) in the statements of operations and comprehensive income (loss).

Revenue Recognition

Revenue arrangements with multiple deliverables are accounted for in accordance with the Financial Accounting Standards Board Accounting Standards Codification, Subtopic 605-25, *Multiple-Element Arrangements* ("ASC 605-25"). Under ASC 605-25, revenue arrangements with multiple deliverables are divided into separate units of accounting based on whether certain criteria are met, including whether the delivered item has stand-alone value to the customer. Consideration is allocated among the separate units of accounting based on their respective fair value, and the applicable revenue recognition is applied to each of the separate units.

Non-refundable fees where the Company has no continuing performance obligations are recognized as revenues when collection is reasonably assured. In situations where continuing performance obligations exist, non-refundable fees are deferred and recognized ratably over the projected performance period.

Milestone payments from license or collaboration agreements which are substantive and at risk at the time the agreement is executed are recognized upon completion of the applicable milestone event. Royalty revenues, if any, will be recognized based on reported product sales by third-party licensees. Research funding from any future agreement will be recognized as the related research services are performed.

Research and Development

All research and development costs, including those funded by third parties, are expensed as incurred. Research and development expense consists primarily of clinical trial costs, which include payments for work performed by contract research organizations ("CROs"), clinical trial sites, labs and other clinical service providers, and for drug packaging, storage and distribution; drug manufacturing costs, which include costs for stability and other testing; personnel costs for related permanent and temporary employees; and payments under license agreements.

Clinical Trial Accounting

The Company records accruals for estimated clinical trial costs, which include payments for work performed by CROs and participating clinical trial sites. These costs are generally a significant component of

research and development expense. Costs incurred for setting up clinical trial sites for participation in trials are generally non-refundable, and are expensed as incurred, with any refundable advances related to enrollment of the first patient recorded as prepayments and assessed for recoverability on a quarterly basis. Costs related to patient enrollment are accrued as patients progress through the clinical trial, including amortization of any first-patient prepayments. This amortization generally matches when the related services are rendered, however, these cost estimates may or may not match the actual costs incurred by the CROs or clinical trial sites, and if the Company has incomplete or inaccurate information, the clinical trial accruals may not be accurate. The difference between accrued expenses based on the Company's estimates and actual expenses have not been significant to date.

Stock-Based Compensation

The Company grants options to purchase common stock to its employees, directors and consultants under its stock option plans. Under the Company's Employee Stock Purchase Plan, eligible employees can also purchase shares of common stock at 85% of the lower of the fair market value of the Company's common stock at the beginning of a 12-month offering period or at the end of one of the two related six-month purchase periods.

The Company values these share-based awards using the Black-Scholes option valuation model (the "Black-Scholes model"). The determination of fair value of share-based payment awards on the date of grant using the Black-Scholes model is affected by the Company's stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the expected stock price volatility over the term of the awards and actual and projected employee stock option exercise behaviors and related estimated forfeitures.

Foreign Currency

Transactions that are denominated in a foreign currency are translated into U.S. dollars at the current exchange rate on the transaction date. Any foreign currency-denominated monetary assets and liabilities are subsequently remeasured at current exchange rates as of each balance sheet date, with gains or losses on foreign exchange recognized in other income (expense) in the statements of operations and comprehensive income (loss).

Income Taxes

The Company accounts for income taxes under the liability method. Under this method, deferred tax assets and liabilities are determined based on the differences between the tax basis of assets and liabilities and their basis for financial reporting. Deferred tax assets or liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which temporary differences are expected to be recovered or settled. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized. The Company's policy is to recognize interest charges and penalties as other expense.

3. Loss per Common Share

Basic loss per common share is calculated by dividing loss attributable to common stockholders by the weighted-average number of common shares outstanding for the period. Diluted loss per common share is computed by dividing loss attributable to common stockholders by the weighted-average number of common shares outstanding for the period plus dilutive potential common shares as determined using the as-if converted method for convertible preferred stock and the treasury stock method for options and warrants to purchase common stock.

The following table represents the shares of common stock potentially issuable pursuant to outstanding securities as of the related period end dates that were excluded from the computation of diluted loss per common share because their inclusion would have had an anti-dilutive effect (in thousands):

	As of December 31,		
	2011	2010	2009
Outstanding securities not included in calculations:			
Convertible preferred stock, as-if converted	—	—	7,246
Warrants to purchase common stock	9,034	8,648	7,353
Options to purchase common stock	5,099	1,065	1,068
Total securities excluded from calculation	14,133	9,713	15,667

4. License and Collaboration Agreements

Biogen Idec and Millennium

In August 2004, the Company entered into a collaboration agreement with Biogen Idec MA, Inc. ("Biogen Idec") to discover, develop and commercialize small molecule inhibitors of Raf kinase and up to five additional targets that play a role in oncology and immunology indications or in the regulation of the human immune system (the "Original Biogen Idec Agreement"). In connection with the Company's June 2008 restructuring, the parties agreed to terminate the research term and related funding as of June 30, 2008. In mid-2009, the Company received and recognized a $1.5 million milestone for Biogen Idec's selection of a Raf kinase inhibitor development candidate for the treatment of cancer.

On March 31, 2011, as part of a series of agreements among the Company, Biogen Idec and Millennium Pharmaceuticals, Inc., a wholly-owned subsidiary of Takeda Pharmaceutical Company Limited, ("Millennium"), the Company entered into: (a) an amended and restated collaboration agreement with Biogen Idec (the "Restated Biogen Idec Agreement"), which amended and restated the Original Biogen Idec Agreement, to provide for the discovery, development and commercialization of small molecule inhibitors of a unique preclinical kinase inhibitor program involved in immunology; (b) a license agreement with Millennium (the "Millennium Agreement") under which the Company granted exclusive licenses to products against two oncology targets under the Original Biogen Idec Agreement, consisting of Raf kinase and one other identified target, under substantially the same terms as under the Original Biogen Idec Agreement; and (c) a termination and transition agreement among the Company, Biogen Idec and Millennium (the "Termination and Transition Agreement"), which provided, among other matters, for a $4.0 million, non-refundable, upfront payment from Millennium to the Company for the Millennium Agreement and termination of the Original Biogen Idec Agreement.

Under the Restated Biogen Idec Agreement, the Company no longer has research obligations, but licenses granted to Biogen Idec with respect to the research collaboration under the Original Biogen Idec Agreement (other than the licenses transferred to Millennium under the Millennium Agreement) remain in effect. The Company may in the future receive up to $60.0 million in pre-commercialization milestone payments related to the development of the first two indications for licensed products against the specified immunology target, of which $9.2 million is related to development milestones and $50.8 million is related to regulatory milestones. The Company is also eligible to receive royalty payments depending on product sales, which may be increased if the Company exercises its option to co-fund product candidates worldwide, but is subject to reduction if Biogen Idec is required to in-license third party intellectual property related to certain technology jointly developed under the collaboration agreement in order to commercialize a licensed product.

Under the Millennium Agreement, the Company exclusively licensed to Millennium products against the Raf kinase target and one other identified target, under substantially the same terms as under the Original Biogen Idec Agreement. The Company may in the future receive up to $59.3 million in pre-commercialization milestone

payments related to the development of the first two indications for each of the licensed products directed against the two exclusively licensed targets. For each of the two targets, $8.5 million of potential payments are related to development milestones, and $50.8 million of potential payments are related to regulatory milestones. The Company is also eligible to receive royalty payments depending on product sales, which may be increased if the Company exercises its option to co-fund product candidates worldwide, but is subject to reduction if Millennium is required to in-license third party intellectual property related to certain technology jointly developed under the collaboration agreement in order to commercialize a licensed product.

The Termination and Transition Agreement provided for: (a) termination of Biogen Idec's exclusive rights under the Original Biogen Idec Agreement to all discovery programs under such agreement other than a preclinical kinase inhibitor program involved in immunology, (b) the permitted assignment to Millennium of all related Company collaboration assets and rights to Raf kinase and one additional undisclosed kinase inhibitor program in oncology, and (c) the payment of $4.0 million upfront from Millennium to the Company. As the upfront amount is non-refundable and the Company has no continuing performance obligations under this agreement, or either of the two other agreements entered into on the same date, the $4.0 million was recorded as revenue in March 2011.

SARcode

In March 2006, the Company licensed its LFA-1 patents and related know-how to SARcode Bioscience, Inc. ("SARcode"), a privately-held biopharmaceutical company. In March 2009, the license agreement was terminated and SARcode paid the Company $2.0 million in cash for this intellectual property, which was recorded as revenue in April 2009. In August 2011, SARcode repaid three promissory notes that had been issued to the Company upon entering into the original license agreement. The total amount received was $1.2 million, which comprised the aggregate principal value of the three notes of $1.0 million, plus $0.2 million of accrued interest, which the Company recorded as revenue and interest income, respectively, upon receipt.

5. Financial Instruments

Financial Assets

The following tables summarize the estimated fair value of the Company's financial assets measured on a recurring basis as of the dates indicated, which were comprised solely of available-for-sale securities with remaining contractual maturities of one year or less (in thousands):

December 31, 2011	Input Level	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Money market funds	Level 1	$ 7,156	$—	$—	$ 7,156
U.S. corporate debt obligations	Level 2	16,619	5	(1)	16,623
U.S. commercial paper	Level 2	14,556	18	—	14,574
Foreign government obligations	Level 2	3,607	1	—	3,608
Foreign corporate debt obligations	Level 2	1,476	—	(3)	1,473
Total available-for-sale securities		43,414	24	(4)	43,434
Less: amounts classified as cash equivalents		8,632	—	(2)	8,630
Amounts classified as marketable securities		$34,782	$ 24	$ (2)	$34,804

December 31, 2010	Input Level	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Money market funds	Level 1	$14,037	$—	$—	$14,037
U.S. corporate debt obligations	Level 2	20,114	—	(21)	20,093
U.S. commercial paper	Level 2	16,986	7	—	16,993
Foreign government obligations	Level 2	2,087	—	(1)	2,086
Total available-for-sale securities		53,224	7	(22)	53,209
Less: amounts classified as cash equivalents		14,036	—	—	14,036
Amounts classified as marketable securities		$39,188	$ 7	$ (22)	$39,173

The following table summarizes the available-for-sale securities that were in an unrealized loss position as of December 31, 2011, each having been in such a position for less than 12 months, and none deemed to be other-than-temporarily impaired (in thousands):

December 31, 2011	Gross Unrealized Losses	Estimated Fair Value
U.S. corporate debt obligations	$ (1)	$5,946
Foreign government obligations	—	488
Foreign corporate debt obligations	(3)	1,473
Total available-for-sale securities in an unrealized loss position	$ (4)	$7,907

No significant facts or circumstances have arisen to indicate that there has been any deterioration in the creditworthiness of the issuers of these securities. The gross unrealized losses are not considered to be significant and have been for relatively short durations. The Company does not intend to sell these securities and it is not more likely than not that they will need to be sold prior to the recovery of their amortized cost basis. There were no sales of available-for-sale securities in the years ended December 31, 2011, 2010 and 2009.

Financial Liabilities

The following table summarizes the inputs and assumptions and estimated fair value of the Company's financial liabilities measured on a recurring basis as of the dates indicated, which were comprised solely of a liability for warrants issued in connection with the 2010 Offering (see Note 10):

	December 31, 2011	December 31, 2010
Inputs and assumptions:		
Fair market value of Company's common stock	$ 1.17	$ 3.12
Exercise price	$ 2.52	$ 2.52
Expected term (years)	3.8	4.8
Expected volatility	98.9%	87.6%
Risk-free interest rate	0.5%	1.9%
Expected dividend yield	0.0%	0.0%
Fair value:		
Estimated fair value per warrant share	$ 0.62	$ 2.22
Shares underlying outstanding warrants classified as liabilities (in thousands)	3,679	3,679
Total estimated fair value of outstanding warrants (in thousands)	$2,276	$8,154

The warrants have been classified as a derivative liability in the Company's balance sheet due to the potential for the warrants to be settled in cash upon the occurrence of certain transactions specified in the warrant agreements. The warrants were initially recorded at their fair value of $4.5 million, which was estimated using the Black-Scholes model. At each subsequent balance sheet date, the estimated fair value of the outstanding warrants is determined using the Black-Scholes model and recorded to the balance sheet, with the change in fair value recorded to other income (expense) in the statements of operations and comprehensive income (loss).

The Black-Scholes model requires Level 3 inputs such as the expected term of the warrants and share price volatility. These inputs are subjective and generally require significant analysis and judgment to develop. Any changes in these inputs could result in a significantly higher or lower fair value measurement. The following table summarizes the changes in the fair value of the Company's Level 3 financial liabilities for the periods indicated (in thousands):

	Warrant Liability
Balance as of December 31, 2009	—
Initial fair value of warrant liability	4,490
Change in fair value of warrant liability included in other income (expense)	3,664
Balance as of December 31, 2010	$ 8,154
Change in fair value of warrant liability included in other income (expense)	(5,878)
Balance as of December 31, 2011	$ 2,276

6. Property and Equipment

Property and equipment is recorded at cost and consisted of the following as of December 31 of the periods presented (in thousands):

	2011	2010
Computer equipment and software	$ 598	$ 1,063
Furniture and office equipment	326	472
Laboratory equipment	44	44
Leasehold improvements	376	376
	1,344	1,955
Less accumulated depreciation and amortization	(1,270)	(1,839)
Net property and equipment	$ 74	$ 116

7. Other Accrued Liabilities

Other accrued liabilities as of December 31 were as follows (in thousands):

	2011	2010
Accrued outside services	$1,209	$1,079
Accrued professional services	358	292
Other accruals	238	9
Total other accrued liabilities	$1,805	$1,380

8. Notes Payable

On October 18, 2011, the Company entered into a loan and security agreement (the "Loan Agreement") with Oxford Finance LLC, Silicon Valley Bank and Horizon Technology Finance Corporation (collectively, "the Lenders") under which the Company may borrow up to $25.0 million in two tranches (the "Loan Facility"). The first tranche of $10.0 million was funded upon closing of the transaction on October 18, 2011. Subject to the Company's continued compliance with the terms and conditions of the Loan Facility, the second tranche of $15.0 million may be drawn at the Company's option between June 30, 2012 and September 30, 2012, contingent upon the recommendation by the Data and Safety Monitoring Board (the "DSMB") following the interim analysis of the VALOR trial to either: (a) discontinue the trial due to positive efficacy, or (b) continue the trial.

The interest rate for the first tranche is 8.95% per annum, and the interest rate for the second tranche will be fixed upon drawdown at a per annum rate equal to the greater of 8.95% or 8.61% plus the then effective three-month U.S. LIBOR rate. Payments under the Loan Agreement are monthly in arrears and interest-only until February 1, 2013, followed by 32 equal monthly payments of principal and interest through the scheduled maturity date of October 1, 2015. In addition, a final payment equal to 3.75% of the aggregate amount drawn will be due on October 1, 2015, or such earlier date specified in the Loan Agreement. The Company paid the Lenders a facility fee of $250,000 at closing, and incurred legal fees of approximately $0.1 million in connection with closing the loan. If the Company repays all or a portion of the loans prior to maturity, it will pay the Lenders a prepayment fee of between 1-3% of the principal amount prepaid.

The facility fee is being accounted for as a debt discount and classified within notes payable on the Company's balance sheet and is being amortized as interest expense over the term of the loan using the effective interest method. The final payment is being accreted as interest expense over the term of the loan using the effective interest method. The legal fees are being accounted for as deferred debt issuance costs within assets on the Company's balance sheet and are being amortized as other income (expense) over the term of the loan using the effective interest method.

In accordance with the terms of the Loan Agreement, the Company agreed to issue five-year warrants to the Lenders upon each drawdown to purchase shares of common stock in an amount equal to 5.0% of the amount drawn at such tranche, divided by the exercise price per share, which is determined in each case to be the lower of the 10-day average closing share price prior to the drawdown or the closing price per share the day prior to the drawdown. As a result of the drawdown of the first tranche of $10.0 million, the Company issued warrants to purchase 386,100 shares of its common stock at an exercise price of $1.30 per share. These warrants are immediately exercisable, may be exercised on a cashless basis, and will expire on October 18, 2016.

The fair value of the warrants issued was approximately $0.4 million and was estimated using a Black-Scholes valuation model with the following assumptions: fair value of common stock at issuance of $1.38; risk-free interest rate of 1.07% based upon observed risk-free interest rates appropriate for the expected term of the warrants; expected volatility of 88.9% based on the average historical volatilities of a peer group of publicly-traded companies within the Company's industry; expected term of five years, which is the contractual life of the warrants; and a dividend yield of 0%. The fair value of the warrants was recorded as a debt discount within notes payable and an increase to additional paid-in capital on the Company's balance sheet. The debt discount is being amortized as interest expense over the term of the loan using the effective interest method. As of December 31, 2011, the warrants remained outstanding and exercisable.

The loan is secured by substantially all of the Company's assets, except for intellectual property. Under the Loan Agreement, the Company also agreed to certain restrictions regarding the pledging or encumbrance of its intellectual property. The Loan Agreement includes standard affirmative and restrictive covenants, but does not include any covenants to attain or maintain any financial metrics, and also includes standard events of default, including payment defaults, breaches of covenants following any applicable cure period, a material impairment in the perfection or priority of the Lenders' security interest or in the value of the collateral, a material impairment of the prospect of repayment of the loans and a material adverse change in the business, operations or conditions (financial or otherwise) of the Company. Upon the occurrence of an event of default and following any applicable cure periods, a default interest rate of an additional 5% may be applied to the outstanding loan balances, and the Lenders may declare all outstanding obligations immediately due and payable and take such other actions as set forth in the Loan Agreement.

Future payments as of December 31, 2011 are as follows (in thousands):

Year ending December 31,	
2012	$ 895
2013	3,674
2014	4,229
2015	3,524
Total minimum payments	12,322
Less amount representing interest	2,322
Notes payable, gross	10,000
Unamortized discount on notes payable	(575)
Accretion of the final payment	28
Notes payable, balance	9,453
Current portion of notes payable	—
Non-current portion notes payable	$ 9,453

The Company recorded interest expense related to the loan of $0.3 million and zero for the years ended December 31, 2011 and 2010, respectively. The annual effective interest rate on the note payable, including the amortization of the debt discounts and accretion of the final payments, is 13.1%.

9. Commitments and Contingencies

Commitments

The Company's operating lease obligations as of December 31, 2011 relate to the lease of 15,000 square feet of office space in a building at 395 Oyster Point Boulevard in South San Francisco, California, which is currently the Company's headquarters. The lease was entered into in December 2006 and expires in April 2013, subject to the Company's option to extend the lease through February 2014. The operating lease agreement provides for increasing monthly rent payment over the lease term.

Aggregate non-cancelable future minimum rental payments under operating leases are as follows (in thousands):

Year Ended December 31:	Payments
2012	$405
2013	135
Total rental payments	$540

The Company recognizes rent expense on a straight-line basis. The Company recorded rent expense of $0.4 million, $0.5 million and $0.8 million for the years ended December 31, 2011, 2010 and 2009, respectively. Deferred rent balances in the Company's balance sheet represent the difference between actual rent payments and straight-line rent expense.

Contingencies

From time to time, the Company may be involved in legal proceedings, as well as demands, claims and threatened litigation, which arise in the normal course of its business or otherwise. The ultimate outcome of any litigation is uncertain and unfavorable outcomes could have a negative impact on the Company's results of operations and financial condition. Regardless of outcome, litigation can have an adverse impact on the Company because of the defense costs, diversion of management resources and other factors. The Company is not currently involved in any material legal proceedings.

10. Stockholders' Equity

Preferred Stock

The Company has 10,000,000 shares of authorized preferred stock available for issuance in one or more series. Upon issuance, the Company can determine the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. There were no shares of preferred stock outstanding as of December 31, 2011 and 2010.

Common Stock

Holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders of the Company. Subject to the preferences that may be applicable to any outstanding shares of preferred stock, the holders of common stock are entitled to receive ratably such dividends, if any, as may be declared by the Board of Directors.

Controlled Equity Offerings

In January 2010, the Company entered into its first controlled equity offering sales agreement with Cantor Fitzgerald & Co. ("Cantor"), pursuant to which the Company could issue and sell shares of its common stock having an aggregate offering price of up to $15.0 million from time to time with Cantor acting as agent and/or principal. Under this facility, the Company sold an aggregate of 2,645,008 shares of common stock in the year ended December 31, 2010, at an average price of $5.67 per share for gross proceeds of $15.0 million. Net proceeds were $14.2 million after deducting Cantor's commission and costs to set up the facility. No further shares of common stock can be issued under this facility.

In April 2010, the Company entered into a second controlled equity offering sales agreement with Cantor, pursuant to which the Company could issue and sell shares of its common stock having an aggregate offering price of up to $20.0 million from time to time through Cantor acting as agent and/or principal. The Company agreed to pay Cantor a commission of 3.0% of the gross proceeds from each sale. In the year ended December 31, 2011, the Company sold an aggregate of 1,302,383 shares of common stock at an average price of approximately $2.93 per share for gross proceeds of $3.8 million and net proceeds of $3.7 million, after deducting Cantor's commission. Through December 31, 2011, the Company had sold an aggregate of 4,383,283 shares of common stock under this facility at an average price of approximately $4.10 per share for gross proceeds of $18.0 million and net proceeds of $17.4 million, after deducting Cantor's commission. As of December 31, 2011, $2.0 million of common stock remained available to be sold under this facility, subject to certain conditions as specified in the agreement.

In August 2011, the Company entered into a third controlled equity offering sales agreement with Cantor, pursuant to which the Company may issue and sell shares of its common stock having an aggregate offering price of up to $20.0 million from time to time through Cantor acting as agent and/or principal. The Company agreed to pay Cantor a commission of 3.0% of the gross proceeds from each sale. As of December 31, 2011, no sales had been made under this facility, and $20.0 million of common stock remained available to be sold under this facility, subject to certain conditions as specified in the agreement.

2010 Offering

In October 2010, the Company completed an underwritten offering, pursuant to which the Company issued an aggregate of 7,357,610 shares of common stock and warrants to purchase 3,678,798 shares of common stock, for aggregate gross proceeds of $15.5 million (the "2010 Offering"). Net proceeds from the sale were $14.2 million, after deducting the underwriting discount and offering expenses. The warrants have an exercise price of $2.52 per share, and expire five years from the date of issuance.

The warrants have been classified as a derivative liability in the Company's balance sheet due to potential cash settlement of the warrants on terms, which do not include a cash limit, and upon the occurrence of certain transactions, as specified in the warrant agreements. The warrants were initially recorded at their fair value of $4.5 million, which was estimated using the Black-Scholes model. At each subsequent balance sheet date, the estimated fair value of the outstanding warrants is determined using the Black-Scholes model and recorded to the balance sheet, with the change in fair value recorded to other income (expense) in the statements of operations and comprehensive income (loss). As of December 31, 2011 and 2010, the fair value of the warrants was $2.3 million and $8.2 million, respectively.

Private Placement

In March 2009, the Company entered into a securities purchase agreement with accredited investors, including certain members of management, providing for the private placement of up to $15.0 million of units consisting of Series A convertible preferred stock and warrants to purchase common stock, and up to $28.5 million in common stock, in three closings (collectively, the "Private Placement").

The initial closing of $10.0 million of units of the Private Placement was completed in April 2009, and the second closing of $5.0 million of units was completed in October 2009. The warrants have an exercise price of $1.32 per share and a term of seven years from the date of issuance. The net proceeds from the initial closing were $8.8 million, and net proceeds from the second closing were $4.7 million. In the initial closing, the Company issued 483,081 shares of Series A convertible preferred stock, which were initially convertible into 4,830,901 shares of common stock and warrants to purchase an aggregate of 4,830,901 shares of common stock. In the second closing, the Company issued 241,537 shares of Series A preferred stock, which were initially convertible into 2,415,438 shares of common stock, and warrants to purchase 2,415,438 shares of common stock.

Warrants for an aggregate of 2,321,050 and 333,166 shares of common stock were net exercised during the years ended December 31, 2010 and 2009, respectively, resulting in the issuance of 1,764,322 shares and 244,908 shares of common stock, respectively. As of December 31, 2011, warrants issued under the Private Placement for the purchase of 4,592,123 shares of common stock were outstanding.

In June 2010, the Company completed the third and final closing of the Private Placement, issuing 17,272,716 shares of common stock to the investors at a purchase price of $1.65 per share, for gross proceeds of $28.5 million and net proceeds of $26.7 million. In conjunction with this common equity closing, each of the outstanding shares of Series A convertible preferred stock issued in the initial and second closings of the Private Placement were converted into 10 shares of common stock, and as a result, an additional 7,246,339 shares of common stock were issued on June 30, 2010.

The investors in the Private Placement received a number of additional rights as a result of their convertible preferred stock ownership, some of which expired upon conversion of the Series A preferred stock into common stock on June 30, 2010. The remaining rights include the right of certain of the investors to designate members of the Company's board of directors.

Stock Option Plans

The Company grants options to purchase shares of its common stock primarily to: (i) new employees, of which 25% of the shares subject to such options become exercisable on the first anniversary of the vesting commencement date, and 1/48th of the shares subject to such options become exercisable each month over the remainder of the four-year vesting period, (ii) existing employees, of which 1/48th of the shares subject to such options become exercisable each month following the date of grant over a four-year vesting period, (iii) new non-employee members of the board of directors, of which 50% of the shares subject to such options become exercisable on each of the first and second anniversary of the vesting commencement date, and (iv) continuing non-employee members of the board of directors, of which, commencing in 2011, 1/24th of the shares subject to such options become exercisable each month following the date of grant over a two-year vesting period.

2011 Equity Incentive Plan

On March 15, 2011, the Company's Board of Directors adopted, and on June 3, 2011, the Company's stockholders approved, the 2011 Equity Incentive Plan (the "2011 Plan"). The 2011 Plan is intended as the successor to and continuation of the Company's 1998 Stock Plan, 2001 Stock Plan, 2005 Equity Incentive Award Plan and 2006 Employment Commencement Incentive Plan (collectively, the "Prior Plans"). Following stockholder approval on June 3, 2011 (the "Effective Date"), no additional stock awards shall be granted under Prior Plans.

The Company initially reserved a total of 6,041,856 shares of common stock for issuance under the 2011 Plan, which is the sum of (i) the 539,803 shares remaining available as of the Effective Date under the Prior Plans, (ii) an additional 4,400,000 new shares, and (iii) that portion of the 1,102,053 shares underlying stock options granted and currently outstanding under the Prior Plans that expire or terminate for any reason prior to exercise or settlement or that are forfeited because of the failure to meet a contingency or condition required to vest such shares.

The number of shares of common stock available for issuance under the 2011 Plan automatically increases on January 1st of each year for a period of 10 years commencing on January 1, 2012 by an amount equal to: (i) 4.0% of the Company's outstanding shares of common stock on December 31st of the preceding calendar year, or (ii) a lesser amount determined by the Board of Directors.

During the year ended December 31, 2011, options to purchase 4,165,000 shares of the Company's common stock were granted under the 2011 Plan. As of December 31, 2011, there were 942,409 shares available for future grants under the 2011 Plan.

Employee Stock Purchase Plan

On March 15, 2011, the Company's Board of Directors adopted, and on June 3, 2011, the Company's stockholders approved, the 2011 Employee Stock Purchase Plan (the "2011 ESPP"). The 2011 ESPP is intended as the successor to the Company's 2005 Employee Stock Purchase Plan, which was terminated on June 3, 2011.

The 2011 ESPP permits eligible employees to purchase common stock at a discount through payroll deductions during defined offering periods. Eligible employees can purchase shares of the Company's common stock at 85% of the lower of the fair market value of the common stock at (i) the beginning of a 12-month offering period, or (ii) at the end of one of the two related 6-month purchase periods. No participant in the 2011 ESPP may be issued or transferred shares of common stock valued at more than $25,000 per calendar year. The initial offering under the 2011 ESPP commenced on June 13, 2011 and will end on May 31, 2012, unless terminated earlier.

The Company initially reserved a total of 500,000 shares of common stock for issuance under the 2011 ESPP. The number of shares of common stock available for issuance under the 2011 ESPP automatically increases on January 1st of each year for a period of 10 years commencing on January 1, 2012 by an amount equal to: (i) 1.0% of the Company's outstanding shares of common stock on December 31st of the preceding calendar year, or (ii) a lesser amount determined by the Board of Directors.

A total of 60,470 shares were issued under the 2011 ESPP during the year ended December 31, 2011. As of December 31, 2011, 439,530 shares were available for future issuance under the ESPP.

Warrants

As of December 31, 2011, the following warrants to purchase shares of the Company's common stock were outstanding (in thousands, except per share amounts):

Date Issued	Shares	Exercise Price Per Share	Expiration
March 2006	363	$37.26	March 2013
August 2005	14	$54.60	August 2015
April 2009 (see Note 10)	2,876	$ 1.32	April 2016
October 2009 (see Note 10)	1,716	$ 1.32	October 2016
October 2010 (see Note 10)	3,679	$ 2.52	October 2015
October 2011 (see Note 8)	386	$ 1.30	October 2016
Total warrants outstanding	9,034		

Reserved Shares

As of December 31, 2011, the Company's shares of common stock reserved for future issuance were as follows (in thousands):

	Shares Available for Future Grant	Outstanding Securities	Total Shares Reserved
Warrants	—	9,034	9,034
Stock option plans	943	5,099	6,042
Employee stock purchase plan	439	—	439
Total reserved shares of common stock	1,382	14,133	15,515

11. Stock-Based Compensation

Overview

Employee stock-based compensation expense is calculated based on the grant-date fair value of awards ultimately expected to vest, reduced for estimated forfeitures, and is recorded on a straight-line basis over the vesting period of the awards. Forfeitures are estimated at the time of grant, based on historical option cancellation information, and revised in subsequent periods if actual forfeitures differ from those estimates. The following table summarizes stock-based compensation expense related to the Company's stock-based awards for the periods indicated (in thousands):

	Year ended December 31,		
	2011	2010	2009
Research and development	$ 630	$300	$ 227
General and administrative	739	570	1,084
Employee stock-based compensation expense	1,369	870	1,311
Non-employee stock-based compensation expense	19	7	29
Total stock-based compensation expense	$1,388	$877	$1,340

Fair Value of Awards

The Company determines the fair value of stock-based awards on the grant date using the Black-Scholes model, which is impacted by the Company's stock price, as well as assumptions regarding a number of highly subjective variables. The following table summarizes the weighted-average assumptions used as inputs to the Black-Scholes model, and resulting weighted-average and total estimated grant date fair values of employee stock options granted during the periods indicated:

	Year Ended December 31,		
	2011	2010	2009
	Stock Option Plans		
Assumptions:			
Expected term (years)	5.5	4.5	4.5
Expected volatility	85.0 %	90.4 %	86.7 %
Risk-free interest rate	1.9 %	1.7 %	1.9 %
Expected dividend yield	0.0 %	0.0 %	0.0 %
Fair value:			
Weighted-average estimated grant date fair value per share	$ 1.42	$ 2.10	$ 1.86
Options granted to employees (in thousands)	4,179	58	675
Total estimated grant date fair value (in thousands)	$5,915	$ 121	$1,254

The estimated fair value of stock options that vested in the years ended December 31, 2011, 2010 and 2009, was $1.4 million, $0.8 million and $1.2 million, respectively. The Company based its assumptions for the expected term on historical cancellation and exercise data, and the contractual term and vesting terms of the awards. Expected volatility is based on historical volatility of the Company's common stock, as well as that for a mature peer group of companies in the same industry. The Company does not anticipate paying any cash dividends in the foreseeable future, and therefore uses an expected dividend yield of zero.

Option Plan Activity

The following table summarizes stock option activity for the Company's stock option plans in the periods presented (in thousands, except per share amounts):

	Number of Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding as of December 31, 2008	775	$20.66		
Options granted	684	$ 2.82		
Options exercised	(1)	$ 8.64		
Options canceled, forfeited or expired	(390)	$19.06		
Outstanding as of December 31, 2009	1,068	$ 9.83		
Options granted	64	$ 3.06		
Options exercised	(1)	$ 2.94		
Options canceled, forfeited or expired	(66)	$13.55		
Outstanding as of December 31, 2010	1,065	$ 9.19		
Options granted	4,209	$ 2.03		
Options canceled, forfeited or expired	(175)	$ 2.63		
Outstanding as of December 31, 2011	5,099	$ 3.51	8.84	$—
Vested and expected to vest as of December 31, 2011	4,607	$ 3.67	8.77	$—
Exercisable as of December 31, 2011	1,317	$ 7.59	7.18	$—

The aggregate intrinsic value in the table above represents the total pre-tax intrinsic value (i.e., the difference between the Company's closing stock price on the last trading day of the period and the exercise price, multiplied by the number of in-the-money options) that would have been received by option holders if they had exercised all their options on December 31, 2011.

The intrinsic value of options exercised during the years ended December 31, 2011, 2010 and 2009 was zero, $3,000 and $1,000, respectively. As the Company believes it is more likely than not that no stock option related tax benefits will be realized, the Company does not record any net tax benefits related to exercised options.

Total estimated unrecognized stock-based compensation cost related to unvested stock options was $5.3 million as of December 31, 2011, which is expected to be recognized over the respective vesting terms of each award. The weighted average term of the unrecognized stock-based compensation expense is 3.3 years.

12. Restructuring

In the first quarter of 2009, the Company recorded a restructuring charge of $0.6 million for employee severance and related benefit costs related to a restructuring plan initiated in March 2009. The severance payments were made in the second quarter of 2009, and other personnel-related expenses such as employee benefits were paid over the remainder of 2009. These charges are included in "Restructuring charges" in the Company's statement of operations and comprehensive income (loss) for the year ended December 31, 2009.

In June 2008, the Company implemented a corporate realignment to focus on the development of vosaroxin (the "2008 Restructuring"). For the year ended December 31, 2009, the Company recorded net charges of $1.3 million for the 2008 Restructuring, including $2.2 million for lease termination fees and $0.4 million for third-party commissions, partially offset by the reversal of $1.4 million of deferred rent. No liability remained as of December 31, 2009.

13. Income Taxes

No provision for income taxes was recorded in the periods presented due to tax losses incurred in each period. The income tax provision differs from the amount computed by applying the statutory income tax rate of 34% to pre-tax loss as follows (in thousands):

	Year Ended December 31,		
	2011	2010	2009
Tax at statutory rate	$(6,848)	$(8,359)	$(13,677)
Current year net operating losses and temporary differences for which no tax benefit is recognized	8,549	6,973	6,341
Non-cash expense (credit) related to financings	(1,995)	1,246	7,146
Other permanent differences	294	140	190
Provision for income taxes	$ —	$ —	$ —

Deferred income taxes reflect the net tax effects of loss and credit carry-forwards and temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets for federal and state income taxes are as follows (in thousands):

	December 31,	
	2011	2010
Deferred tax assets:		
Federal and state net operating loss carry-forwards	$ 104,757	$ 95,547
Federal and state research credit carry-forwards	10,515	9,660
Capitalized research costs	5,177	5,098
Stock-based compensation and other	2,018	1,808
Property and equipment	162	183
Gross deferred tax assets	122,629	112,296
Valuation allowance	(122,629)	(112,296)
Net deferred tax assets	$ —	$ —

Realization of the deferred tax assets is dependent upon future taxable income, if any, the amount and timing of which are uncertain. Accordingly, the net deferred tax assets have been fully offset by a valuation allowance. The net valuation allowance increased by approximately $10.3 million, $8.9 million and $7.7 million during the years ended December 31, 2011, 2010 and 2009, respectively.

As of December 31, 2011, the Company had federal net operating loss carry-forwards of $278.2 million and federal research and development tax credit carry-forwards of $6.5 million. If not utilized, the federal net operating loss and tax credit carry-forwards will expire at various dates beginning in 2018. As of December 31, 2011, the Company had state net operating loss carry-forwards of $169.3 million, which begin to expire in 2012, and state research and development tax credit carry-forwards of $5.9 million, which do not expire.

Utilization of these net operating loss and tax credits carry-forwards may be subject to a substantial annual limitation due to the ownership change rules under Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"). The limitations are applicable if an "ownership change," as defined in the Code, is deemed to have occurred or occurs in the future. The annual limitation may result in the expiration of net operating loss and credit carry-forwards before they can be utilized.

The Company recognizes the financial statement effect of tax positions when it is more likely than not that the tax positions will be sustained upon examination by the appropriate taxing authorities. As of December 31, 2011 and 2010, the Company had no unrecognized tax positions.

The Company files U.S. federal and California tax returns. The Company's wholly owned subsidiary files tax returns in the United Kingdom. To date, neither the Company nor its wholly owned subsidiary has been audited by the Internal Revenue Service, any state income tax authority or tax authority in the United Kingdom. Due to net operating loss carry-forwards, substantially all of the Company's tax years remain open to federal tax examination.

14. Guarantees and Indemnification

As permitted under Delaware law and in accordance with the Company's Bylaws, the Company indemnifies its officers and directors for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at the Company's request in such capacity. The indemnification agreements with the Company's officers and directors terminate upon termination of their employment, but the termination does not affect claims for indemnification relating to events occurring prior to the effective date of termination. The

maximum amount of potential future indemnification is unlimited; however, the Company's officer and director insurance policy reduces the Company's exposure and may enable the Company to recover a portion of any future amounts paid. The Company believes that the fair value of these indemnification agreements is minimal. In addition, in the ordinary course of business the Company enters into agreements, such as licensing agreements, clinical trial agreements and certain services agreements, containing standard indemnifications provisions. The Company believes that the likelihood of an adverse judgment related to such indemnification provisions is remote. Accordingly, the Company has not recorded any liabilities for any of these agreements as of December 31, 2011.

15. Selected Quarterly Financial Data (unaudited, and in thousands, except per share amounts)

	Three Months Ended							
	Mar. 31, 2011	June 30, 2011	Sep. 30, 2011	Dec. 31, 2011	Mar. 31, 2010	June 30, 2010	Sep. 30, 2010	Dec. 31, 2010
Revenue	$ 4,000	$ —	$ 1,000	$ —	$ 13	$ 14	$ —	$ 6
Net loss	$ 1,840	$ (8,227)	$ (5,014)	$ (8,740)	$(4,648)	$ (4,784)	$ (5,084)	$(10,071)
Basic and diluted net income (loss) attributable to common stockholders per common share	$ 0.04	$ (0.18)	$ (0.11)	$ (0.19)	$ (0.65)	$ (0.44)	$ (0.14)	$ (0.23)
Shares used in computing net income (loss) attributable to common stockholders per common share:								
Basic	45,894	46,295	46,714	46,733	7,142	10,912	36,970	43,879
Diluted	47,866	46,295	46,714	46,733	7,142	10,912	36,970	43,879

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

Not applicable.

ITEM 9A. *CONTROLS AND PROCEDURES*

Disclosure Controls and Procedures

Based on their evaluation as of December 31, 2011, our Chief Executive Officer and Chief Financial Officer, with the participation of management, have concluded that, subject to the limitations described below, our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act) were effective at the reasonable assurance level.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2011. Management based its assessment on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control—Integrated Framework*. Based on this evaluation, our management concluded that as of December 31, 2011, our internal control over financial reporting was effective at the reasonable assurance level.

The Company's internal control over financial reporting was not subject to attestation by the Company's registered public accounting firm pursuant to the rules of the Securities and Exchange Commission that permit the Company, as a non-accelerated filer, to provide only management's report in this annual report.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2011 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on the Effectiveness of Controls

Our disclosure controls and procedures provide our Chief Executive Officer and Chief Financial Officer with only reasonable assurances that our disclosure controls and procedures will achieve their objectives. However, our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting can or will prevent all human error. A control system, no matter how well designed and implemented, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Furthermore, the design of a control system must reflect the fact that there are internal resource constraints, and the benefit of controls must be weighed relative to their corresponding costs. Because of the limitations in all control systems, no evaluation of controls can provide complete assurance that all control issues and instances of error, if any, within our company are detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur due to human error or mistake. Additionally, controls, no matter how well designed, could be circumvented

by the individual acts of specific persons within the organization. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated objectives under all potential future conditions.

ITEM 9B. ***OTHER INFORMATION***

None.

PART III

Certain information required by Part III is omitted from this report because we will file with the SEC a definitive proxy statement pursuant to Regulation 14A, or the Proxy Statement, not later than 120 days after the year ended December 31, 2011, and certain information included therein is incorporated herein by reference.

ITEM 10. *DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

Information responsive to this item regarding directors and director nominees, executive officers, the board of directors and its committees, and certain corporate governance matters is incorporated herein by reference to the information set forth under the captions "Election of Nominees to the Board of Directors," "Information About the Board of Directors and Corporate Governance" and "Certain Information with Respect to Executive Officers" in our definitive Proxy Statement.

Code of Business Conduct & Ethics

We have adopted a Code of Business Conduct & Ethics which applies to all of our directors, officers and employees. A copy of our Code of Business Conduct & Ethics can be found on our website, www.sunesis.com, in the section titled *"Investors & Media"* under the subsection titled *"Corporate Governance."* Information found on our website is not incorporated by reference into this report. In addition, we intend to promptly disclose (1) the nature of any amendment to our Code of Business Conduct & Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or persons performing similar functions and (2) the nature of any waiver, including an implicit waiver, from a provision of our Code of Business Conduct & Ethics that is granted to one of these specified officers, the name of such person who is granted the waiver and the date of the waiver on our website in the future.

All additional information required by this Item 10 will be set forth in our definitive Proxy Statement and is incorporated in this report by reference.

ITEM 11. *EXECUTIVE COMPENSATION*

Information responsive to this item is incorporated herein by reference to the information set forth under the captions "Executive Compensation and Related Information" and "Information About the Board of Directors and Corporate Governance" in our definitive Proxy Statement.

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

Ownership of Sunesis Securities

Information responsive to this item is incorporated herein by reference to the information set forth under the caption "Security Ownership of Certain Beneficial Owners and Management" in our definitive Proxy Statement.

Equity Compensation Plan Information

The following table provides certain information with respect to our equity compensation plans in effect as of December 31, 2011:

Plan Category	(A) Number of Securities to be Issued upon Exercise of Outstanding Options	(B) Weighted Average Exercise Price of Outstanding Options	(C) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column A)
Equity Compensation Plans Approved by Stockholders(1)	5,099,447(2)	$3.51	1,381,939(3)
Equity Compensation Plans Not Approved by Stockholders	—	$ —	—
Total	5,099,447	$3.51	1,381,939

(1) Includes securities issuable under our 2011 Equity Incentive Plan, or 2011 Plan, and 2011 Employee Stock Purchase Plan, or ESPP.

(2) Excludes purchase rights currently accruing under the ESPP. Offering periods under the ESPP are 12-month periods, which are comprised of two six-month purchase periods. Eligible employees may purchase shares of common stock at a price equal to 85% of the lower of the fair market value of the common stock at the beginning of each offering period or the end of each semi-annual purchase period. No participant in the ESPP may be issued or transferred shares of common stock valued at more than $25,000 per calendar year.

(3) Includes (i) 942,409 shares of common stock available for issuance under our 2011 Plan and (ii) 439,530 shares of common stock available for issuance under our ESPP. Beginning in 2012, the number of shares of common stock reserved under the 2011 Plan automatically increases on January 1st of each year by an amount equal to: (i) 4.0% of our shares of common stock outstanding on December 31st of the preceding calendar year, or (ii) a lesser amount determined by our Board of Directors. The number of shares of common stock reserved under our ESPP automatically increases on January 1st of each year by an amount equal to: (i) 1.0% of our shares of common stock outstanding on December 31st of the preceding calendar year, or (ii) a lesser amount determined by our Board of Directors.

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

Information responsive to this item is incorporated herein by reference to the information set forth under the captions "Certain Relationships and Related Party Transactions" and "Information About the Board of Directors and Corporate Governance" in our definitive Proxy Statement.

ITEM 14. *PRINCIPAL ACCOUNTING FEES AND SERVICES*

Information responsive to this item is incorporated herein by reference to the information set forth under the caption "Independent Registered Public Accounting Firm" in our definitive Proxy Statement.

PART IV

ITEM 15. *EXHIBITS AND FINANCIAL STATEMENT SCHEDULES*

Exhibits and Financial Statement Schedules:

(a)(1) Financial Statements

(a)(2) Financial Statement Schedules

All financial statement schedules are omitted because they are not applicable, or the information is included in the financial statements or notes thereto.

(a)(3) Exhibits

A list of exhibits filed with this report or incorporated herein by reference is found in the Exhibit Index immediately following the signature page of this report.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, Sunesis Pharmaceuticals, Inc. has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on March 14, 2012.

SUNESIS PHARMACEUTICALS, INC.

By: /s/ ERIC H. BJERKHOLT
Eric H. Bjerkholt
Executive Vice President, Corporate Development and Finance, Chief Financial Officer

POWER OF ATTORNEY KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Daniel N. Swisher, Jr. and Eric H. Bjerkholt, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution for him, and in his name in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, and any of them or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ JAMES W. YOUNG, PH.D. James W. Young, Ph.D.	Chairman of the Board	March 14, 2012
/s/ DANIEL N. SWISHER, JR. Daniel N. Swisher, Jr.	President, Chief Executive Officer and Director *(Principal Executive Officer)*	March 14, 2012
/s/ ERIC H. BJERKHOLT Eric H. Bjerkholt	Executive Vice President, Corporate Development and Finance, Chief Financial Officer *(Principal Financial Officer and Principal Accounting Officer)*	March 14, 2012
/s/ MATTHEW K. FUST Matthew K. Fust	Director	March 14, 2012
/s/ EDWARD HURWITZ Edward Hurwitz	Director	March 14, 2012
/s/ STEVEN B. KETCHUM PH. D Steven B. Ketchum, Ph. D.	Director	March 14, 2012

Signature	Title	Date
/s/ HELEN S. KIM Helen S. Kim	Director	March 14, 2012
/s/ DAYTON MISFELDT Dayton Misfeldt	Director	March 14, 2012
/s/ HOMER L. PEARCE, PH.D. HOMER L. PEARCE, PH.D.	Director	March 14, 2012
/s/ DAVID C. STUMP, M.D. David C. Stump, M.D.	Director	March 14, 2012

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated By Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation of the Registrant	10-K/A	000-51531	3.1	5/23/2007	
3.2	Amended and Restated Bylaws of the Registrant	8-K	000-51531	3.2	12/11/2007	
3.3	Certificate of Designation of the Series A Preferred Stock of the Registrant	8-K	000-51531	3.3	4/3/2009	
3.4	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Registrant	S-8	333-160528	3.4	7/10/2009	
3.5	Certificate of Amendment to the Certificate of Designation of the Series A Preferred Stock of the Registrant	8-K	000-51531	3.4	11/2/2009	
3.6	Certificate of Amendment to the Certificate of Designation of the Series A Preferred stock of the Registrant	8-K	000-51531	3.5	1/21/2010	
3.7	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Registrant	8-K	000-51531	3.1	2/14/2011	
4.1	Reference is made to Exhibits 3.1, 3.2, 3.3, 3.4, 3.5, 3.6 and 3.7 above.					
4.2	Specimen Common Stock certificate of the Registrant	10-K	000-51531	4.2	3/29/2011	
4.3	Investor Rights Agreement, dated April 3, 2009, by and among the Registrant and the purchasers identified on the signature pages thereto	8-K	000-51531	4.1	4/3/2009	
10.1*	1998 Stock Plan and Form of Stock Option Agreement	S-1/A	333-121646	10.1	1/27/2005	
10.2*	2001 Stock Plan and Form of Stock Option Agreement	S-1	333-121646	10.2	12/23/2004	
10.3*	2005 Equity Incentive Award Plan, as amended, and Form of Stock Option Agreement	10-K/A	000-51531	10.3	4/30/2009	
10.4*	Employee Stock Purchase Plan and Enrollment Form	10-Q	000-51531	10.4	11/9/2006	
10.5*	Form of Indemnification Agreement for directors and executive officers	S-1	333-121646	10.5	12/23/2004	
10.6	Warrant, dated June 11, 2003, issued to General Electric Capital Corporation	S-1	333-121646	10.21	12/23/2004	
10.7	Warrant, dated June 21, 2004, issued to General Electric Capital Corporation and Amendment No. 1 thereto, dated December 16, 2004	S-1/A	333-121646	10.22	4/29/2005	

Exhibit Number	Exhibit Description	Incorporated By Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.8†	License Agreement, dated October 14, 2003, by and between the Registrant and Dainippon Sumitomo Pharma Co., Ltd. (formerly known as Dainippon Pharmaceutical Co., Ltd.)	S-1/A	333-121646	10.36	4/29/2005	
10.9	Warrant, dated August 25, 2005, issued to Horizon Technology Funding Company II LLC	S-1/A	333-121646	10.40	9/1/2005	
10.10	Warrant, dated August 25, 2005, issued to Horizon Technology Funding Company III LLC	S-1/A	333-121646	10.41	9/1/2005	
10.11	Warrant, dated August 25, 2005, issued to Oxford Finance Corporation	S-1/A	333-121646	10.42	9/1/2005	
10.12	Warrant, dated September 9, 2005, issued to General Electric Capital Corporation	10-K	000-51531	10.16	3/29/2011	
10.13*	Amended and Restated 2006 Employment Commencement Incentive Plan	10-K/A	000-51531	10.32	4/30/2009	
10.14	Common Stock and Warrant Purchase Agreement, dated as of March 17, 2006, among the Registrant and the investors listed on the signature pages thereto	8-K	000-51531	10.44	3/22/2006	
10.15	Registration Rights Agreement, dated as of March 17, 2006, among the Registrant and the investors listed on the signature pages thereto	8-K	000-51531	10.45	3/22/2006	
10.16	Form of Warrant	8-K	000-51531	10.46	3/22/2006	
10.17†	Sublease, dated December 22, 2006, by and between the Registrant and Oncology Therapeutics Network Joint Venture, L.P., for office space located at 395 Oyster Point Boulevard, South San Francisco, California	10-K	000-51531	10.47	3/17/2008	
10.18*	Consulting Agreement, dated August 17, 2006, by and between the Registrant and Homer L. Pearce, Ph. D.	10-Q	000-51531	10.49	5/9/2007	
10.19*	Consulting Agreement, dated September 2, 2006, by and between the Registrant and David C. Stump, M. D.	10-Q	000-51531	10.50	5/9/2007	
10.20*	Forms of Stock Option Grant Notice and Stock Option Agreement under the 2005 Equity Incentive Award Plan	8-K	000-51531	10.52	9/19/2007	
10.21*	Second Amended and Restated Executive Severance Benefits Agreement, dated December 24, 2008, by and between Registrant and Daniel N. Swisher, Jr.	10-K	000-51531	10.44	4/3/2009	
10.22*	Second Amended and Restated Executive Severance Benefits Agreement, dated December 24, 2008, by and between Registrant and Eric H. Bjerkholt	10-K	000-51531	10.45	4/3/2009	

Exhibit Number	Exhibit Description	Incorporated By Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.23*	Forms of Stock Option Grant Notice and Stock Option Agreement for Automatic Grants to Outside Directors under the 2005 Equity Incentive Award Plan	10-Q	000-51531	10.69	11/7/2008	
10.24*	Forms of Stock Option Grant Notice and Stock Option Agreement under the Amended and Restated 2006 Employment Commencement Incentive Plan	8-K	000-51531	10.71	12/23/2008	
10.25	Summary of Non-Employee Director Cash Compensation Arrangements	10-Q	000-51531	10.2	8/13/2010	
10.26	Form of Warrant to purchase shares of Common Stock	8-K	000-51531	10.2	4/3/2009	
10.27	Agreement Regarding Private Placement of Securities of Sunesis Pharmaceuticals, Inc., dated as of June 29, 2009, by and among the Registrant and the investors identified on the signature pages thereto	8-K	000-51531	10.1	7/2/2009	
10.28	Second Agreement Regarding Private Placement of Securities of Sunesis Pharmaceuticals, Inc., dated as of October 27, 2009, by and among the Registrant and the investors identified on the signature pages thereto	8-K	000-51531	10.66	11/2/2009	
10.29	Third Agreement Regarding Private Placement of Securities of Sunesis Pharmaceuticals, Inc., dated as of January 19, 2010, by and among the Registrant and the investors identified on the signature pages thereto	8-K	000-51531	10.67	1/21/2010	
10.30	Fourth Agreement Regarding Private Placement of Securities of Sunesis Pharmaceuticals, Inc., dated as of March 29, 2010, by and among the Registrant and the investors identified on the signature pages thereto	8-K	000-51531	10.1	4/2/2010	
10.31	Sales Agreement, dated April 29, 2010, between the Registrant and Cantor Fitzgerald & Co.	8-K	000-51531	10.1	4/29/2010	
10.32*	Sunesis Pharmaceuticals, Inc. 2011 Bonus Program	8-K	000-51531	10.1	2/18/2011	
10.33	Underwriting Agreement, dated September 30, 2010, by and between the Registrant and Cowen and Company LLC	8-K	000-51531	1.1	10/1/2010	
10.34	Form of Warrant to Purchase Common Stock of the Registrant	8-K	000-51531	4.1	10/1/2010	
10.35	Master Services Agreement, dated November 3, 2003, by and between the Registrant and AAI Developmental Services Inc.	10-K	000-51531	10.49	3/29/2011	

Exhibit Number	Exhibit Description	Incorporated By Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.36	First Amendment to Master Services Agreement, dated September 11, 2006, by and between the Registrant and AAIPharma Inc.	10-K	000-51531	10.50	3/29/2011	
10.37	Second Amendment to Master Services Agreement, dated May 2, 2008, by and between the Registrant and AAIPharma Inc.	10-K	000-51531	10.51	3/29/2011	
10.38	Third Amendment to Master Services Agreement, dated November 3, 2009, by and between the Registrant and AAIPharma Services Corp.	10-K	000-51531	10.52	3/29/2011	
10.39	Master Services Agreement, dated January 1, 2010, by and between the Registrant and Albany Molecular Research, Inc.	10-K	000-51531	10.53	3/29/2011	
10.40	Master Services Agreement, dated June 21, 2010, by and between the Registrant and Icon Clinical Research Limited	10-K	000-51531	10.54	3/29/2011	
10.41	Master Services Agreement, dated August 26, 2004, by and between the Registrant and Quintiles, Inc.	10-Q	000-51531	10.2	5/12/2011	
10.42	First Amendment to Master Services Agreement, dated August 1, 2008, by and between the Registrant and Aptuit, Inc. (as assignee of Quintiles, Inc.)	10-Q	000-51531	10.3	5/12/2011	
10.43	Amended and Restated Collaboration Agreement, dated March 31, 2011, by and between the Registrant and Biogen Idec MA Inc.	10-Q/A	000-51531	10.4	6/30/2011	
10.44	License Agreement, dated March 31, 2011, by and between the Registrant and Millennium Pharmaceuticals, Inc.	10-Q/A	000-51531	10.5	6/30/2011	
10.45	Termination and Transition Agreement, dated March 31, 2011, by and between the Registrant, Biogen Idec MA Inc. and Millennium Pharmaceuticals, Inc.	10-Q	000-51531	10.6	5/12/2011	
10.46*	Sunesis Pharmaceuticals, Inc. 2011 Equity Incentive Plan	S-8	333-174732	99.1	6/6/2011	
10.47*	Sunesis Pharmaceuticals, Inc. 2011 Employee Stock Purchase Plan	S-8	333-174732	99.2	6/6/2011	
10.48	Sales Agreement, dated August 11, 2011, between Sunesis Pharmaceuticals, Inc. and Cantor Fitzgerald & Co.	8-K	000-51531	10.1	8/11/2011	
10.49	Loan and Security Agreement among Sunesis Pharmaceuticals, Inc., Oxford Finance LLC, Silicon Valley Bank and Horizon Technology Finance Corporation, dated as of October 18, 2011	8-K	000-51531	10.1	10/19/2011	

Exhibit Number	Exhibit Description	Incorporated By Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.50	Warrant to Purchase Stock issued to Oxford Finance LLC, dated as of October 18, 2011	8-K	000-51531	10.2	10/19/2011	
10.51	Warrant to Purchase Stock issued to Silicon Valley Bank, dated as of October 18, 2011	8-K	000-51531	10.3	10/19/2011	
10.52	Warrant to Purchase Stock issued to Horizon Technology Finance Corporation, dated as of October 18, 2011	8-K	000-51531	10.4	10/19/2011	
10.53	Fifth Agreement Regarding Private Placement of Securities of Sunesis Pharmaceuticals, Inc., dated as of February 2, 2012, by and among the Registrant and the investors identified on the signature pages thereto	8-K	000-51531	10.1	2/3/2012	
10.54*	Letter Agreement, dated February 2, 2012, by and between Sunesis Pharmaceuticals, Inc. and Steven B. Ketchum	8-K	000-51531	10.2	2/3/2012	
10.55*	Offer Letter, dated January 31, 2012, by and between Sunesis Pharmaceuticals, Inc. and Adam R. Craig					X
10.56*	Executive Severance Benefits Agreement, dated January 31, 2012, by and between Sunesis Pharmaceuticals, Inc. and Adam R. Craig					X
10.57*	Forms of Stock Option Grant Notice and Option Agreement under the 2011 Equity Incentive Plan					X
10.58*	Forms of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement under the 2011 Equity Incentive Plan					X
21.1	Subsidiaries of the Registrant	10-K	000-51531	21.1	3/17/2008	
23.1	Consent of Independent Registered Public Accounting Firm					X
24.1	Power of Attorney					(included on Signature page)
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Exchange Act					X
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Exchange Act					X
32.1#	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 13a-14(b) or 15d-14(b) of the Exchange Act					X

Exhibit Number	Exhibit Description	Incorporated By Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
101.INS	XBRL Instance Document					(1)
101.SCH	XBRL Taxonomy Extension Schema Document					(1)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					(1)
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					(1)
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document					(1)
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					(1)

* Management contract, compensatory plan or arrangement.

† Portions of the exhibit have been omitted pursuant to a request for confidential treatment. The omitted information has been filed separately with the Securities and Exchange Commission.

In accordance with Item 601(b)(32)(ii) of Regulation S-K and SEC Release Nos. 33-8238 and 34-47986, Final Rule; Management's Reports on Internal Control over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, the Certification furnished in Exhibit 32.1 hereto is deemed to accompany this Form 10-K and will not be filed for purposes of Section 18 of the Exchange Act. Such certification will not be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act, except to the extent that the registrant specifically incorporates it by reference.

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