

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

SCHEDULE 14A
Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934
(Amendment No.)

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to §240.14a-12

SUNESIS PHARMACEUTICALS, INC.
(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
- (1) Title of each class of securities to which transaction applies:
- (2) Aggregate number of securities to which transaction applies:
- (3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):
- (4) Proposed maximum aggregate value of transaction:
- (5) Total fee paid:
- Fee paid previously with preliminary materials.
- Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.
- (1) Amount Previously Paid:
- (2) Form, Schedule or Registration Statement No.:
- (3) Filing Party:
- (4) Date Filed:

PRELIMINARY PROXY STATEMENT, SUBJECT TO COMPLETION



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 2, 2010

To the Stockholders of Sunesis Pharmaceuticals, Inc.:

The 2010 annual meeting of stockholders of Sunesis Pharmaceuticals, Inc. ("Sunesis" or the "Company") will be held on Wednesday, June 2, 2010 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 two directors nominated by the Board of Directors to serve until the 2013 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 the Company for the year ending December 31, 2010.
3. To approve an amendment to Sunesis' amended and restated certificate of incorporation in order to effect a reverse stock split of the issued and outstanding shares of Sunesis' common stock and preferred stock. A copy of the amendment to Sunesis' amended and restated certificate of incorporation to effect the reverse stock split is attached as Annex A to the accompanying proxy statement.
4. 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 7, 2010. 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 Sunesis. We look forward to seeing you at our Annual Meeting.

By Order of the Board of Directors,

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

South San Francisco, California
April 7, 2010

You are cordially invited to attend the annual meeting in person. Whether or not you expect to attend the annual meeting, please complete, date, sign and return the enclosed proxy, or vote over the telephone or the Internet as instructed in these materials, as promptly as possible in order to ensure your representation at the annual meeting. A return envelope (which is postage prepaid if mailed in the United States) has been provided for your convenience. Even if you have voted by proxy, you may still vote in person if you attend the annual 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 annual meeting, you must obtain a proxy issued in your name from that record holder.

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders to be Held at 10:00 a.m., Pacific Time, on Wednesday, June 2, 2010 at Sunesis Pharmaceuticals, Inc. located at 395 Oyster Point Boulevard, Suite 400, South San Francisco, CA 94080.

The proxy statement and annual report to stockholders are available at <https://materials.proxyvote.com/867328>.

The Board of Directors recommends that you vote FOR each of the proposals identified above.

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**SUNESIS PHARMACEUTICALS, INC.
PROXY STATEMENT FOR THE 2010 ANNUAL MEETING OF STOCKHOLDERS**

JUNE 2, 2010

INFORMATION CONCERNING SOLICITATION AND VOTING

General

This proxy statement is furnished 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 2010 annual meeting of stockholders, or Annual Meeting, to be held on June 2, 2010, 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. A copy of our Annual Report on Form 10-K for the year ended December 31, 2009 and this proxy statement and the accompanying proxy card are first being distributed to stockholders on or about April 1, 2010.

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 American Stock Transfer & Trust Company, or AST, 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 and Outstanding Shares

Our common stock and Series A preferred stock are the only types of securities entitled to vote at the Annual Meeting. Each share of common stock and Series A preferred stock entitles the holder of record thereof at the close of business on April 7, 2010 to notice of, and to vote on, each of the matters to be voted upon at the Annual Meeting. 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 and each share of Series A preferred stock is entitled to ten votes per share of Series A preferred stock.

Unless otherwise instructed, shares represented by executed proxies in the form accompanying this proxy statement will be voted as follows:

- FOR the election of two directors nominated by the Board of Directors to serve until the 2013 annual meeting of stockholders (Proposal No. 1);
- FOR the ratification of the selection of Emst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2010 (Proposal No. 2);

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- FOR an amendment to our amended and restated certificate of incorporation in order to effect a reverse stock split of the issued and outstanding shares of our common stock and preferred stock (Proposal No. 3); and
- At the proxyholder's discretion, on such other matters, if any, that may come before the Annual Meeting.

Voting Quorum, Abstentions and Voting Requirements

In order to conduct any business at the Annual Meeting, a quorum must be present in person or represented by valid proxy. A majority of the outstanding shares of the capital stock entitled to vote at the Annual Meeting, present or represented by proxy, constitutes a quorum. As of April 7, 2010, the record date for the Annual Meeting, we had 57,981,195 shares of capital stock outstanding and entitled to vote (on an as-if converted to common stock basis). 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.

Votes will be counted by the inspector of election appointed for the Annual Meeting, who will separately count FOR and WITHHELD votes, with respect to Proposal No. 1, and, with respect to all proposals other than Proposal No. 1, AGAINST votes and abstentions. Abstentions will be counted towards the vote total with respect to all proposals other than Proposal No. 1 and will have the same effect as AGAINST votes. In the event that a broker, bank, custodian, nominee or other record holder of our common stock or preferred stock indicates on a proxy that it does not have discretionary authority to vote certain shares on a particular matter, which is called a broker non-vote, those shares 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 AST will tabulate all votes cast at the Annual Meeting.

- For Proposal No. 1 to be approved, the two nominees nominated by the Board of Directors to serve as Class II directors, whose terms will expire at our 2013 annual meeting of stockholders, 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. Only votes FOR or WITHHELD will affect the outcome. The director nominees listed in Proposal No. 1 will be elected by a plurality of the votes of the shares present or represented by proxy at the Annual Meeting and entitled to vote on the election of directors.
- To be approved, 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, 2010, must receive a FOR vote from the majority of the outstanding shares entitled to vote and present either in person or by proxy at the Annual Meeting. If you ABSTAIN from voting, it will be counted towards the tabulation of votes cast on the proposal and will have the same effect as an AGAINST vote.
- To be approved, Proposal No. 3, an amendment to our amended and restated certificate of incorporation to effect a reverse stock split, must receive a FOR vote from a majority of the outstanding shares entitled to vote either in person or by proxy at the Annual Meeting. If you ABSTAIN from voting, it will be counted towards the tabulation of votes cast on the proposal and will have the same effect as an AGAINST vote.

Voting Procedures and Options

The procedures for voting are fairly simple:

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 using the enclosed proxy card, vote by proxy over the telephone, or vote by proxy via the Internet. Whether or not you plan

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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, simply complete, sign and date the enclosed 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 1-800-776-9437 in the United States or 1-718-921-8500 outside the United States using a touch-tone phone and follow the recorded instructions. You will be asked to provide the company number and control number from the enclosed proxy card. Your vote must be received by 11:59 p.m., Eastern Time, on June 1, 2010 to be counted.
- To vote via the Internet, go to www.voteproxy.com to complete an electronic proxy card. You will be asked to provide the company number and control number from the enclosed proxy card. Your vote must be received by 11:59 p.m., Eastern Time, on June 1, 2010 to be counted.

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

Most beneficial owners whose stock is held in the name of a bank, broker or other nominee, or “street name,” will receive instructions for granting proxies from their banks, brokers or other nominees, rather than our proxy card. If your shares are held in street name, you will need to obtain a proxy form from the institution that holds your shares and follow the instructions included on that form regarding how to instruct your broker or other nominee holding the shares to vote your shares. Broker non-votes occur when a beneficial owner of shares held in street name does not give instructions to the broker or nominee holding the shares as to how to vote on matters deemed “non-routine.” 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 the beneficial owner does not provide voting instructions, the broker or nominee can still vote the shares with respect to matters that are considered to be “routine,” but not with respect to “non-routine” matters. Under the rules and interpretations of the New York Stock Exchange, or the NYSE, “non-routine” matters are matters that may substantially affect the rights or privileges of stockholders, such as mergers, stockholder proposals and, for the first time, under a new amendment to the NYSE rules, elections of directors, even if not contested.

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 or preferred stock as of April 7, 2010 as well as a proxy from the record holder to the stockholder.

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.

Shares Registered in the Name of Stockholder

Shares may only be voted by or on behalf of the record holder of shares as indicated in our stock transfer records. If you are a stockholder of record, you are requested either to vote in person at the Annual Meeting, over the telephone, via the Internet or to complete, sign and date the enclosed proxy card and return it in the enclosed envelope. The envelope requires no postage if mailed in the United States. If you return your signed proxy card to us before the Annual Meeting, we will vote your shares as you direct. Unless there are different instructions on the proxy, all shares represented by valid proxies (and not revoked before they are voted) will be voted at the

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Annual Meeting FOR each of the nominees named in Proposal No. 1 and FOR Proposals No. 2 and No. 3. With respect to any other business which may properly come before the Annual Meeting or any adjournment or postponement thereof and submitted to a vote of stockholders, proxies will be voted in accordance with the best judgment of the designated proxyholder.

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 attendance at the Annual Meeting will not, by itself, constitute revocation of your proxy.

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.

Internet Availability of Proxy Materials

This proxy statement and our Annual Report on Form 10-K for the year ended December 31, 2009 are available at <https://materials.proxyvote.com/867328>.

Availability of Our Independent Registered Public Accounting Firm

Representatives of Ernst & Young LLP, or Ernst & Young, 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, 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 COMPLETE, SIGN AND RETURN THE ACCOMPANYING PROXY CARD 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 nine 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 until their earlier death, resignation or removal or their successors are duly elected and qualified. In accordance with our amended and restated certificate of incorporation and bylaws, our Board may fill existing vacancies on the Board by appointment, subject to the terms and conditions of the Investor Rights Agreement described in more detail below.

The term of office of the Class II directors will expire at the Annual Meeting. There are two directors eligible for nomination for the upcoming three-year term. Proxies cannot be voted for more than two persons. The two nominees for Class II director are Drs. James W. Young and Homer L. Pearce, both of whom currently serve as Class II directors. If elected at the Annual Meeting, each of these nominees would serve until our 2013 annual meeting of stockholders and until his successor is elected and qualified, or, if sooner, until his death, resignation or removal.

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 meeting. The two nominees nominated by the Board of Directors to serve as Class II directors, whose terms will expire at our 2013 annual meeting of stockholders, 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. Each nominee has indicated his willingness to serve if elected. Our management has no reason to believe that any nominee will be unable to serve. In the event that either 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.

Pursuant to an Investor Rights Agreement, as of May 1, 2010, we are required to establish and maintain the size of the Board at nine members, five of which may be designated by investors holding a majority-in-interest of our Series A preferred stock. Alta Partners, Bay City Capital LLC, Growth Equity Opportunities Fund, LLC and ONC Partners, L.P., together with their respective affiliates, are each entitled to designate one such investor seat. Alta Partners, Bay City Capital LLC and Growth Equity Opportunities Fund, LLC presently have a designee serving on our Board as described below. See the section titled "*Certain Relationships and Related Party Transactions—Investor Rights Agreements*" for a more complete description of the Investor Rights Agreement.

The following table sets forth information as of March 31, 2010 with respect to our directors, including the two persons nominated for election by our Board at the Annual Meeting.

<u>Name</u>	<u>Age</u>	<u>Director Since</u>
James W. Young, Ph.D.	65	2000
Daniel N. Swisher, Jr.	47	2004
Matthew K. Fust	45	2005
Homer L. Pearce, Ph.D.	57	2006
David C. Stump, M.D.	60	2006
Edward Hurwitz	46	2009
Dayton Misfeldt	36	2009
Helen S. Kim	47	2009

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

Class II Nominees for Election to the Board of Directors for a Three-Year Term Expiring in 2013

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 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 Dr. Young's prior history as chief executive officer and his long tenure as Board Chair, 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.

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 position him to make an effective contribution to the scientific understanding of the Board, which the Board believes to be particularly important as we continue our drug development efforts.

Class III Directors Continuing in Office Until the 2011 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. is Executive Vice President, Research and Development, at Human Genome Sciences, Inc., a biopharmaceutical company, and has served at that 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

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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 Trustees of Adventist HealthCare and 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 and move forward through clinical trials.

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. In 2007, Mr. Swisher joined the Board of Directors of the Okizu Foundation, an organization that provides support to families affected by childhood cancers. 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 chief executive officer, 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.

Class I Directors Continuing in Office Until the 2012 Annual Meeting

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 Godward LLP. 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 the Private Placement. See "*Certain Relationships and Related Party Transactions—Investor Rights Agreements*" for a description of this agreement. 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 is currently the chief business officer of NGM Biopharmaceuticals, Inc., where she has served since August 2009. Prior to joining NGM, Ms. Kim was the chief executive officer of TRF Pharma, where she has served since December 2008. 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 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. 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.

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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. 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.

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 DIRECTOR NOMINEES
NOMINATED IN 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 as our independent registered public accounting firm for the year ending December 31, 2010 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, 2010. The affirmative vote of the holders of a majority of the shares present in person or represented by proxy and entitled to vote at the Annual Meeting will be required to ratify this Proposal No. 2. Abstentions will be counted towards the tabulation of votes cast on proposals presented to the stockholders 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.

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

PROPOSAL NO. 3

APPROVAL OF AMENDMENT TO AMENDED AND RESTATED CERTIFICATE OF INCORPORATION TO EFFECT A REVERSE STOCK SPLIT

Overview

Our Board has unanimously approved an amendment to our amended and restated certificate of incorporation to effect a reverse stock split of all outstanding shares of our common stock and preferred stock at an exchange ratio ranging from one-for-three (1:3) to one-for-fifteen (1:15). A similar amendment to effect a reverse stock split at an exchange ratio ranging from one-for-five (1:5) to one-for-fifteen (1:15) was previously approved at the 2009 Annual Meeting of Stockholders; however, the Board has not yet elected to effect the reverse stock split and its authorization to do so expires as of June 18, 2010. You are now being asked to vote again upon an amendment to our amended and restated certificate of incorporation. Should we receive the required stockholder approval, the Board will have the sole authority to elect, at any time prior to the first anniversary of the Annual Meeting:

- whether or not to effect a reverse stock split, and
- if so, the number of whole shares of our common stock and preferred stock, as applicable, between and including three and 15 which will be combined into one share of our common stock or preferred stock, as applicable.

The Board believes that providing the flexibility for the Board to choose an exact split ratio based on then-current market conditions is in the best interests of Sunesis and its stockholders.

The text of the form of proposed amendment to our amended and restated certificate of incorporation is attached to this proxy statement as Annex B. Such form provides that any whole number of outstanding shares between and including three and 15 would be combined into one share of our common stock or preferred stock, as applicable. If approved by the stockholders, and following such approval, the Board determines that a reverse stock split is in the best interests of Sunesis and its stockholders, the reverse stock split will become effective upon filing the amendment with the Secretary of State of the State of Delaware. The amendment will contain the number of shares selected by the Board within the limits set forth in this Proposal No. 3 to be combined into one share of our common stock or preferred stock, as applicable.

Except for adjustments that may result from the treatment of fractional shares as described below, each stockholder will hold the same percentage of our outstanding common stock or preferred stock, as applicable, immediately following the reverse stock split as such stockholder held immediately prior to the reverse stock split.

The par value of Sunesis' common stock and preferred stock would remain unchanged at \$0.0001 per share. The amendment would not change the number of authorized shares of common stock or preferred stock. Accordingly, the reverse stock split will have the effect of creating additional unreserved shares of our authorized common stock and preferred stock. Although at present, apart from the sale of the additional equity securities contemplated by the Private Placement described in "*Certain Relationships and Related Party Transactions—Purchases of Our Securities*" below, we have no other current arrangements or understandings providing for the issuance of the additional shares that would be made available for issuance upon effectiveness of the reverse stock split. These additional shares may be used by us for various purposes in the future without further stockholder approval, including, among other things:

- raising capital to fund our clinical trials and to continue as a going concern;
- establishing strategic relationships with other companies;

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- providing equity incentives to our employees, officers or directors; and
- expanding our business or product lines through the acquisition of other businesses or products.

Certain of our officers and directors have an interest in this reverse split as a result of their ownership of shares of our stock, as set forth in the section entitled “*Security Ownership of Certain Beneficial Owners and Management*” below.

Reasons for the Reverse Stock Split

The Board believes that a reverse stock split may be desirable and should be approved by stockholders for a number of reasons, including:

- *Increase in Eligible Investors.* A reverse stock split would allow a broader range of institutions to invest in our stock (namely, funds that are prohibited from buying stocks whose price is below a certain threshold), potentially increasing the trading volume and liquidity of our common stock.
- *Increased Analyst and Broker Interest.* A reverse stock split would help increase analyst and broker interest in our stock as their policies can discourage them from following or recommending companies with low stock prices. Because of the trading volatility often associated with low-priced stocks, many brokerage houses and institutional investors have adopted internal policies and practices that either prohibit or discourage them from investing in such stocks or recommending them to their customers. Some of those policies and practices may also function to make the processing of trades in low-priced stocks economically unattractive to brokers. Additionally, because brokers’ commissions on transactions in low-priced stocks generally represent a higher percentage of the stock price than commissions on higher-priced stocks, the current average price per share of our common stock can result in individual stockholders paying transaction costs representing a higher percentage of their total share value than would be the case if the share price were substantially higher.
- *Reduced Risk of NASDAQ Delisting.* By potentially increasing our stock price, the reverse stock split would reduce the risk that our stock could be delisted from The NASDAQ Capital Market, which requires, among other things, that issuers maintain a closing bid price of at least \$1.00 per share. We announced on September 18, 2009 that we had received a letter, dated September 16, 2009, from the Listing Qualifications Department of The NASDAQ Stock Market, or the Staff, notifying us that, for 30 consecutive business days, the bid price for our common stock had closed below the minimum \$1.00 per share requirement, or the Bid Price Requirement, for continued inclusion on The NASDAQ Capital Market pursuant to NASDAQ Listing Rules. In accordance with NASDAQ Listing Rules, we were given 180 calendar days, or until March 15, 2010, to regain compliance. To regain compliance, the bid price of our common stock needed to close at or above \$1.00 for at least 10 consecutive business days at any time prior to March 15, 2010, which it did achieve in the 10 consecutive business days ending on December 23, 2009. On December 24, 2009, we received notification from NASDAQ that we had regained compliance with the Bid Price Requirement. However, as of March 30, 2010, the bid price for our common stock had again closed below the Bid Price Requirement for 30 consecutive business days. As a result, on March 31, 2010, we received a letter from the Staff notifying us that we do not satisfy the Bid Price Requirement, and, in accordance with NASDAQ’s Listing Rules, that we will be afforded 180 calendar days, or until September 27, 2010, to regain compliance. If we fail to regain compliance during the grace period, our common stock could be subject to delisting.

[Table of Contents](#)**Effects of the Reverse Stock Split**

Reduction of Shares Held by Individual Stockholders. After the effective date of the proposed reverse stock split, each stockholder will own fewer shares of our common stock or preferred stock, as applicable. However, the proposed reverse stock split will affect all of our stockholders uniformly and will not affect any stockholder's percentage ownership interests in us, except to the extent that the reverse split results in any of our stockholders owning a fractional share as described below. Proportionate voting rights and other rights and preferences of the holders of our common stock or preferred stock, as applicable, will not be affected by the proposed reverse stock split (other than as a result of the payment of cash in lieu of fractional shares as described more fully below). For example, a holder of two percent of the voting power of the outstanding shares of common stock immediately prior to reverse stock split would continue to hold two percent of the voting power of the outstanding shares of common stock immediately after the reverse stock split. The number of stockholders of record will not be affected by the proposed reverse stock split (except to the extent that any stockholder holds only a fractional share interest and receives cash for such interest after the proposed reverse stock split). However, if the proposed reverse stock split is implemented, it will increase the number of stockholders of Sunesis who own "odd lots" of less than 100 shares of our common stock. Brokerage commissions and other costs of transactions in odd lots may be higher than the costs of transactions of more than 100 shares of common stock.

Reduction in Total Outstanding Shares. The proposed reverse stock split will reduce the total number of outstanding shares of common stock and preferred stock by the split ratio determined by the Board within the limits set forth in this Proposal No. 3.

The following table contains approximate information relating to our common stock under certain of the possible split ratios based on share information as of March 31, 2010:

	Pre Reverse Stock Split	1-for-3	1-for-10	1-for-15
Authorized	400,000,000	400,000,000	400,000,000	400,000,000
Outstanding	57,981,195	19,327,065	5,798,119	3,865,413
Reserved for future issuance pursuant to conversion of Series A preferred stock	43,478,120	14,492,706	4,347,812	2,898,541
Reserved for future issuance pursuant to outstanding warrants	36,056,545	12,018,848	3,605,654	2,403,769
Reserved for future issuance pursuant to outstanding awards under equity incentive plans	6,336,170	2,112,056	633,617	422,411
Reserved for future issuance pursuant to awards available for grant under equity incentive plans	2,756,522	918,840	275,652	183,768
Reserved for future issuance pursuant to 2005 Employee Stock Purchase Plan	233,637	77,879	23,363	15,575
Authorized and unreserved	253,157,811	351,052,606	385,315,783	390,210,523

The following table contains approximate information relating to our preferred stock under certain of the possible split ratios based on share information as of March 31, 2010:

	Pre Reverse Stock Split	1-for-3	1-for-10	1-for-15
Authorized	10,000,000	10,000,000	10,000,000	10,000,000
Outstanding	4,347,812	1,449,270	434,781	289,854
Authorized and unreserved	5,652,188	8,550,730	9,565,219	9,710,146

Change in Number and Exercise Price of Employee and Director Equity Awards. The proposed reverse stock split will reduce the number of shares of common stock available for issuance under our equity plans in proportion to the exchange ratio selected by the Board within the limits set forth in this Proposal No. 3. Under the

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terms of our outstanding equity awards, the proposed reverse stock split will cause a reduction in the number of shares of common stock issuable upon exercise or vesting of such awards in proportion to the exchange ratio of the reverse stock split and will cause a proportionate increase in the exercise price of such awards. The number of shares authorized for future issuance under our equity plans will also be proportionately reduced. The number of shares of common stock issuable upon exercise or vesting of outstanding equity awards will be rounded to the nearest whole share and no cash payment will be made in respect of such rounding.

Regulatory Effects. Our common stock is currently registered under Section 12(b) of the Exchange Act, and we are subject to the periodic reporting and other requirements of the Exchange Act. The proposed reverse stock split will not affect the registration of our common stock under the Exchange Act or our obligation to publicly file financial and other information with the SEC. If the proposed reverse stock split is implemented, our common stock will continue to trade on The NASDAQ Capital Market under the symbol “SNSS” (although NASDAQ would likely add the letter “D” to the end of the trading symbol for a period of 20 trading days to indicate that the reverse stock split has occurred), assuming our common stock has not otherwise been delisted due to our failure to comply with the minimum stockholders’ equity continued listing requirement or otherwise.

No Going Private Transaction. Notwithstanding the decrease in the number of outstanding shares following the proposed reverse stock split, the Board does not intend for this transaction to be the first step in a series of plans or proposals of a “going private transaction” within the meaning of Rule 13e-3 of the Exchange Act.

Risks of Proposed Reverse Stock Split

The proposed reverse stock split may not increase our stock price, which would prevent us from realizing some of the anticipated benefits of the reverse stock split.

The Board expects that a reverse stock split of our common stock will increase the market price of our common stock so that we are able to maintain compliance with the NASDAQ minimum bid price listing standard. However, the effect of a reverse stock split upon the market price of our common stock cannot be predicted with any certainty, and the history of similar stock splits for companies in like circumstances is varied. It is possible that the per share price of our common stock after the reverse stock split will not rise in proportion to the reduction in the number of shares of our common stock outstanding resulting from the reverse stock split, and there can be no assurance that the market price per post-reverse split share will either exceed or remain in excess of the \$1.00 minimum bid price for a sustained period of time. The market price of our common stock may also be based on other factors which may be unrelated to the number of shares outstanding, including our future performance. In addition, there can be no assurance that we will not be delisted due to a failure to meet other continued listing requirements, including the minimum stockholders’ equity requirement, even if the market price per post-reverse stock split share of our common stock remains in excess of \$1.00 per share. Notwithstanding the foregoing, the Board would only implement the proposed reverse stock split within the proposed exchange ratio range, if it believed it would result in the market price of our common stock rising to the level necessary to satisfy the \$1.00 minimum bid price requirement for the foreseeable future.

The proposed reverse stock split may decrease the liquidity of our stock.

The liquidity of our capital stock may be harmed by the proposed reverse split given the reduced number of shares that would be outstanding after the reverse stock split, particularly if the stock price does not increase as a result of the reverse stock split.

Board Discretion to Implement the Reverse Stock Split

If the reverse stock split is approved by our stockholders, it will be effected, if at all, only upon a determination by the Board that a reverse stock split is in the best interests of Sunesis and our stockholders. Such determination shall be based upon certain factors, including our then-current stock price, the existing and

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expected marketability and liquidity of our common stock, prevailing market conditions, the likely effect on the market price of our common stock and the desire to continue to meet the continued listing requirements of The NASDAQ Capital Market. Notwithstanding the approval of the reverse stock split by our stockholders, the Board may, in its sole discretion, abandon the proposed amendment to our amended and restated certificate of incorporation and determine not to effect the reverse stock split as permitted under Section 242(c) of the Delaware General Corporation Law. If the Board fails to implement the reverse stock split prior to the one year anniversary of the Annual Meeting, additional stockholder approval would be required prior to implementing any reverse stock split.

Effective Date

The proposed reverse stock split would become effective on the date of filing of a certificate of amendment to our amended and restated certificate of incorporation with the office of the Secretary of State of the State of Delaware. Except as explained below with respect to fractional shares, on the effective date, shares of common stock and preferred stock issued and outstanding immediately prior thereto will be combined and converted, automatically and without any action on the part of the stockholders, into new shares of common stock or preferred stock, as applicable, in accordance with the reverse stock split ratio determined by the Board within the limits set forth in this Proposal No. 3.

Payment for Fractional Shares

No fractional shares of common stock or preferred stock will be issued as a result of the proposed reverse stock split. Instead, stockholders who otherwise would be entitled to receive fractional shares, upon surrender to the exchange agent of such certificates representing such fractional shares, will be entitled to receive cash in an amount equal to the product obtained by multiplying (a) the closing sales price of our common stock on the effective date as reported on The NASDAQ Capital Market by (b) the number of shares of our common stock or preferred stock, as applicable, held by such stockholder that would otherwise have been exchanged for such fractional share interest (on an as-if converted to common stock basis).

Exchange of Stock Certificates

As soon as practicable after the effective date, stockholders will be notified that the reverse stock split has been effected. Our transfer agent will act as exchange agent for purposes of implementing the exchange of stock certificates for record holders (i.e., stockholders who hold their shares directly in their own name and not through a broker). Record holders of pre-reverse split shares will be asked to surrender to the exchange agent certificates representing pre-reverse split shares in exchange for a book entry with the transfer agent or certificates representing post-reverse split shares in accordance with the procedures to be set forth in a letter of transmittal to be sent by us. No new certificates will be issued to a stockholder until such stockholder has surrendered such stockholder's outstanding certificate(s) together with the properly completed and executed letter of transmittal to the exchange agent. STOCKHOLDERS OF RECORD SHOULD NOT DESTROY ANY STOCK CERTIFICATE(S) AND SHOULD NOT SUBMIT ANY CERTIFICATE(S) UNTIL REQUESTED TO DO SO.

For beneficial holders of pre-reverse split shares (i.e., stockholders who hold their shares through a broker), your broker will make the appropriate adjustment to the number of shares held in your account following the effective date of the reverse stock split.

Accounting Consequences

The par value per share of our common stock and preferred stock will remain unchanged at \$0.0001 per share after the reverse stock split. As a result, on the effective date of the reverse split, the stated capital on our consolidated balance sheet attributable to common stock and preferred stock will be reduced and the additional paid-in-capital account will be increased by the amount by which the stated capital is reduced. Per share net

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income or loss will be increased because there will be fewer shares of our common stock and preferred stock outstanding. We do not anticipate that any other accounting consequences, including changes to the amount of stock-based compensation expense to be recognized in any period, will arise as a result of the reverse stock split.

No Appraisal Rights

Under the Delaware General Corporation Law, our stockholders are not entitled to dissenter's rights with respect to the proposed amendment to our amended and restated certificate of incorporation to effect the reverse stock split.

Material Federal U.S. Income Tax Consequences of the Reverse Stock Split

The following is a summary of important tax considerations of the proposed reverse stock split. It addresses only stockholders who hold the pre-reverse split shares and post-reverse split shares as capital assets. It does not purport to be complete and does not address stockholders subject to special rules, such as financial institutions, tax-exempt organizations, insurance companies, dealers in securities, mutual funds, foreign stockholders, stockholders who hold the pre-reverse split shares as part of a straddle, hedge, or conversion transaction, stockholders who hold the pre-reverse split shares as qualified small business stock within the meaning of Section 1202 of the Internal Revenue Code of 1986, as amended, or the Code, stockholders who are subject to the alternative minimum tax provisions of the Code, or stockholders who acquired their pre-reverse split shares pursuant to the exercise of employee stock options or otherwise as compensation. This summary is based upon current law, which may change, possibly even retroactively. It does not address tax considerations under state, local, foreign, and other laws. Furthermore, we have not obtained a ruling from the Internal Revenue Service or an opinion of legal or tax counsel with respect to the consequences of the reverse stock split. Each stockholder is advised to consult his or her tax advisor as to his or her own situation.

The reverse stock split is intended to constitute a reorganization within the meaning of Section 368 of the Code. Assuming the reverse stock split qualifies as a reorganization, a stockholder generally will not recognize gain or loss on the reverse stock split, except to the extent of cash, if any, received in lieu of a fractional share interest in the post-reverse split shares. The aggregate tax basis of the post-reverse split shares received will be equal to the aggregate tax basis of the pre-reverse split shares exchanged therefor (excluding any portion of the holder's basis allocated to fractional shares), and the holding period of the post-reverse split shares received will include the holding period of the pre-reverse split shares exchanged.

A holder of the pre-reverse split shares who receives cash generally will recognize gain or loss equal to the difference between the portion of the tax basis of the pre-reverse split shares allocated to the fractional share interest and the cash received. Such gain or loss will be a capital gain or loss and will be short term if the pre-reverse split shares were held for one year or less and long term if held more than one year. No gain or loss will be recognized by Sunesis as a result of the reverse stock split.

Required Vote and Recommendation of the Board of Directors

Approval and adoption of an amendment to our amended and restated certificate of incorporation to effect the reverse stock split requires the affirmative vote of at least a majority of Sunesis' issued and outstanding shares of common stock and preferred stock entitled to vote either in person or by proxy at the Annual Meeting. If you ABSTAIN from voting, it will be counted towards the tabulation of votes cast on the proposal and will have the same effect as an AGAINST vote.

**THE BOARD OF DIRECTORS RECOMMENDS
A VOTE *FOR* PROPOSAL NO. 3.**

INFORMATION ABOUT THE BOARD OF DIRECTORS AND CORPORATE GOVERNANCE

Meetings of the Board of Directors

Our Board held nine meetings during 2009. Each Board member attended 75% or more of the aggregate meetings of the Board and of the committees on which he or she served, with the exception of Steven D. Goldby, who attended two out of three meetings of each of the Board and Audit Committee prior to his resignation from the Board in April 2009.

Independence of the Members of the Board of Directors

The laws and rules governing public companies and the 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. 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 addition, the Board has affirmatively determined that each of Jonathan S. Leff and Anthony B. Evnin, Ph.D., Stephen P.A. Fodor, Ph.D. and Steven D. Goldby were independent directors within the meaning of the applicable NASDAQ requirements until their respective resignations from the Board in February 2009 and April 2009.

In making its determination of independence, the Board considered our consulting relationships with Drs. Pearce and Stump and 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 25 of this proxy statement. In 2009, neither Dr. Pearce nor Dr. Stump received consulting fees pursuant to these arrangements. Our Board does not believe that these stockholder 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 Chair, 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 Chair has substantial ability to shape the work of the Board. We believe that separation of the positions of Board Chair and Chief Executive Officer 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 Chair separate from the Chief Executive Officer can enhance the effectiveness of the Board as a whole. In addition, Dr. Young's recent position as Executive Chairman helps ensure that the Board and management act with a common purpose. In our view, having a Board Chair 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 recent 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 Chair with extensive history and knowledge of Sunesis (as is the case with Dr. Young).

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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 Board standing committees 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 our ability to raise additional capital to fund our clinical trials and operations, and the various risks associated with the development of voreloxin. 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 voreloxin, 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 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 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.

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 2009.

Information Regarding Committees of the Board of Directors

Our Board has three standing committees: the Audit Committee; the Compensation Committee; and the Nominating and Corporate Governance 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 2009 for each of the committees of the Board:

<u>Name(1)</u>	<u>Audit</u>	<u>Compensation</u>	<u>Nominating and Corporate Governance</u>
Anthony B. Evnin, Ph.D.	X**	X**	
Stephen P.A. Fodor, Ph.D.			X**
Matthew K. Fust(2)(3)	X*	X	X**
Steven D. Goldby	X**	X**	
Edward Hurwitz	X	X	
Jonathan S. Leff		X**	
Dayton Misfeldt(3)		X*	X
Homer L. Pearce, Ph.D.(4)			X*
David C. Stump, M.D.	X		
Total Meetings in 2009	9	8	1

* Committee Chairperson.

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** Former Committee member.

- (1) Ms. Kim was not a member of any Board committee in 2009.
- (2) On April 3, 2009, Mr. Fust was appointed as a member of the Compensation Committee.
- (3) On April 3, 2009, Mr. Fust resigned as a member of the Nominating and Corporate Governance Committee and Mr. Misfeldt was appointed as a member of such Committee.
- (4) On April 3, 2009, Dr. Pearce was appointed chairman of the Nominating and Corporate Governance 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 assesses their own performance. In addition, the Board, through the Nominating and Corporate Governance 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;

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- 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 Mr. Hurwitz and Dr. Stump. 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

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 2009, 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, 2009 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 Ernst & Young, 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 (“*Codification of Statements on Auditing Standards*,” AICPA, *Professional Standards*, Vol. 1. AU section 380), 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, 2009.

Matthew K. Fust, *Chairperson*
Edward Hurwitz
David C. Stump, M.D.

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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.

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;
- preparing the report required by SEC rules to be included in our annual proxy statement, if required;
- 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; and
- determining and approving the compensation and establishing the individual performance objectives relevant to compensation of our CEO, Executive Chairman (if one is serving), as well as for our other executive officers and senior management.

The Compensation Committee is chaired by Mr. Misfeldt, and also includes Messrs. Hurwitz and Fust. All members of our Compensation Committee are “independent” (as independence is currently defined in Rule 5605(c)(2)(A)(i) and (ii) 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 Securities Exchange Act of 1934, as amended, or the Exchange Act.

Role and Authority of the Compensation Committee and the Board

Prior to December 2007, the Compensation Committee was 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 December 2007, the Board approved certain amendments to the Compensation Committee Charter, including a change which requires full Board approval of the compensation of our CEO and Executive Chairman, based upon recommendations from the Compensation Committee. As a result, beginning in 2008, decisions regarding the compensation of the CEO and Executive Chairman were made by the full Board. In May 2009, the Board approved certain amendments to the Compensation Committee Charter to provide that decisions regarding the compensation of the CEO and Executive Chairman, if one is serving, will be made by the Compensation Committee.

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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, and, in the case of our CEO and Executive Chairman from December 2007 through May 2009, the Board was, 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.

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 compensation process for the upcoming year generally begins in the prior 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.

Analyze Peer Data; Make Equity Awards. Annually, a representative of management 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.

Approve Corporate Objectives for the Coming Year. The Compensation Committee typically meets to select the corporate objectives against which to measure executive performance for the coming year and to recommend such objectives to the full Board for adoption. In addition, the Compensation Committee reviews and approves individual performance goals and objectives for our executive officers.

Assess Prior Year's Performance; Determine Cash 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 payouts of cash bonuses for executives (other than himself and our Executive Chairman, during the period in which he was an employee) in light of the analysis of the prior year's performance.

Following our private placement in April 2009 and the reconstitution of the Compensation Committee in May 2009, the Compensation Committee reviewed and approved both corporate and individual performance objectives for the period from May 8, 2009 to March 31, 2010, or the Performance Period, that will form the basis for the evaluation of cash bonuses to be paid to employees for this period under the 2009 Bonus Program.

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The Compensation Committee also approved a resolution to recommend such performance objectives to the Board for approval. These performance objectives were approved by the Board. On March 31, 2010, the Compensation Committee agreed to extend the Performance Period to April 30, 2010. See section titled *Narrative to Summary Compensation Table—2009 Bonus Program* below for more information regarding our 2009 Bonus Program.

Determine Base Salary, Bonus Target and Individual Objectives for the Coming Year. Each year, the Compensation Committee generally meets to discuss and, as appropriate, approve adjustments to base salary and bonus targets for executives for the coming year.

In 2010, due to the atypical Performance Period under the 2009 Bonus Program, which ends more than a quarter after the fiscal year end, this meeting is expected to occur in May 2010. 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 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, including base salary, bonus and equity compensation and approval of individual objectives for the applicable new performance period.

Nominating and Corporate Governance Committee

Our Nominating and Corporate Governance 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 and Corporate Governance Committee is chaired by Dr. Pearce and also includes Mr. Misfeldt, each of whom is "independent" within the meaning of applicable SEC and NASDAQ rules.

Director Nominations Process

The Nominating and Corporate Governance Committee is charged with monitoring the size and composition of our Board. In addition, the Nominating and Corporate Governance Committee has primary responsibility for reviewing, evaluating and recommending to the Board the slate of nominees for directors 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 and Corporate Governance 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 and Corporate Governance 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 and Corporate Governance 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 and Corporate Governance 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 and Corporate Governance Committee decides not to nominate a member for re-election, or if the Nominating and Corporate Governance Committee wishes to increase the size of the Board, the committee will identify the desired skills and experience of a new nominee as outlined above unless the Board determines not to fill the vacancy. In 2009, 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 and Corporate Governance 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 and Corporate Governance 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 and Corporate Governance Committee will also conduct any necessary or appropriate inquiries into the backgrounds and qualifications of such candidates. The committee also believes

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that it is essential that directors represent diverse viewpoints, and thus diversity is typically another factor that the committee takes into account in identifying and evaluating candidates.

In addition, in connection with the initial closing of the Private Placement, the Company entered into an Investor Rights Agreement, pursuant to which the investors in the Private Placement have certain Board designation rights, as further described in "*Certain Relationships and Related Party Transactions—Investor Rights Agreement*." These designation rights may cause the composition of the Board to be different than it would have been without such designation rights, and may impact the retention of current members or the selection of future members of the Board.

The Nominating and Corporate Governance 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 chairperson 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 and Corporate Governance 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 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 and Corporate Governance Committee did not receive any stockholder nominations during 2009.

Director Evaluations

On an annual basis, the Nominating and Corporate Governance 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.

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Annual Meeting Attendance

In March 2008, we adopted a policy to encourage our directors to attend our annual stockholder meetings. In 2009, Mr. Swisher attended our annual meeting.

Corporate Governance Guidelines

In April 2004, the Board 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, 2009, 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

On the date of our annual meeting of stockholders each year, each non-employee director of our Board, except the Chairman of our Board, is entitled to receive \$20,000 in connection with his or her services as a director. A non-employee Chairman of our Board is entitled to receive \$50,000 in connection with his or her services as a director and chair of our Board. Additionally, each non-employee director who serves on a committee is entitled to receive an annual payment of \$5,000 for service as chairman of a committee and \$3,000 for service as a member on a committee. However, Messrs. Hurwitz and Misfeldt directors waived their cash compensation in 2009. Our chief executive officer did not receive any compensation in 2009 for his service on our Board, nor did our Chairman while his status was that of an employee.

Each continuing non-employee director receives a non-qualified stock option grant to purchase 10,000 shares of our common stock on the date of our annual meeting of stockholders each year. These options vest in equal installments over a 12-month period from the grant date. On July 31, 2009, the Compensation Committee elected to grant to each of Mr. Fust and Drs. Young, Pearce and Stump an additional non-qualified stock option to purchase 90,000 shares and grant Ms. Kim a non-qualified stock option to purchase 70,000 shares with vesting in equal installments over a 12-month period measured from the grant date, given the significant dilution in our capital

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stock and the desire to continue to create long term incentives for these non-employee Board members. The Compensation Committee has yet to determine whether it will make any discretionary grants of stock options for non-employee directors in 2010. Upon first being elected to our Board, non-employee directors are granted, in addition to the Board and committee fees discussed above, an initial grant of non-qualified stock options to purchase 30,000 shares of our common stock. These options vest over a two-year period, with 50% annual vesting on each anniversary of the grant date.

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 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.

Director Compensation Table

The following table sets forth the compensation information for our non-employee directors, as well as Dr. Young, the current Chairman of our Board and former Executive Chairman, for the year ended December 31, 2009. The compensation received by Mr. Swisher, as a named executive officer, is set forth in the "Summary Compensation Table" on page 29 of this proxy statement.

<u>Name</u>	<u>Fees Earned or Paid in Cash (\$)(1)</u>	<u>Option Awards (\$)(2)(3)</u>	<u>All Other Compensation (\$)</u>	<u>Total (\$)</u>
Anthony B. Evnin, Ph.D.(4)	\$ —	\$ —	\$ —	\$ —
Stephen P.A. Fodor, Ph.D.(5)	—	—	—	—
Matthew K. Fust	28,000	26,684	—	54,684
Steven D. Goldby(6)	—	—	—	—
Edward Hurwitz(7)	—	6,149	—	6,149
Helen S. Kim(8)	—	25,602	—	25,602
Jonathan S. Leff(9)	—	—	—	—
Dayton Misfeldt(10)	—	6,149	—	6,149
Homer L. Pearce, Ph.D.	25,000	26,684	—	51,684
David C. Stump M.D.	23,000	26,684	—	49,684
James W. Young, Ph.D.(11)	50,000	26,684	53,828	130,512

- (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 our equity compensation plans in the year ended December 31, 2009. 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, 2009 which identifies assumptions made in the valuation of option awards in accordance with FASB ASC Topic 718.

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- (3) On June 18, 2009, each non-employee director received a stock option to purchase 10,000 shares. The aggregate grant date fair value of each such option award was \$2,384, calculated in accordance with FASB ASC Topic 718. On July 31, 2009, each non-employee director who had served for at least one year received a stock option to purchase 90,000 shares, each with an aggregate grant date fair value of \$24,300, and each non-employee director who had served for less than one year received a stock option to purchase 70,000 shares, each with an aggregate grant date fair value of \$18,900. However, Messrs. Hurwitz and Misfeldt each waived their respective July 31, 2009 grant. As of December 31, 2009, 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 160,000 shares of our common stock; Mr. Hurwitz held options to purchase 40,000 shares of our common stock; Ms. Kim held options to purchase 100,000 shares of our common stock; Mr. Misfeldt held options to purchase 40,000 shares of our common stock; and Drs. Pearce and Stump each held options to purchase 150,000 shares of our common stock. In addition, Drs. Evinin and Fodor and Mr. Goldby each held options to purchase 27,500 shares of our common stock and Mr. Leff held options to purchase 25,833 shares of our common stock as of December 31, 2009.
- (4) Dr. Evinin resigned effective as of April 3, 2009.
- (5) Dr. Fodor resigned effective as of April 3, 2009.
- (6) Mr. Goldby resigned effective as of April 3, 2009.
- (7) Mr. Hurwitz was appointed to the Board on April 3, 2009. Upon his appointment, he was automatically granted a stock option to purchase 30,000 shares, with an aggregate grant date fair value of \$3,765.
- (8) Ms. Kim was appointed to the Board on July 24, 2009. Upon her appointment, she was automatically granted a stock option to purchase 30,000 shares, with an aggregate grant date fair value of \$6,702.
- (9) Mr. Leff resigned effective as of February 3, 2009.
- (10) Mr. Misfeldt was appointed to the Board on April 3, 2009. Upon his appointment, he was automatically granted a stock option to purchase 30,000 shares, with an aggregate grant date fair value of \$3,765.
- (11) Until April 2009, Dr. Young served as our Executive Chairman. As noted above, Dr. Young did not receive any compensation for his service on our Board while also serving as an employee. "All Other Compensation" includes the portion of Dr. Young's annual salary paid by us prior to his resignation as Executive Chairman, \$52,273, as well as \$1,556 in group term life insurance premiums and \$2,500 in profit sharing contributions paid by us. As of December 31, 2009, Dr. Young held stock options to purchase 429,118 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 31, 2010. Biographical information with regard to Mr. Swisher is presented under *Proposal No. 1: Election of Nominees to the Board of Directors* on page 5 of this proxy statement.

<u>Name</u>	<u>Age</u>	<u>Position</u>
Daniel N. Swisher, Jr.	47	CEO, President and Director
Eric H. Bjerkholt	50	Senior Vice President, Corporate Development and Finance and Chief Financial Officer
Steven B. Ketchum, Ph.D.	45	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 has served as our Senior Vice President, Corporate Development and Finance and Chief Financial Officer since February 2007. 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.

Steven B. Ketchum, Ph.D. has served as our Senior Vice President, Research and Development since June 2008. 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.

EXECUTIVE COMPENSATION AND RELATED INFORMATION

Summary Compensation Table

The following table sets forth the compensation information for our CEO and our two most highly compensated executive officers other than our CEO who were serving as executive officers as of December 31, 2009, as well as one former executive officer who would have qualified as our most highly compensated executive officer during 2009, but was no longer serving as an executive officer as of December 31, 2009. Such individuals are referred to as our “named executive officers,” or NEOs, for the year ended December 31, 2009. All compensation awarded to, earned by, or paid to our NEOs are included in the table below for the years indicated.

<u>Name and Principal Position</u>	<u>Year</u>	<u>Salary(1)</u> <u>(\$)</u>	<u>Bonus</u> <u>(\$)</u>	<u>Option</u> <u>Awards</u> <u>(\$)(2)</u>	<u>All Other</u> <u>Compensation</u> <u>(\$)</u>	<u>Total</u> <u>(\$)</u>
Daniel N. Swisher, Jr.	2009	\$405,000	\$ —(3)	\$241,950	\$ 6,450(4)	\$653,400
<i>Chief Executive Officer and President</i>	2008	403,125	—(3)	—	930(5)	404,055
Eric H. Bjerkholt	2009	340,000	—(3)	145,170	5,966(6)	491,136
<i>Senior Vice President, Corporate Development and Finance, Chief Financial Officer and Corporate Secretary</i>	2008	321,458	—(3)	59,380	930(5)	381,768
Steven B. Ketchum, Ph.D.	2009	360,000	100,000(3)(7)	145,170	137,280(8)	742,450
<i>Senior Vice President, Research and Development</i>	2008	210,000	50,000(9)	131,955	55,783(10)	447,738
Valerie L. Pierce(11)	2009	95,303	—	—	257,072(12)	352,803
<i>Former Senior Vice President, General Counsel and Corporate Secretary</i>	2008	318,958	—	59,380	630(13)	378,968

- (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 Internal Revenue Code of 1986, as amended, or 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, 2009. 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, 2009 which identifies assumptions made in the valuation of option awards in accordance with FASB ASC Topic 718.
- (3) We anticipate that cash bonuses earned for performance in 2009 pursuant to our amended and restated 2009 Bonus Program will be determined no later than July 31, 2010. See “*Narrative to Summary Compensation Table—2009 Bonus Program*” below for the terms of our 2009 Bonus Program.
- (4) Consists of \$630 in group term life insurance premiums, \$420 for health club membership reimbursement, \$400 for airline club fees, \$2,500 in matching 401(k) plan contributions and \$2,500 in profit sharing contributions paid by us.
- (5) Consists of \$630 in group term life insurance premiums and \$300 for airline club fees.

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- (6) Consists of \$966 in group term life insurance premiums, \$2,500 in matching 401(k) plan contributions and \$2,500 in profit sharing contributions paid by us.
- (7) Includes \$50,000 paid as a signing bonus to Dr. Ketchum pursuant to his offer letter and \$50,000 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.
- (8) Consists of \$131,650 in housing allowances, \$630 in group term life insurance premiums, \$2,500 in matching 401(k) plan contributions and \$2,500 in profit sharing contributions paid by us.
- (9) Consists of a \$50,000 signing bonus paid to Dr. Ketchum pursuant to the terms of his offer letter. See "*Narrative to Summary Compensation Table—Offer Letter to Dr. Ketchum*" below.
- (10) Consists of \$55,538 in housing allowances and \$245 in group term life insurance premiums.
- (11) Ms. Pierce's employment terminated as of April 10, 2009.
- (12) Consists of \$272,572 in severance payments, representing \$255,000 of continuing base salary and \$17,572 of continuing health benefits, and \$2,500 in profit sharing contributions paid by us.
- (13) Consists of group term life insurance premiums.

Narrative to Summary Compensation Table

Offer Letter to Dr. Ketchum

Pursuant to Dr. Ketchum's offer letter, dated June 2, 2008, we agreed to pay Dr. Ketchum a \$100,000 signing bonus payable in two installments. The first installment of \$50,000 of Dr. Ketchum's signing bonus was paid in 2008, which amount is reflected in the "Bonus" column for the year ended December 31, 2008 of the *Summary Compensation Table* above. The second installment of \$50,000 of Dr. Ketchum's signing bonus was paid in 2009, as well as an additional \$50,000 bonus paid to Dr. Ketchum 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 for the year ended December 31, 2009 of the *Summary Compensation Table*.

2009 Cash Bonus Program

In May 2009, the Board of Sunesis Pharmaceuticals, Inc. approved our 2009 Bonus Program that provides 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 remain an employee through the payment date under the program to earn a cash bonus.

The program originally provided that the closing of a financing or corporate transaction with net proceeds of \$20 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 does not equal or exceed \$25 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 will be earned under the program regardless of whether the corporate objectives and/or individual objectives are deemed to be achieved by the Compensation Committee. The Compensation Committee shall determine in its sole discretion whether the Cash Balance Threshold has been achieved.

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

Each eligible participant in the 2009 Bonus Program may receive a cash bonus in an amount up to a specified percentage of such participant's annual base salary earned in 2009, or the Bonus Targets. The Bonus Targets range from 25% to 40% of a participant's 2009 base salary for Vice President level employees and above and from 6% to 20% of a participant's 2009 base salary for other participants. The bonus target percentage and bonus target amount for each of our NEOs are as follows:

<u>Named Executive Officer</u>	<u>Bonus Target Percentage</u>	<u>Bonus Target Amount</u>
Daniel N. Swisher, Jr. <i>President and Chief Executive Officer</i>	40%	\$ 162,000
Eric H. Bjerkholt <i>Senior Vice President, Corporate Development and Finance, Chief Financial Officer and Corporate Secretary</i>	30%	\$ 102,000
Steven B. Ketchum, Ph.D. <i>Senior Vice President, Research and Development</i>	30%	\$ 108,000

The Compensation Committee shall determine the degree to which the corporate objectives have been met after receiving the analysis and recommendations of management. Based on such determination, the Compensation Committee will adjust these bonus targets.

The Compensation Committee shall also determine the level of achievement of the individual objectives by our chief executive officer based on its evaluation of the chief executive officer's achievements and by the remaining executive officers based on the recommendations of the chief executive officer. Achievement of the individual objectives by non-executive participants shall be determined by the executive committee with input from team leaders, department heads or supervisors, as appropriate.

There is no set formula for determining the amount of bonus earned under the program based on the achievement of the corporate and individual objectives. Rather, the Compensation Committee will exercise its discretion in determining the amount of cash bonus actually earned, which determination will be final and binding. Payment under the program is expected to occur upon the later of (a) the first quarter following April 30, 2010 or (b) within fifteen (15) business after our cash balance exceeds the Cash Balance Threshold, on such date as determined by the Compensation Committee in its sole discretion.

Stock Option Grants in 2009

See "Outstanding Equity Awards Table at December 31, 2009" below for the terms of the stock options granted to certain of our NEOs in 2009.

Severance Payments in 2009

See "Post-Termination Compensation—Executive Severance Benefits Agreements" below regarding severance payments made to certain of our NEOs in 2009.

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Outstanding Equity Awards Table at December 31, 2009

The following information sets forth the outstanding stock options held by our NEOs as of December 31, 2009. As of December 31, 2009, none of our NEOs held unearned equity incentive awards or stock awards.

Name	Option Awards			
	Number of Securities Underlying Unexercised Options (#)	Number of Securities Underlying Unexercised Options (#)	Option Exercise Price (\$)	Option Expiration Date
	Exercisable	Unexercisable		
Daniel N. Swisher, Jr.	129,412	—	\$ 2.55	02/06/12
	47,059	—	2.55	04/16/13
	70,589	—	2.55	01/21/14
	21,176	—	2.55	06/24/14
	235,000	—	5.25	11/29/15
	95,000(1)	25,000(1)	4.85	10/13/16
	87,187(2)	67,813(2)	2.59	09/13/17
	62,500(3)	687,500(3)	0.49	08/31/19
Eric H. Bjerkholt	58,824	—	2.55	01/21/14
	17,647	—	2.55	06/09/14
	120,000	—	5.25	11/29/15
	47,500(1)	12,500(1)	4.85	10/13/16
	50,625(2)	39,375(2)	2.59	09/13/17
	25,312(4)	42,188(4)	1.44	06/30/18
	37,500(3)	412,500(3)	0.49	08/31/19
Steven B. Ketchum, Ph.D.	52,500(5)	87,500(5)	1.44	06/30/18
	3,750(6)	6,250(6)		
	37,500(3)	412,500(3)	0.49	08/31/19
Valerie L. Pierce	—	—	—	—

- (1) This stock option was granted on October 13, 2006 pursuant to our 2005 Equity Incentive Award 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 September 13, 2007 pursuant to our 2005 Equity Incentive Award 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 August 31, 2009 pursuant to our 2005 Equity Incentive Award 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 Equity Incentive Award Plan and vests monthly during the 48-month period measured from the grant date, subject to the holder's continued service with Sunesis.
- (5) This stock option was granted on June 30, 2008 pursuant to our 2006 Employment Commencement Incentive 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.

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- (6) This stock option was granted on June 30, 2008 pursuant to our 2005 Equity Incentive Award 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

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. In the event that Mr. Swisher is terminated by an acquirer within six months after a change of control transaction, the above-described severance benefits payable in the event Mr. Swisher is terminated without cause or constructively terminated would be reduced on a dollar-for-dollar basis by the amount paid or payable to Mr. Swisher pursuant to the Change of Control Payment Plan, as detailed in the "Change of Control Payment Plan" section below. 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 and Dr. Ketchum. Under the respective executive severance benefits agreements with Mr. Bjerkholt and Dr. Ketchum, if such executive is terminated without cause or is constructively terminated, each 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. In the event that Mr. Bjerkholt or Dr. Ketchum, as the case may be, is terminated by an acquirer within six months after a change of control transaction, the above-described severance benefits payable in the event the executive is terminated without cause or constructively terminated would be reduced on a dollar-for-dollar basis by the amount paid or payable to the executive pursuant to the Change of Control Payment Plan. Under Mr. Bjerkholt's and Dr. Ketchum's respective executive severance benefits agreements, they 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 and Dr. Ketchum, in connection with a change of control of Sunesis, the vesting of 50% 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% of our voting stock, as well as the

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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% 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% excise tax imposed by Section 4999 of the Internal Revenue Code of 1986, or 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.

Ms. Pierce. The employment of Ms. Pierce terminated on April 10, 2009. Ms. Pierce received the following severance benefits pursuant to her executive severance benefits agreement with Sunesis in connection with the termination of her employment:

<u>Name</u>	<u>Cash Severance (\$)</u>	<u>Health Benefits (\$)</u>
Valerie L. Pierce	\$255,000(1)	\$20,043(2)

- (1) Represents nine months of base salary at time of termination.
- (2) Represents nine months of health care benefits.

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% 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 year ended December 31, 2009, 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.

Medical Benefits

On April 3, 2009, Dr. Young retired as our Executive Chairman. In connection with his resignation, we agreed to cover Dr. Young's medical benefits for a period of 12 months; however, Dr. Young is not otherwise entitled to any severance in connection with his resignation pursuant to the terms of his Second Amended and Restated Executive Severance Benefits Agreement with us, dated December 23, 2008.

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Change of Control Benefits

Change of Control Payment Plan

On April 3, 2009, we adopted a Change of Control Payment Plan, or the Plan, pursuant to which 10.5% to 12.0% of the transaction value, or the Plan Pool, of a change of control transaction of Sunesis would be allocated to our eligible employees, including our NEOs remaining employed by Sunesis, pursuant to the terms of such Plan. The aggregate proceeds available for distribution to eligible employees under the Plan are as follows:

<u>Transaction Value</u>	<u>Aggregate Plan Pool (%)</u>
≤\$30 million	10.5%
>\$30 million but less than \$45 million	11.0
□\$45 million but less than \$60 million	11.5
□\$60 million	12.0

In order for an employee to be eligible to participate in the Plan, the individual must be a full-time regular U.S. employee and designated in writing by our Board, subject to certain limitations. Each participant shall be allocated a percentage of the Plan Pool. The percentage allocations of the Plan Pool for our executive officers are as follows:

<u>Title of Executive Officer</u>	<u>Pro Rata Share (%)</u>
Chairman of the Board of Directors	3.0%
Chief Executive Officer	20.0
Senior Vice Presidents	12.5 each, 25.0 in the aggregate

Our other employees are also eligible to participate in the Plan. If the number of employees at a level of Vice President or higher participating in the Plan changes after April 3, 2009, the Plan Pool allocations shown above shall be reallocated by the Compensation Committee on a pro rata basis without increasing or decreasing the aggregate Plan Pool. If there are significant decreases in the number of eligible employees below the level of Vice President, the Compensation Committee, in its sole discretion but considering the recommendation of our CEO, may reallocate a portion of the Plan Pool to other allocation categories (including those at or above the level of Vice President) without increasing or decreasing the aggregate Plan Pool.

If a change of control occurs, a participant in the Plan shall receive, in exchange for a general release of claims against us, a payment under the Plan in the same consideration received by us or our stockholders in the transaction if the participant is still an eligible employee on the date that payments pursuant to the Plan are scheduled to be made, and any cash severance payments owed by us in the future to the participant on account of a termination by us without cause or a constructive termination by us within six months following the change of control transaction under any severance agreement shall be reduced on a dollar-for-dollar basis by any payments pursuant to the Plan. If the participant has been terminated by us without cause or constructively terminated by us at the time payments under the Plan are scheduled to be made, we shall still provide the participant with such participant's allocated portion of the Plan Pool, but any cash severance payments otherwise payable to the participant by us shall be reduced on a dollar-for-dollar basis by such allocated portion of the Plan Pool, which shall be paid in cash to the extent of the cash severance payments that have been so reduced. The application of the Plan to amounts that are paid from escrow or pursuant to earn-out or other contingencies shall be determined at a future date in the sole discretion of our Board, recognizing that it is the present intention of our Board to apply the Plan to such amounts in the same manner as it applies to amounts payable immediately upon the effective date of the change of control, subject, however, to the requirements for either compliance with or exemption from Section 409A of the Code.

In general, a "change of control" under the Plan includes an acquisition transaction in which a person or entity (with certain exceptions) becomes the direct or indirect beneficial owner of more than 50% of our voting

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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% 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 Plan.

The Plan shall remain in effect until the earlier of the conclusion of a change of control transaction and payout under the Plan or six months after the earlier of (a) the common equity closing of the Private Placement (see "*Purchases of Our Securities*" below), or (b) the conversion of our outstanding shares of Series A preferred stock; provided, however, that our obligation to make payments pursuant to a change of control transaction that occurs on or prior to such termination shall be unaffected by such termination. We reserve the right to amend or terminate the Plan at any time, subject to the consent of any adversely affected participant.

Change of Control Equity Incentive Plan Protections

Our 1998 Stock Plan and our 2001 Stock 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 Equity Incentive Award Plan, or 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% 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 Stock Plan and 2001 Stock 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 Stock Plan and 2001 Stock Plan were amended to reflect identical change in control provisions.

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

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, 2009 and 2008 for each of the following categories of professional services:

Fee Category	Year Ended December 31,	
	2009	2008
Audit fees(1)	\$ 309,729	\$ 320,872
Audit-related fees(2)	40,000	—
Tax fees	—	—
Other fees(3)	—	1,320
Total fees	<u>\$ 349,729</u>	<u>\$ 322,192</u>

- (1) Audit fees for 2009 and 2008 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 comfort letters and consents.
- (2) Audit-related fees in 2009 were for accounting consultations related to the Private Placement.
- (3) Other fees in 2008 were for a subscription to Ernst & Young's online accounting research tool.

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 2009 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

We have 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 contemplates 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 at the initial closing on April 3, 2009 and \$5.0 million in units were sold at the second closing on October 30, 2009. The participation in the Private Placement by some of our executive officers was approved by the Audit Committee.

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The shares of Series A preferred stock and warrants to purchase common stock set forth in the table below were issued and sold in the initial and second closings of the Private Placement held on April 3, 2009 and October 30, 2009, respectively, to entities affiliated with certain of our executive officers and directors. 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.

Investor	Executive Officer or Director Affiliation (if any)	Series A Preferred Stock	Warrants	Amount Invested as of December 31, 2009 (\$)	Total Participation Amount (\$)(1)
Entities affiliated with Bay City Capital	Dayton Misfeldt	999,499(2)	9,994,990(3)	\$3,448,276	\$10,000,000
Growth Equity Opportunities Fund, LLC	Helen S. Kim	999,499(4)	9,994,990	3,448,276	10,000,000
Entities affiliated with Alta Partners	Ed Hurwitz	499,747(5)	4,997,470(6)	1,724,138	5,000,000
Swisher Revocable Trust	Daniel N. Swisher, Jr.	19,989	199,890	68,962	200,000
Bjerkholt / Hahn Family Trust	Eric H. Bjerkholt	9,994	99,940	34,479	100,000
Steven B. Ketchum, Ph.D.	Self	9,994	99,940	34,479	100,000

- (1) Reflects the total dollars that such entities and individual could invest in the aggregate in the Private Placement.
- (2) Consists of (i) 980,809 shares purchased by Bay City Capital Fund V, L.P. and (ii) 18,690 shares purchased by Bay City Capital Fund V Co-Investment Fund, L.P. In addition, entities affiliated with Bay City Capital may participate in the subsequent closing of the Private Placement with an additional investment of up to approximately \$6,551,724. 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.
- (3) Consists of warrants to purchase (i) 9,808,090 shares of common stock purchased by Bay City Capital Fund V, L.P. and (ii) 186,900 shares of common stock purchased by Bay City Capital Fund V Co-Investment Fund, L.P.
- (4) Growth Equity Opportunities Fund, LLC, or GEO, may participate in the subsequent closing of the Private Placement with an additional investment of up to approximately \$6,551,724. In connection with the Private Placement and following the initial closing, Helen S. Kim was appointed to our Board as a designee of 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) 457,728 shares purchased by Alta BioPharma Partners III, L.P., (ii) 30,739 shares purchased by Alta BioPharma Partners III GmbH & Co. Beteiligungs KG, and (iii) 11,280 shares purchased by Alta Embarcadero BioPharma Partners III, LLC. In addition, the entities affiliated with Alta Partners may participate in the subsequent closings of the Private Placement with an additional investment of up to approximately \$3,275,862. 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 warrants to purchase (i) 4,577,280 shares of common stock purchased by Alta BioPharma Partners III, L.P., (ii) 307,390 shares of common stock purchased by Alta BioPharma Partners III GmbH & Co. Beteiligungs KG, and (iii) 112,800 shares of common stock purchased by Alta Embarcadero BioPharma Partners III, LLC.

Investor Rights Agreements

Eighth Amended and Restated Investor Rights Agreement

We have entered into an Eighth Amended and Restated Investor Rights Agreement, dated August 30, 2004 and as subsequently amended, with the prior holders of our convertible preferred stock and certain holders of warrants to purchase convertible preferred stock, including entities with which certain of our directors are affiliated. The parties to the Eight Amended and Restated Investor Rights Agreement were entitled to certain rights with respect to the registration of their shares pursuant to the terms and conditions of such agreement; however, all registration rights under this agreement terminated on or about May 4, 2009. These registration rights were waived with respect to the issuance of our securities contemplated by the Private Placement.

Investor Rights Agreement

In connection with the initial closing of the Private Placement, we entered into an Investor Rights Agreement on April 3, 2009, as amended, with the investors in 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. As of March 31, 2010, the holders of 4,347,812 shares of our preferred stock, 1,096,219 shares of common stock issued upon the exercise of warrants, and 33,416,500 shares of common stock issuable upon the exercise of outstanding warrants are entitled to certain rights with respect to the registration of their shares pursuant to the terms and conditions of such agreement.

Pursuant to the Investor Rights Agreement, we also granted to the investors certain rights of first refusal with respect to certain future issuances of our securities as long as they continue to hold Series A Preferred Stock, including as part of a future equity financing, subject to customary exclusions. If we determine to issue any such securities not subject to such exceptions, then we must provide notice and an offer to sell the securities to the purchasing stockholders a pro rata amount of such securities on the same terms as we propose to sell such securities to other investors, based on such investors' respective percentage ownership of our outstanding common stock, calculated as if all shares of Series A preferred stock (including any dividends thereon) had been converted into shares of common stock immediately following the original issuance of our Series A preferred stock.

The Investor Rights Agreement also includes 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 the holders of a majority of the Series A preferred stock have the right to designate, and we are 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 Growth Equity Opportunities Fund, LLC, or GEO, together with their respective affiliates, each have 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. From May 1, 2010, investors holding a majority-in-interest of our Series A preferred stock are entitled to designate, and we will be required to nominate, five members to our Board. Alta, Bay City Capital and GEO, together with their respective affiliates, would each have the right to designate one such investor designee.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth, as of March 31, 2010, information regarding beneficial ownership of our common stock by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% 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 or exercisable within 60 days of March 31, 2010. Shares of common stock subject to stock options and warrants currently exercisable or exercisable within 60 days of March 31, 2010 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 57,981,195 shares of common stock outstanding and 4,347,812 shares of Series A preferred stock outstanding, or an aggregate of 101,459,315 shares of capital stock (on an as-if-converted to common stock basis), as of March 31, 2010. 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.

Name of Beneficial Owner	Beneficial Ownership(1)				Percentage of Capital Stock Beneficially Owned (on an as-if-converted basis) (%)
	Shares of Common Stock Beneficially Owned (#)(2)	Percentage of Common Stock Beneficially Owned (%)	Shares of Preferred Stock Beneficially Owned (#)	Percentage of Preferred Stock Beneficially Owned (%)	
5% Stockholders:					
Entities affiliated with Alta Partners(3)	5,577,209	8.8%	499,747	11.5%	9.9
Entities affiliated with Bay City Capital(4)	10,004,081	14.7	999,499	23.0	17.9
Biogen Idec(5)	2,912,022	5.0	—	*	2.9
Caxton Advantages Life Sciences Fund, L.P.(6)	2,498,740	4.1	249,874	5.7	4.8
Growth Equity Opportunities Fund, LLC(7)	9,994,990	14.7	999,499	23.0	17.9
Entities affiliated with Merlin Biomed(8)	1,699,140	2.8	509,744	11.7	6.6
ONC General Partnership Limited(9)	1,665,830	2.8	499,749	11.5	6.5
Vision Opportunity Master Fund, Ltd.(10)	999,500	1.7	299,850	6.9	3.9
Named Executive Officers and Directors:					
James W. Young, Ph.D.(11)	637,748	1.1	—	*	*
Daniel N. Swisher, Jr.(12)	1,079,811	1.8	19,989	*	1.2
Eric H. Bjerkholt(13)	522,191	*	9,994	*	*
Steven B. Ketchum, Ph.D.(14)	246,041	*	9,994	*	*
Valerie L. Pierce	3,528	*	—	*	*
Matthew K. Fust(15)	136,666	*	—	*	*
Edward Hurwitz(16)	5,601,375	8.8	499,747	11.5	9.9
Helen S. Kim (17)	52,500	*	—	*	*
Dayton Misfeldt(18)	10,028,247	14.7	999,499	23.0	18.0
Homer L. Pearce, Ph.D.(19)	126,666	*	—	*	*
David C. Stump, M.D.(20)	126,666	*	—	*	*
All executive officers and directors as a group (10 persons)	18,557,911	24.3	1,539,223	35.4	28.4

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- * Represents beneficial ownership of less than one percent (1%) 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 31, 2010.
 - (3) Includes (i) 30,739 shares of our Series A preferred stock and 343,051 shares of common stock issuable upon exercise of warrants outstanding held by Alta BioPharma Partners III GmbH & Co. Beteiligungs KG, (ii) 457,728 shares of our Series A preferred stock and 5,108,272 shares of common stock issuable upon exercise of warrants outstanding held by Alta BioPharma Partners III, L.P., and (iii) 11,280 shares of our Series A preferred stock and 125,886 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 managing directors of Alta BioPharma Management III, LLC, which is the general partner of Alta BioPharma Partners III, L.P. and the managing limited partner of Alta BioPharma Partners III GmbH & Co. Beteiligungs KG, and the managers of Alta Embarcadero BioPharma Partners III, LLC (together, the “Principals”) exercise sole dispositive and voting power over the shares owned by the Alta Funds. The Principals include Jean Deleage, Farah Campsi, Edward Penhoet and Edward Hurwitz. These individuals may be deemed to share dispositive and voting 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) 9,091 shares of our common stock held by Bay City Capital LLC, a Delaware limited liability company, or BCC, (ii) 980,809 shares of our Series A preferred stock and 9,808,090 shares of common stock issuable upon exercise of warrants outstanding held by Bay City Capital Fund V, L.P., or Fund V, and (iii) 18,690 shares of our Series A preferred stock and 186,900 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 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) Biogen Idec MA, Inc., a Massachusetts corporation, is a wholly owned subsidiary of Biogen Idec Inc., a biotechnology company. Paul Clancy, Michael F. MacLean and Michael F. Phelps are the directors of Biogen Idec MA, Inc. These individuals may be deemed to share dispositive and voting power over the shares which are, or may be, deemed to be beneficially owned by Biogen Idec MA, Inc. Each of these individuals disclaims beneficial ownership of these shares, except to the extent of his pecuniary interest therein.
 - (6) Includes 249,874 shares of our Series A preferred stock and 2,498,740 shares of common stock issuable upon the exercise of warrants outstanding owned by Caxton Advantages Life Sciences Fund, L.P. (“Caxton”). The principal address for Caxton is c/o Caxton Advantage Venture Partners, L.P., 500 Park Avenue, 9th Floor, New York, New York 10022.
 - (7) Includes 999,499 shares of our Series A preferred stock and 9,994,990 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 M. Linehan, Charles W. Newhall III, Mark W. Perry and Scott D. Sandell are the individual managers of NEA 12 GP, GEO, NEA 12, NEA Partners 12 and 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 119 St. Paul Street, Baltimore, Maryland 21202.
 - (8) Includes (i) 209,894 shares of our Series A preferred stock and 699,640 shares of common stock issuable upon the exercise of warrants outstanding owned by Nexus Gemini, L.P., or Gemini, and (ii) 299,850 shares of our Series A preferred stock and 999,500 shares of common stock issuable upon the exercise of warrants outstanding owned by Merlin Nexus III, L.P. (“Nexus III”). Merlin BioMed Private Equity Advisors, LLC, a Delaware limited liability company, or Merlin, is the investment adviser to Gemini and Nexus III. 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.

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- (9) Includes 499,749 shares of our Series A preferred stock and 1,665,830 shares of common stock issuable upon the exercise of warrants outstanding owned by ONC General Partner Limited (“ONC”). The principal address for ONC is 26 New Street, St. Helier, Jersey, Channel Islands JE4 8PP.
- (10) Includes 299,850 shares of our Series A preferred stock and 999,500 shares of common stock issuable upon the exercise of warrants outstanding owned by Vision Opportunity Master Fund, Ltd., a Cayman Islands company, or the Vision Fund. Vision Capital Advisors, LLC, a Delaware limited liability company, is the investment manager of the Vision Fund and Adam Benowitz is the Managing Member of the investment manager. The Vision Fund directly beneficially owns all of the shares reported in this table. Mr. Benowitz and the investment manager may be deemed to share with the Vision Fund voting and dispositive power with respect to such shares. The principal address of the Vision Fund is c/o Citi Hedge Fund Services (Cayman) Limited, P.O. Box 1748, Cayman Corporate Centre, 27 Hospital Road, 5th Floor, Grand Cayman KY1-1109, Cayman Islands.
- (11) Includes 11,765 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 381,200 shares of common stock that are exercisable within 60 days of March 31, 2010.
- (12) Includes options held by Mr. Swisher to purchase 839,068 shares of our common stock that are exercisable within 60 days of March 31, 2010. Also includes 19,989 shares of our Series A preferred stock and 199,890 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.
- (13) Includes options held by Mr. Bjerkholt to purchase 416,156 shares of our common stock exercisable within 60 days of March 31, 2010. Also includes 9,994 shares of our Series A preferred stock and 99,940 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.
- (14) Includes options held by Dr. Ketchum to purchase 143,749 shares of our common stock exercisable within 60 days of March 31, 2010. Also includes 9,994 shares of our Series A preferred stock and 99,940 shares of common stock issuable upon the exercise of warrants outstanding.
- (15) Includes options held by Mr. Fust to purchase 136,666 shares of our common stock exercisable within 60 days of March 31, 2010.
- (16) Includes the shares of common stock, Series A preferred 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 24,166 shares of our common stock exercisable within 60 days of March 31, 2010. The address of Mr. Hurwitz is c/o Alta Partners III, Inc., One Embarcadero Center, 37th Floor, San Francisco, California 94111.
- (17) Consists of options held by Ms. Kim to purchase 52,500 shares of our common stock exercisable within 60 days of March 31, 2010.
- (18) Includes the shares of our common stock, Series A preferred 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 24,166 shares of our common stock exercisable within 60 days of March 31, 2010. The address for Mr. Misfeldt is c/o Bay City Capital, 750 Battery Street, Suite 400, San Francisco, California 94111.
- (19) Includes options held by Dr. Pearce to purchase 126,666 shares of our common stock exercisable within 60 days of March 31, 2010.
- (20) Includes options held by Dr. Stump to purchase 126,666 shares of our common stock exercisable within 60 days of March 31, 2010.

OTHER INFORMATION

Stockholder Proposals for Inclusion in our 2011 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 2011 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 _____, 2011. However, if our 2010 annual meeting of stockholders is not held between May 2, 2011 and July 1, 2011, 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 2011 annual meeting, such a proposal must be received by us on or before _____, 2011. If the date of the annual meeting is before May 2, 2011 or after July 1, 2011, 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 2011 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 statements and annual reports with respect to two or more stockholders sharing the same address by delivering a single proxy statement 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 proxy statement may 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 proxy statement and annual report in the future, you may write or call either our (i) Investor Relations Department at Sunesis Pharmaceuticals, Inc., 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080, Attention: Eric H. Bjerkholt, Senior 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. 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.

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
*Senior Vice President, Corporate Development and Finance,
Chief Financial Officer and Corporate Secretary*

April , 2010

A COPY OF OUR ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2009, AS FILED WITH THE SEC, IS BEING MAILED TO STOCKHOLDERS IN CONNECTION WITH THIS PROXY SOLICITATION. WE WILL FURNISH WITHOUT CHARGE, UPON WRITTEN REQUEST OF ANY STOCKHOLDER, A COPY OF OUR ANNUAL REPORT ON FORM 10-K AND WE WILL PROVIDE COPIES OF THE EXHIBITS TO OUR ANNUAL REPORT ON FORM 10-K IF SPECIFICALLY REQUESTED. 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, SR. VICE PRESIDENT, CORPORATE DEVELOPMENT AND FINANCE, CHIEF FINANCIAL OFFICER AND CORPORATE SECRETARY BY TELEPHONE TO: (650) 266-3717, OR BY E-MAIL TO: EBJERKHOLT@SUNESIS.COM.

NOTE 11 OF THE NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS, INCLUDED IN OUR ANNUAL REPORT ON FORM 10-K FILED ON MARCH 31, 2009, IS INCORPORATED BY REFERENCE INTO THIS PROXY STATEMENT.

**2010 ANNUAL MEETING OF STOCKHOLDERS OF
SUNESIS PHARMACEUTICALS, INC.
June 2, 2010**

PROXY VOTING INSTRUCTIONS

INTERNET - Access "www.voteproxy.com" and follow the on-screen instructions. Have your proxy card available when you access the web page, and use the Company Number and Account Number shown on your proxy card.

TELEPHONE - Call toll-free **1-800-PROXIES** (1-800-776-9437) in the United States or **1-718-921-8500** from foreign countries from any touch-tone telephone and follow the instructions. Have your proxy card available when you call and use the Company Number and Account Number shown on your proxy card.

Vote online/phone until 11:59 PM EST the day before the meeting.

MAIL - Sign, date and mail your proxy card in the envelope provided as soon as possible.

IN PERSON - You may vote your shares in person by attending the Annual Meeting.

COMPANY NUMBER	
ACCOUNT NUMBER	

NOTICE OF INTERNET AVAILABILITY OF PROXY MATERIAL: The Notice of Meeting, proxy statement and proxy card are available at <https://materials.proxyvote.com/867328>

i Please detach along perforated line and mail in the envelope provided IF you are not voting via telephone or the Internet. i

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THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE ELECTION OF THE NOMINEES FOR DIRECTOR IN PROPOSAL NO. 1 AND A VOTE "FOR" PROPOSALS NO. 2 AND NO. 3.

PLEASE SIGN, DATE AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE. PLEASE MARK YOUR VOTE IN BLUE OR BLACK INK AS SHOWN HERE

Proposal No. 1: To elect two directors nominated by the Board of Directors to serve for the terms specified below, as more fully described in the accompanying proxy statement.

FOR ALL NOMINEES

NOMINEES:

James W. Young, Ph.D., to serve until the 2013 annual meeting.

Homer L. Pearce, Ph.D., to serve until the 2013 annual meeting.

WITHHOLD AUTHORITY FOR ALL NOMINEES

FOR ALL EXCEPT
(See instructions below)

INSTRUCTIONS: To withhold authority to vote for any individual nominee(s), mark "FOR ALL EXCEPT" and fill in the circle next to each nominee you wish to withhold, as shown here: ●

	FOR	AGAINST	ABSTAIN
<u>Proposal No. 2:</u> To ratify the selection of Ernst & Young LLP as the independent registered public accounting firm of Sunesis for the year ending December 31, 2010.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Proposal No. 3:</u> To approve an amendment to Sunesis' amended and restated certificate of incorporation in order to effect a reverse stock split of the issued and outstanding shares of common stock and preferred stock, as described in the accompanying proxy statement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Other Matters: The Board of Directors knows of no other matters that will be presented for consideration at the 2010 Annual Meeting. If any other matters are properly brought before the 2010 Annual Meeting, it is the intention of the persons named in the proxy card to vote on such matters in accordance with their best judgment.

MARK "X" HERE IF YOU PLAN TO ATTEND THE MEETING.

To change the address on your account, please check the box at right and indicate your new address in the address space above. Please note that changes to the registered name(s) on the account may not be submitted via this method.

Signature of Stockholder Date: Signature of Stockholder Date:

Note: Please sign exactly as your name or names appear on this Proxy. When shares are held jointly, each holder should sign. When signing as executor, administrator, attorney, trustee or guardian, please give full title as such. If the signer is a corporation, please sign full corporate name by duly authorized officer, giving full title as such. If signer is a partnership, please sign in partnership name by authorized person.

PROXY

SUNESIS PHARMACEUTICALS, INC.

PROXY FOR 2010 ANNUAL MEETING OF STOCKHOLDERS

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned stockholder of SUNESIS PHARMACEUTICALS, INC., a Delaware corporation, hereby acknowledges receipt of the notice of annual meeting of stockholders and proxy statement for the 2010 annual meeting of stockholders of Sunesis Pharmaceuticals, Inc., and hereby appoints Daniel N. Swisher, Jr. and Eric H. Bjerkholt, and each of them, jointly and severally, as proxies and attorneys-in-fact, with full power of substitution, on behalf and in name of the undersigned, to represent the undersigned at the 2010 annual meeting of stockholders of Sunesis Pharmaceuticals, Inc. to be held on Wednesday, June 2, 2010 at 10:00 a.m., local time, at 395 Oyster Point Boulevard, Suite 400, South San Francisco, California 94080 and at any and all adjournments, continuations or postponement thereof, and to vote all shares of common stock and preferred stock which the undersigned would be entitled to vote, if personally present, on the matters set forth on the reverse side and, in accordance with their discretion, on any other business that may come before the meeting, and revokes all proxies previously given by the undersigned with respect to the shares covered hereby.

This proxy will be voted as directed, or if no contrary direction is indicated, will be voted (i) FOR the election of all nominees for director in Proposal No. 1, (ii) FOR Proposals No. 2 and No. 3, and (iii) as said proxies deem advisable, on such other matters as may properly come before the meeting.

PLEASE VOTE, DATE AND SIGN ON REVERSE SIDE AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE

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