UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 14A

(RULE 14a-101)
INFORMATION REQUIRED IN PROXY STATEMENT

SCHEDULE 14A INFORMATION

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

Filed	l by the	e Registrant 🗵	Filed by a Party other than the Registrant						
Che	ck the a	appropriate box:							
	Preli	minary Proxy Statement							
	Conf	fidential, for Use of the	Commission Only (as permitted by Rule 14a-6(e)(2))						
X	Defin	nitive Proxy Statement							
□ Definitive Additional Materials									
	Solic	citing Material Pursuant	o § 240.14a-12						
			IDERA PHARMACEUTICALS, INC.						
			(Name of Registrant as Specified in its Charter)						
			(Name of Person(s) Filing Proxy Statement, if Other than the Registrant)						
Payr	nent of	Filing Fee (Check the ap	propriate box):						
X	No fe	ee required.							
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4) Date Filed:

IDERA PHARMACEUTICALS, INC.

167 Sidney Street Cambridge, Massachusetts 02139

NOTICE OF 2013 ANNUAL MEETING OF STOCKHOLDERS

Date and Time:	Friday, July 26, 2013 at 10:00 a.m., local time
Place:	Idera Pharmaceuticals, Inc.

167 Sidney Street

Cambridge, Massachusetts 02139

Items of Business:

At our 2013 annual meeting of stockholders we will ask our stockholders to:

- Approve amendments to our Restated Certificate of Incorporation to (a) declassify our board of
 directors, (b) provide that our stockholders may remove directors with or without cause
 following declassification of our board of directors and (c) eliminate the supermajority voting
 requirement for amending or repealing Article ELEVENTH of our Restated Certificate of
 Incorporation;
- Approve an amendment to our Restated Certificate of Incorporation to increase the number of authorized shares of our common stock from 140,000,000 shares to 280,000,000 shares;
- Approve, by non-binding vote, executive compensation;
- Approve the Idera Pharmaceuticals, Inc. 2013 Stock Incentive Plan;
- Ratify the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2013;
- Elect three directors to our board of directors as named and for the terms indicated in this proxy statement;
- Approve the issuance and sale by us to certain affiliates of Pillar Invest Corporation (including
 our prior issuances and sales of our securities to such affiliates in November 2011 and
 November 2012) of a number of shares of our common stock (including securities convertible
 into or exercisable for shares of our common stock) that is greater than 19.99% of the total
 number of issued and outstanding shares of common stock and of the outstanding voting
 power of our securities after such issuance and sale in accordance with Nasdaq Listing Rule
 5635(b);
- Approve amendments to our Restated Certificate of Incorporation amending the Certificate of Designations, Preferences and Rights of Series D Preferred Stock to:
 - (a) provide that, if the Nasdaq Proposal, as described below, were approved by our stockholders, the beneficial ownership limitation applicable to our Series D preferred stock would be increased from 19.99% to 35%, consistent with the beneficial ownership limitations applicable to our Series E preferred stock;

- (b) modify the dividend provisions of the Series D Certificate of Designations so that dividends on the Series E preferred stock are not required to be paid to the holders of our Series D preferred stock;
- (c) modify the dividend provisions of the Series D Certificate of Designations to (i) change the date after which we may elect to pay dividends to the holders of our Series D preferred stock in shares of our common stock in lieu of cash from December 31, 2014 to October 1, 2013, and (ii) allow for the payment of such dividends in shares of a to-be-created new series of our preferred stock in the event that payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series D Certificate of Designations; and
- (d) (i) eliminate the provision of the Series D Certificate of Designations that had provided the holders of our Series D preferred stock with the right to require us to redeem the Series D preferred stock upon the occurrence of specified fundamental changes and provide, in the event of a sale of the corporation (as defined the Series D Certificate of Designations), for the distribution of any assets that remain available for distribution to our stockholders, after payment to the holders of our Series A preferred stock and any other class of our capital stock that ranks senior to the Series D preferred stock, to the holders of the Series D preferred stock on a pro rata basis with the holders of our common stock, Series E preferred stock and any new series of non-voting preferred stock that ranks pari passu with the Series D preferred stock and (ii) modify the Series D Certificate of Designations to eliminate the right of the holders of our Series D preferred stock to receive, in the event of a liquidation, dissolution or winding up of our company, or Liquidation, an amount per share of Series D preferred stock equal to the original issue price of such share of Series D preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation, such that upon a Liquidation the holders of our Series D preferred stock will receive an amount per share of Series D preferred stock equal to the amount that would be payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation;
- Approve amendments to our Restated Certificate of Incorporation amending the Certificate of Designations, Preferences and Rights of Series E Preferred Stock to:
 - (a) modify the dividend provisions of the Series E Certificate of Designations to (i) permit us to elect to pay dividends to the holders of our Series E preferred stock in shares of our common stock in lieu of cash commencing October 1, 2013, and (ii) allow for the payment of such dividends in shares of a to-be-created new series of our preferred stock in the event that payment of such

dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series E Certificate of Designations; and

- (b) modify the Series E Certificate of Designations to eliminate the right of the holders of our Series E preferred stock to receive, in the event of a Liquidation, an amount per share of Series E preferred stock equal to the original issue price of such share of Series E preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation, such that upon a Liquidation the holders of our Series E preferred stock will receive an amount per share of Series E preferred stock equal to the amount that would be payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation; and
- Transact any other business as may properly come before the 2013 annual meeting or any
 postponement or adjournment of the 2013 annual meeting.

The board of directors has no knowledge of any other business to be transacted at the 2013 annual meeting.

You may vote at the 2013 annual meeting if you were a stockholder of record at the close of business on June 3, 2013.

It is important that your shares be represented and voted at the annual meeting. Whether or not you plan to attend the 2013 annual meeting, please mark, sign, date and promptly mail your proxy card in the enclosed postage-paid envelope or follow the instructions on the proxy card to vote by telephone or over the internet. You may revoke your proxy at any time before its exercise at the 2013 annual meeting.

Record Date:

Proxy Voting:

By order of the board of directors,

Louis J. Arcudi, III Secretary Cambridge, Massachusetts June 10, 2013

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IDERA PHARMACEUTICALS, INC. 167 Sidney Street

Cambridge, Massachusetts 02139

PROXY STATEMENT

For our Annual Meeting of Stockholders to be held on July 26, 2013

Idera Pharmaceuticals, Inc., a Delaware corporation, which is referred to as "we," "us," the "Company" or "Idera" in this proxy statement, is sending you this proxy statement and the enclosed proxy card because our board of directors is soliciting your proxy to vote at our 2013 annual meeting of stockholders. The 2013 annual meeting will be held on Friday, July 26, 2013, at 10:00 a.m., local time, at our principal offices located at 167 Sidney Street, Cambridge, Massachusetts 02139. If the 2013 annual meeting is adjourned for any reason, then proxies submitted may be used at any adjournments of the 2013 annual meeting.

This proxy statement summarizes information about the proposals to be considered at the 2013 annual meeting and other information you may find useful in determining how to vote. The proxy card is the means by which you actually authorize another person to vote your shares in accordance with your instructions.

We are mailing this proxy statement and the enclosed proxy card to stockholders on or about June 13, 2013.

In this mailing, we are also including copies of our annual report to stockholders for the year ended December 31, 2012. Our annual report on Form 10-K for the year ended December 31, 2012, as filed with the Securities and Exchange Commission, or the SEC, on March 11, 2013, including our audited financial statements, is included in our annual report to stockholders and is also available free of charge on our website, www.iderapharma.com, where it can be accessed by clicking "Investors" and then "SEC Filings," or through the SEC's electronic data system at www.sec.gov. To request a printed copy of our Notice of Annual Meeting, Proxy Statement and Annual Report on Form 10-K, which we will provide to you free of charge, or to obtain directions to be able to attend the 2013 annual meeting and vote in person, write to Investor Relations, Idera Pharmaceuticals, Inc., 167 Sidney Street, Cambridge, Massachusetts 02139, call our toll-free number 1 (877) 888-6550, or email Investor Relations at ir@iderapharma.com.

Important Notice Regarding the Availability of Proxy Materials for the 2013 Annual Meeting to Be Held on July 26, 2013:

The Notice of Annual Meeting, Proxy Statement and 2012 Annual Report are available at http://ir.iderapharma.com/phoenix.zhtml? c=208904&p=proxy.

INFORMATION ABOUT THE 2013 ANNUAL MEETING

Who may vote?

Holders of record of our common stock and our Series D redeemable convertible preferred stock, or Series D preferred stock, at the close of business on June 3, 2013, the record date for the 2013 annual meeting, are entitled to vote on each matter properly brought before the 2013 annual meeting. Except where expressly stated otherwise in this proxy statement, holders of our common stock and our Series D preferred stock will vote together as a single class. Except where expressly stated otherwise in this proxy statement, holders of our Series E convertible preferred stock, or Series E preferred stock, are not entitled to vote at the 2013 annual meeting. Holders of our common stock will be entitled to one vote for each share of common stock held as of the record date. Holders of our Series D preferred stock will be entitled to cast a number of votes equal to the number of whole shares of common stock into which the shares of Series D Preferred Stock held by such holder are convertible as of the record date (rounded down to the nearest whole share). As of the record date, each share of Series D preferred stock is convertible into 5.5736 shares of common stock. On any matter set forth in this proxy statement in which the holders of our Series E preferred stock are entitled to vote, holders of our Series E preferred stock will be entitled to one vote for each share of Series E preferred stock held as of the record date. As of the close of business on June 3, 2013, the record date for the 2013 annual meeting, we had shares of 45,165,160 common stock outstanding, 1,124,260 shares of Series D preferred stock outstanding and 424,242 shares of Series E preferred stock outstanding.

How do I vote my shares if I am a stockholder of record?

If you are a stockholder of record (meaning that you hold shares in your name in the records of our transfer agent, Computershare Trust Company, N.A., and that your shares are not held in "street name" by a bank or brokerage firm), you may vote your shares in any one of the following ways:

- You may vote by mail. To vote by mail, you need to complete, date and sign the proxy card that accompanies this proxy statement and promptly
 mail it in the enclosed postage-prepaid envelope. You do not need to put a stamp on the enclosed envelope if you mail it from within the United
 States.
- You may vote by telephone. To vote by telephone through services provided by Computershare Trust Company, N.A., call 1-800-652-VOTE (8683), and follow the instructions provided on each proxy card. If you vote by telephone, you do not need to complete and mail your proxy card.
- You may vote over the internet. To vote over the internet through services provided by Computershare Trust Company, N.A., please go to the
 following website: http://www.investorvote.com/IDRA and follow the instructions at that site for submitting your proxy card. If you vote over the
 internet, you do not need to complete and mail your proxy card.
- You may vote in person. If you attend the 2013 annual meeting, you may vote by delivering your completed proxy card in person or you may vote by completing a ballot at the 2013 annual meeting. Ballots will be available at the 2013 annual meeting.

Your proxy will only be valid if you complete and return the proxy card, vote by telephone or vote over the internet at or before the 2013 annual meeting. The persons named in the proxy card will vote the shares you own in accordance with your instructions on your proxy card, in your vote by telephone or in your vote over the internet. If you return the proxy card, vote by telephone or vote over the internet, but do not give any instructions on a particular matter described in this proxy statement, the persons named in the proxy card will vote the shares you own in accordance with the recommendations of our board of directors.

How do I vote my shares if I hold them in "street name?"

If the shares you own are held in "street name" by a bank or brokerage firm, your bank or brokerage firm, as the record holder of your shares, is required to vote your shares according to your instructions. In order to vote your shares, you will need to follow the directions that your bank or brokerage firm provides to you. Many banks and brokerage firms solicit voting instructions over the internet or by telephone.

Under applicable stock exchange rules, bank or brokerage firms that hold shares in street name for customers have the discretion to vote those shares with respect to certain matters if they have not received instructions from the beneficial owners. Bank or brokerage firms will have this discretionary authority with respect to routine matters such as the ratification of the selection of our independent registered public accounting firm; however, they will not have this discretionary authority with respect to any of the other matters scheduled to be voted upon at the 2013 annual meeting. As a result, with respect to all matters other than ratification of the selection of our independent registered public accounting firm, if the beneficial owners have not provided instructions with respect to that matter, those beneficial owners' shares will be considered "broker non-votes." Broker non-votes are shares with respect to which a bank or brokerage firm does not receive voting instructions from the beneficial holder and does not have or exercise discretionary authority in voting on a proposal. The effect of broker non-votes is discussed below in the answer to the question "What yote is required to approve each matter and how will yotes be counted?".

Regardless of whether your shares are held in street name, you are welcome to attend the 2013 annual meeting. If your shares are held in street name, you may not vote your shares in person at the 2013 annual meeting unless you obtain a proxy, executed in your favor, from the holder of record (i.e., your brokerage firm or bank). If you hold your shares in street name and wish to vote in person, please contact your brokerage firm or bank before the 2013 annual meeting to obtain the necessary proxy from the holder of record.

How may I change or revoke my vote?

If you are a stockholder of record, even if you complete and return a proxy card or vote by telephone or over the internet, you may change or revoke your vote at any time before your proxy is exercised by taking one of the following actions:

- · send written notice to our Secretary, Louis J. Arcudi, III, at our address above, stating that you wish to revoke your vote;
- deliver to us another signed proxy card with a later date or vote by telephone or over the internet at a later date; or
- attend the 2013 annual meeting, notify our Secretary that you are present and then vote by ballot.

If you own shares in street name, your bank or brokerage firm should provide you with instructions for changing or revoking your vote.

What constitutes a quorum?

In order for business to be conducted at the 2013 annual meeting, a quorum must be present. A quorum consists of the holders of shares of capital stock representing a majority of the combined voting power of our common stock and our Series D preferred stock that is issued, outstanding and entitled to vote at the 2013 annual meeting.

Shares of voting stock present in person or represented by proxy (including broker non-votes and shares that are abstained or withheld or with respect to which no voting instructions are provided for one or more of the matters to be voted upon) will be counted for the purpose of determining whether a quorum exists.

If a quorum is not present, the 2013 annual meeting will be adjourned until a quorum is obtained.

What vote is required to approve each matter and how will votes be counted?

The table below sets forth the vote required for each matter being submitted to our stockholders at the 2013 annual meeting to be approved and the effect that withheld votes, abstentions and broker non-votes will have on the outcome of voting on each proposal that is being submitted to our stockholders for approval at the 2013 annual meeting.

Proposal	Affirmative Vote Required	Abstentions/ Withholds	Broker Non- Votes
Amendments to Restated Certificate of Incorporation to	At least 75% of issued and outstanding common	Has the same	Has the same
Declassify Board of Directors	stock and Series D preferred stock entitled to vote,	effect as a vote	effect as a vote
(Proposals $I(a)$, $I(b)$ and $I(c)$)	voting together as a single class and on an as- converted basis	AGAINST	AGAINST
Amendments to Restated Certificate of Incorporation to	Majority of issued and outstanding common stock	Has the same	Has the same
Increase Number of Authorized Shares of Common Stock	and Series D preferred stock entitled to vote, voting	effect as a vote	effect as a vote
(Proposal 2)	together as a single class and on an as-converted basis	AGAINST	AGAINST
Advisory Vote on Executive Compensation (Proposal 3)	Majority of common stock and Series D preferred stock present or represented and voting on the matter, voting together as a single class and on an as- converted basis	No effect	No effect
Approval of 2013 Stock Incentive Plan (Proposal 4)	Majority of common stock and Series D preferred stock present or represented and voting on the matter, voting together as a single class and on an asconverted basis	No effect	No effect
Ratification of Selection of Ernst & Young LLP Proposal 5)	Majority of common stock and Series D preferred stock present or represented and voting on the matter, voting together as a single class and on an as- converted basis	No effect	No effect
Election of Directors (Proposal 6)	Plurality of votes cast by holders of common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis	No effect(1)	No effect

Approval of Prior Issuances and Sales to Pillar and its Affiliates (<i>Proposal 7</i>)	Majority of outstanding common stock and Series D preferred stock present or represented and voting on the matter, voting together as a single class and on an as-converted basis	No effect	No effect
	Holders (other than us, Pillar Invest Corporation and their respective affiliates) of a majority of issued and outstanding common stock and Series D preferred stock entitled to vote and held by such holders, voting together as a single class and on an as-converted basis		
Amendments to Certificate of Designations, Preferences and Rights of Series D Preferred Stock (<i>Proposals 8(a), 8(b), 8(c) and 8(d)</i>)	Majority of issued and outstanding common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis	Has the same effect as a vote AGAINST	Has the same effect as a vote AGAINST
	Majority of issued and outstanding Series D preferred stock entitled to vote, voting separately as a series		
Amendments to Certificate of Designations, Preferences and Rights of Series E Preferred Stock (<i>Proposals 9(a) and 9(b)</i>)	Majority of issued and outstanding common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis	Has the same effect as a vote AGAINST	Has the same effect as a vote AGAINST
	Majority of issued and outstanding Series E preferred stock entitled to vote, voting separately as a series		

(1) You may vote FOR all of the director nominees, WITHHOLD your vote from all of the director nominees or WITHHOLD your vote from any of the director nominees.

Each share of common stock will be counted as one vote. Holders of our Series D preferred stock will be entitled to cast a number of votes equal to the number of whole shares of common stock into which the shares of Series D preferred stock held by such holder are convertible as of the record date (rounded down to the nearest whole share). As of the record date, each share of Series D preferred stock is convertible into 5.5736 shares of common stock. Except where expressly stated otherwise in this proxy statement (see Proposal Nine), holders of our Series E preferred stock are not entitled to vote at the 2013 annual meeting. On any matter set forth in this proxy statement in which the holders of our Series E preferred stock are entitled to vote, holders of our Series E preferred stock will be entitled to one vote for each share of Series E preferred stock held as of the record date

How does the board of directors recommend that I vote?

Our board of directors recommends that you vote as follows:

- FOR Proposal One, Proposal Two, Proposal Three, Proposal Four, Proposal Five, Proposal Seven, Proposal Eight and Proposal Nine; and
- To elect the three nominees to our board of directors (Proposal Six).

Under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and related SEC regulations, the vote on executive compensation, as described in greater detail in Proposal Three set forth elsewhere in this proxy statement, is an advisory vote, meaning it is non-binding. The vote on the ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm is also advisory. Our board will carefully consider the outcome of each of these votes.

Will any other business be conducted at the 2013 annual meeting of stockholders?

Our board of directors does not know of any other business to be conducted or matters to be voted upon at the 2013 annual meeting. If any other matter properly comes before the 2013 annual meeting, the persons named in the proxy card that accompanies this proxy statement will exercise their judgment in deciding how to vote or otherwise act with respect to that matter at the 2013 annual meeting.

Who is making and paying for the solicitation of proxies and how is it made?

We are making the solicitation and will bear the costs of soliciting proxies. In addition to solicitations by mail, our directors, officers and regular employees, without additional remuneration, may solicit proxies by telephone, facsimile, email, personal interviews and other means. We may retain a proxy solicitation firm to assist in the solicitation of proxies in connection with the 2013 annual meeting. In that event, we will pay such firm customary fees, which we expect would be approximately \$10,000, plus expenses. We have requested that brokerage houses, custodians, nominees and fiduciaries forward copies of the proxy materials to the persons for whom they hold shares and request instructions for voting the proxies. We will reimburse the brokerage houses and other persons for their reasonable out-of-pocket expenses in connection with this distribution.

How and when may I submit a proposal for the 2014 annual meeting of stockholders?

If you are interested in submitting a proposal for inclusion in the proxy statement and the proxy card for our 2014 annual meeting, you need to follow the procedures outlined in Rule 14a-8 of the Exchange Act. We must receive your proposal intended for inclusion in the proxy statement at our principal executive offices, 167 Sidney Street, Cambridge, Massachusetts 02139, Attention: Secretary, no later than February 13, 2014. SEC rules set standards for the types of stockholder proposals and the information that must be provided by the stockholder making the request.

If you wish to present a proposal at the 2014 annual meeting, but do not wish to have the proposal considered for inclusion in the proxy statement and proxy card or have not complied with the requirements for inclusion of such proposal in our proxy statement under SEC rules, you must also give written notice to us at the address noted above. Our bylaws specify the information that must be included in any such notice, including a brief description of the business to be brought before the annual meeting, the name of the stockholder proposing such business and stock ownership information for such stockholder. In accordance with our bylaws, we must receive this notice at least 60 days, but not more than 90 days, prior to the date of the 2014 annual meeting and the notice must include specified information regarding the proposal and the stockholder making the proposal.

Notwithstanding the foregoing, if we provide less than 70 days' notice or prior public disclosure of the date of the annual meeting to the stockholders, notice by the stockholders must be received by our Secretary no later than the close of business on the tenth day following the date on which the notice of the annual meeting was mailed or such public disclosure was made, whichever occurs first. If a stockholder who wished to present a proposal fails to notify us by this date, the proxies that management solicits for that meeting will have discretionary authority to vote on the stockholder's proposal if it is otherwise properly brought before that meeting. If a stockholder makes timely notification, the proxies may still exercise discretionary authority to vote on stockholder proposals under circumstances consistent with the SEC's rules.

Are annual meeting materials householded?

Some banks, brokers and other nominee record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that the brokers and nominee record holders send only one copy of this proxy statement and the accompanying annual report to multiple stockholders in the same household. Upon request, we will promptly deliver separate copies of this proxy statement and our annual report. To make such a request, please call (617) 679-5500 or write to Investor Relations, 167 Sidney Street, Cambridge, Massachusetts 02139 or ir@iderapharma.com. To receive separate copies of our annual report and proxy statement in the future, or to receive only one copy for the household, please contact your bank, broker, or other nominee record holder, or contact us at the above address and phone number.

PROPOSAL ONE

APPROVAL OF AMENDMENTS TO OUR RESTATED CERTIFICATE OF INCORPORATION TO DECLASSIFY OUR BOARD OF DIRECTORS

Under our Restated Certificate of Incorporation, our board of directors is currently divided into three classes, with members of each class holding office for staggered three-year terms. We are asking you to approve amendments to our Restated Certificate of Incorporation to (a) declassify our board of directors, (b) provide that our stockholders may remove directors with or without cause following declassification of our board of directors and (c) eliminate the supermajority voting requirement for amending or repealing Article ELEVENTH of our Restated Certificate of Incorporation. The board of directors believes that these changes are advisable and in the best interests of our stockholders. The board of directors has unanimously approved the proposed amendments and declared them to be advisable, and recommends that our stockholders approve the proposed amendments.

If the proposed amendments to our Restated Certificate of Incorporation described in this Proposal One are approved by the stockholders, the declassification of our board of directors would be phased in commencing with the 2013 annual meeting and would result in the classified board of directors being fully phased-out (and all board members standing for annual elections) commencing with our 2015 annual meeting of stockholders. Therefore, the Class III directors would be elected at the 2013 annual meeting for one-year terms, the Class III and Class I directors would stand for election at our 2014 annual meeting of stockholders for one-year terms (with the Class II directors having one year remaining in their term), and beginning with our 2015 annual meeting of stockholders, the board will be completely declassified and all directors will stand for election for one-year terms. If the proposed amendments are not approved in the manner described in this Proposal One, no changes will be made to our Restated Certificate of Incorporation under this Proposal One.

Proposals 1(a), 1(b) and 1(c) all relate to the proposed declassification of our board of directors, but each proposal concerns a different amendment to our Restated Certificate of Incorporation. We are submitting these amendments to our stockholders as separate items so that our stockholders are able to express their views on each amendment separately. The approval of Proposals 1(a) and 1(b) is conditioned upon both items receiving the requisite stockholder vote. The approval of Proposal 1(c) is conditioned on the approval of both Proposals 1(a) and 1(b), but Proposals 1(a) and 1(b) are not conditioned on Proposal 1(c). Therefore:

- If Proposals 1(a), 1(b) and 1(c) each receive the requisite stockholder vote, then our Restated Certificate of Incorporation will be amended to reflect all of the revisions set forth in <u>Appendix A</u> to this proxy statement, and a Certificate of Amendment to our Restated Certificate of Incorporation reflecting the amendments will be filed with the Secretary of State of the State of Delaware immediately following the vote and during the 2013 annual meeting.
- If Proposals 1(a) and 1(b) each receive the requisite stockholder vote, but Proposal 1(c) does not, then our Restated Certificate of Incorporation will be amended to reflect the corresponding revisions set forth in <u>Appendix A</u> to this proxy statement, and a Certificate of Amendment to our Restated Certificate of Incorporation reflecting the approved amendments will be filed with the Secretary of State of the State of Delaware immediately following the vote and during the 2013 annual meeting.
- If either Proposal 1(a) or 1(b) does not receive the requisite stockholder vote (regardless of the outcome of Proposal 1(c)), then no changes will be
 made to our Restated Certificate of Incorporation under this Proposal One, and our board will continue to be classified.

For each of Proposal 1(a), 1(b) and 1(c), the affirmative vote of at least 75% of the issued and outstanding shares of our common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, is required to amend our Restated Certificate of Incorporation. Our board of directors reserves the right, at any time prior to the effectiveness of the filing of the Certificate of Amendment reflecting the approved amendments, to abandon the proposed amendments.

The following description of the proposed amendments to our Restated Certificate of Incorporation is a summary and is qualified by the full text of the proposed amendments, which are attached to this proxy statement as Appendix A.

Proposal 1(a): Proposed amendment to our Restated Certificate of Incorporation to declassify our board of directors

Restated Certificate of Incorporation sections affected: Sections 2, 4, 5 and 8 of Article ELEVENTH

Our board of directors and our nominating and corporate governance committee regularly review our corporate governance policies and practices. As part of our nominating and corporate governance committee's continuing review, it discussed the potential declassification of the board of directors and moving to annual elections of all directors. In connection with our Series E preferred stock financing, which is described in greater detail in the section titled "Summary of November 2011 and November 2012 Preferred Stock Financing Transactions" set forth in Proposal Seven set forth elsewhere in this proxy statement and in "Transactions with Related Persons" set forth elsewhere in this proxy statement, we agreed to submit a proposal to our stockholders at the 2013 annual meeting to, among other things, approve an amendment to our Restated Certificate of Incorporation and bylaws to declassify our board of directors.

In deciding whether to recommend that stockholders vote in favor of this proposal, our nominating and corporate governance committee, as well as the full board of directors, considered the advantages of both a classified and declassified board structure. A classified board can promote continuity and enhance the stability of the board of directors, encourage a long-term perspective of management and reduce a company's vulnerability to coercive takeover tactics. Having experienced directors on the board of directors is important because of the unique demands of overseeing our company, including the need to understand the complexities of our business and our long-term strategy for profitable growth. The directors also considered that many investors and commentators believe that the election of directors is the primary means for stockholders to influence corporate governance policies and hold management accountable for implementing those policies. The directors recognized that many investors believe that a classified board structure reduces the accountability of directors to stockholders because the directors do not face an annual election. The directors determined that the advantages to our stockholders of annual director elections for all directors outweigh the advantages of a classified board. After weighing these and other considerations, our nominating and corporate governance committee determined that moving to annual elections of directors is in the best interests of Idera and our stockholders and recommended to the board of directors that it support the proposal to declassify the board of directors. After deliberation, the board of directors unanimously accepted that recommendation. If this proposed amendment is not approved, no changes will be made to our Restated Certificate of Incorporation under this Proposal One.

This proposed amendment is conditioned on the approval of Proposal 1(b) by the stockholders.

Approval of this Proposal 1(a) will also constitute stockholder approval of conforming changes to Sections 2.3, 2.4, 2.5 and 2.6 of our bylaws, as reflected in <u>Appendix B</u>.

Recommendation of the Board of Directors and Required Vote

Our board of directors believes that the proposed amendment to our Restated Certificate of Incorporation to declassify our board of directors is in the best interests of our company and our stockholders and therefore recommends that the stockholders vote FOR this proposal.

The affirmative vote of the stockholders holding at least 75% of the issued and outstanding shares of our common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, is required for approval of this Proposal 1(a).

Proposal 1(b): Proposed amendment to our Restated Certificate of Incorporation to provide that our stockholders may remove our directors with or without cause following declassification of our board of directors

Restated Certificate of Incorporation sections affected: Section 7 of Article ELEVENTH

Delaware corporate law provides that members of a classified board of directors may be removed only for cause, unless otherwise provided in the certificate of incorporation. Our Restated Certificate of Incorporation currently provides that our directors can be removed only for cause by the affirmative vote of at least two-thirds of the shares of our capital stock outstanding and entitled to vote.

If the proposed amendment is approved by our stockholders at the 2013 annual meeting, our Restated Certificate of Incorporation would be amended to provide that, effective immediately after our 2015 annual meeting of stockholders, when our board of directors is no longer classified, directors may be removed with or without cause by the affirmative vote of a majority of our common stock issued and outstanding and entitled to vote, as set forth in Appendix A. Even if this amendment is approved, our directors would continue to be removable only for cause until our 2015 annual meeting of stockholders, at which point our board of directors will no longer be classified. If the proposed amendment is not approved, no changes will be made to our Restated Certificate of Incorporation under this Proposal One.

This proposed amendment is conditioned on the approval of Proposal 1(a) by the stockholders.

Approval of this Proposal 1(b) will also constitute stockholder approval of conforming changes to Section 2.15 of our bylaws, as reflected in <u>Appendix</u> B.

Recommendation of the Board of Directors and Required Vote

Our board of directors believes that the proposed amendment to our Restated Certificate of Incorporation to provide that our stockholders may remove our directors with or without cause by the affirmative vote of a majority of our common stock issued and outstanding and entitled to vote following declassification of our board of directors is in the best interests of our company and our stockholders and therefore recommends that the stockholders vote FOR this proposal.

The affirmative vote of the stockholders holding at least 75% of the issued and outstanding shares of our common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, is required for approval of this Proposal 1(b).

Proposal 1(c): Proposed amendment to our Restated Certificate of Incorporation to eliminate the supermajority voting requirement for amending or repealing Article ELEVENTH of our Restated Certificate of Incorporation

Restated Certificate of Incorporation sections affected: Section 10 of Article ELEVENTH

Our Restated Certificate of Incorporation currently provides that the affirmative vote of at least 75% of the shares of our capital stock issued and outstanding and entitled to vote is required to amend or repeal, or to adopt any provision inconsistent with, Article ELEVENTH of our Restated Certificate of Incorporation. The proposed amendment would eliminate this supermajority voting requirement. This proposed amendment is conditioned on the approval of Proposals 1(a) and 1(b) by the stockholders.

The current supermajority provision in Article ELEVENTH was originally adopted to preserve the classified structure of our board of directors and is, in the board of directors' view, no longer necessary if the board of directors is declassified pursuant to stockholder approval of Proposals 1(a) and 1(b).

If Proposal 1(c) is approved by the stockholders, and Proposals 1(a) and 1(b) are also approved, the relevant voting requirement to amend or repeal Article ELEVENTH of our Restated Certificate of Incorporation in the future would be a majority of the outstanding stock entitled to vote thereon. If Proposal 1(c) is not approved, or if Proposals 1(a) and 1(b) are not approved, the relevant voting requirement to amend or repeal Article ELEVENTH in the future will remain at least 75% of the shares of our capital stock issued and outstanding and entitled to vote.

Recommendation of the Board of Directors and Required Vote

Our board of directors believes that the proposed amendment to our Restated Certificate of Incorporation to eliminate the supermajority voting requirement for amending or repealing Article ELEVENTH of our Restated Certificate of Incorporation is in the best interests of our company and our stockholders and therefore recommends that the stockholders vote FOR this proposal.

The affirmative vote of the stockholders holding at least 75% of the issued and outstanding shares of our common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, is required for approval of this Proposal 1(c).

PROPOSAL TWO

APPROVAL OF AN AMENDMENT TO OUR RESTATED CERTIFICATE OF INCORPORATION TO INCREASE THE NUMBER OF AUTHORIZED SHARES OF COMMON STOCK

In May 2013, our board of directors voted to recommend to the stockholders that they approve an amendment to our Restated Certificate of Incorporation to increase the number of authorized shares of our common stock from 140,000,000 shares to 280,000,000 shares. A copy of a Certificate of Amendment to the Restated Certificate of Incorporation setting forth the amendment is attached to this proxy statement as <u>Appendix C</u>. As of May 15, 2013, we had authorized, outstanding or reserved for issuance the following shares of common stock:

- 45,163,330 shares of common stock outstanding;
- 1,926 shares of common stock reserved for issuance upon conversion of our Series A convertible preferred stock;
- 6,266,175 shares of common stock reserved for issuance upon conversion of our Series D preferred stock;
- 8,484,840 shares of common stock reserved for issuance upon conversion of our Series E preferred stock;
- 64,056,546 shares of common stock reserved for issuance upon exercise of outstanding warrants;
- 5,358,395 shares of common stock reserved for issuance upon exercise of outstanding stock options; and
- 2,642,303 shares of common stock reserved for future issuance under our 2008 Stock Incentive Plan and our 1995 Employee Stock Purchase

Our board of directors believes that the authorization of the additional shares of common stock is necessary to provide us with the flexibility to issue shares of common stock in connection with possible future financings, joint ventures, acquisitions, stock incentive plans and other general corporate purposes. We do not currently have any plans, understandings, arrangements, commitments or agreements, written or oral, for the issuance of the additional shares of common stock that would be authorized if this proposal is approved.

If this proposal to amend our Restated Certificate of Incorporation to increase the number of authorized shares of common stock is approved by the stockholders at the 2013 annual meeting, our board of directors will have authority to issue these additional shares of common stock without the necessity of further stockholder action. Holders of shares of our common stock have no preemptive rights with respect to any shares that may be issued in the future.

If this proposal is approved by our stockholders at the 2013 annual meeting, we intend to file the Certificate of Amendment promptly following the 2013 annual meeting reflecting the approved increase in the number of authorized shares of common stock.

Recommendation of the Board of Directors and Required Vote

Our board of directors believes that approval of the amendment to the Restated Certificate of Incorporation as set forth in the Certificate of Amendment attached to this proxy as Appendix C is in the best interests of our company and our stockholders and therefore recommends that stockholders vote FOR the approval of the amendment.

The affirmative vote of the stockholders holding a majority of the issued and outstanding shares of our common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, is required for approval of this Proposal Two.

PROPOSAL THREE

APPROVAL, BY NON-BINDING VOTE, OF EXECUTIVE COMPENSATION

We are providing our stockholders the opportunity to vote to approve, on an advisory, non-binding basis, the compensation of our named executive officers as disclosed in this proxy statement in accordance with the SEC's rules. This proposal, which is commonly referred to as "say-on-pay," is required by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, which added Section 14A to the Exchange Act.

Our compensation committee seeks to achieve the following broad goals in connection with our executive compensation programs and decisions regarding individual compensation:

- attract, retain and motivate the best possible executive talent;
- ensure executive compensation is aligned with our corporate strategies and business objectives, including our short-term operating goals and longer-term strategic objectives;
- promote the achievement of key strategic and financial performance measures by linking short- and long-term cash and equity incentives to the achievement of measurable corporate and individual performance goals; and
- align executives' incentives with the creation of stockholder value.

Our compensation program for our executives generally consists of five elements based upon the foregoing objectives:

- base salary;
- annual cash bonuses;
- · stock option awards;
- · health care, life insurance and other employee benefits; and
- · severance and change in control benefits.

The value of our variable, performance-based compensation is split between short-term compensation in the form of a cash bonus and long-term compensation in the form of stock option awards that vest over time from the time of the grant of the option awards and from the time of achievement of performance milestones. The annual cash bonus is intended to provide an incentive to our executives to achieve near-term operational objectives. The stock option awards provide an incentive for our executives to achieve longer-term strategic business goals, which should lead to higher stock prices and increased stockholder value.

The "Executive Compensation" section set forth elsewhere in this proxy statement, including "Compensation Discussion and Analysis," describes in detail our executive compensation programs and the decisions made by the compensation committee and the board of directors with respect to the fiscal year ended December 31, 2012.

Our board of directors is asking stockholders to approve a non-binding advisory vote on the following resolution:

RESOLVED, that the compensation paid to the company's named executive officers, as disclosed pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the compensation discussion and analysis, the compensation tables and any related material disclosed in this proxy statement, is hereby approved.

As an advisory vote, this proposal is not binding. The outcome of this advisory vote will not overrule any decision by the Company or our board of directors (or any committee thereof), create or imply any change to our

fiduciary duties or the fiduciary duties of our board of directors (or any committee thereof), or create or imply any additional fiduciary duties on us or our board of directors (or any committee thereof). However, our compensation committee and board of directors value the opinions expressed by our stockholders in their vote on this proposal and will consider the outcome of the vote when making future compensation decisions for named executive officers.

Recommendation of the Board of Directors and Required Vote

Our board of directors recommends that stockholders vote to approve the compensation of our named executive officers by voting FOR this proposal.

The affirmative vote of the stockholders holding a majority of the issued and outstanding shares of our common stock and Series D preferred stock present in person or represented by proxy and voting on the matter, voting together as a single class and on an as-converted basis, is required for approval of this Proposal Three.

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Executive Summary

The compensation committee of our board of directors is responsible for establishing compensation policies with respect to our executive officers, including our chief executive officer and our other executive officers who are listed in the Summary Compensation table below and who we refer to as "named executive officers." Our compensation committee makes compensation decisions relating to our executive officers after consultation with our board of directors.

This section discusses the principles underlying our executive compensation policies and decisions and the most important factors relevant to an analysis of these policies and decisions. It provides qualitative information regarding the manner and context in which compensation is awarded to and earned by our named executive officers. As further discussed in this section, our compensation and benefit programs help us attract, retain and motivate individuals who will maximize our business results by working to meet or exceed established company or individual objectives. In addition, we reward our executive officers for meeting certain developmental milestones, such as completing advancements in product candidate development, strategic partnerships or other financial transactions that add to our capital resources or create value for stockholders. We also decline to increase salaries, make bonus awards or issue equity compensation in the event that our corporate performance falls below expectations or developmental milestones are not met.

Compensation Philosophy and Objectives

The compensation committee seeks to achieve the following broad goals in connection with our executive compensation programs and decisions regarding individual compensation:

- attract, retain and motivate the best possible executive talent;
- ensure executive compensation is aligned with our corporate strategies and business objectives, including our short-term operating goals and longer-term strategic objectives;
- promote the achievement of key strategic and financial performance measures by linking short- and long-term cash and equity incentives to the
 achievement of measurable corporate and individual performance goals; and
- align executives' incentives with the creation of stockholder value.

To achieve these objectives, the compensation committee evaluates our executive compensation program with the goal of setting compensation at levels the committee believes are competitive with those of other companies in our industry and our region that compete with us for executive talent. In addition, our executive compensation program ties a substantial portion of each executive officer's overall compensation to key strategic, financial, research and operational goals such as clinical trial and regulatory progress, intellectual property portfolio development, establishment and maintenance of key strategic relationships and exploration of business development opportunities, as well as our financial and operational performance. We also provide a portion of our executive compensation in the form of stock options or other stock awards that vest over time from the time of the grant of the option awards and from the time of achievement of performance milestones, which we believe helps to retain our executives and align their interests with those of our stockholders by allowing them to participate in the longer term success of our company as reflected in stock price appreciation.

During 2011 and 2012, our compensation committee engaged Radford Surveys + Consulting, or Radford, to provide advice and recommendations regarding the amount and form of executive compensation, equity incentive programs and compensation generally. Radford did not provide any services to our company during 2011 or 2012 other than pursuant to its engagement by the compensation committee.

As part of its engagement in November 2010, Radford provided data on executive compensation from a peer group of publicly traded companies developed by the committee with Radford in November 2010. The committee selected these companies at that time in the belief that these companies had business life cycles, growth profiles, market capitalizations, products, research and development investment levels and number/capabilities of employees that were then comparable to ours. In working with Radford to develop the peer group, the committee and Radford generally targeted companies ranging from one-third to three times Idera's size in terms of number of employees and market capitalization, with lead drug candidates typically in Phase 2 or Phase 3. The companies included in the peer group were:

Achillion Pharmaceuticals, Inc. Anadys Pharmaceuticals, Inc. ARIAD Pharmaceuticals, Inc.

ArQule, Inc. BioCryst Pharmaceuticals,

AVI BioPharma, Inc. Inc.

Celldex Therapeutics, Inc. Cyclacel Pharmaceuticals, Inc. Cytokinetics, Incorporated

CytRx Corp. Dynavax Technologies Corp. GenVec, Inc.

Infinity Pharmaceuticals, Inc. Micromet, Inc. Myrexis, Inc.

Novavax, Inc. Peregrine Pharmaceuticals, Inc. Sangamo BioSciences, Inc.

Synta Pharmaceuticals Corp.

In November 2010, Radford also provided compensation survey data from the Radford Global Life Science Survey, a survey of U.S. biotech companies. Our compensation committee reviews a blend of the peer group and survey data in its determinations regarding executive compensation. We refer to this blended data as the "market compensation data."

Our compensation committee considered this blended data in December 2010 in connection with the establishment of base salaries for our named executive officers in 2011 and in December 2011 in connection with its determination of option grants for our named executive officers in December 2011 and January 2012.

Our compensation committee intends that if we achieve our corporate goals and the executive performs at the level expected, then the executive should have the opportunity to receive compensation that is competitive with industry norms. Accordingly, our compensation committee generally targets overall compensation for executives towards the 50th percentile of the market compensation data. However, the compensation committee from time to time targets a different percentile for individual elements of compensation or specific individuals based on experience, performance levels and potential performance levels of the executive and changes in duties and responsibilities.

In order to accomplish its objectives consistent with its philosophy for executive compensation, our compensation committee typically takes the following actions annually:

- reviews executive officer performance;
- reviews all components of executive officer compensation, including base salary, cash bonuses, equity compensation, the dollar value to the
 executive and cost to us of all health and life insurance and other employee benefits and the estimated payout obligations under severance and
 change in control scenarios;
- seeks input from our chief executive officer on the performance of all other executive officers;
- · consults with an independent compensation consultant;
- · holds executive sessions (without our management present);
- · reviews information regarding the performance and executive compensation of other companies; and
- reviews all of the foregoing with the board of directors.

Under our annual performance review program for our executives, annual performance goals are determined for our company as a whole and for each executive individually. Annual corporate goals are proposed by management and approved by the compensation committee. These corporate goals target the achievement of specific research, clinical, operational and financial milestones.

Annual individual goals focus on contributions that facilitate the achievement of the corporate goals and are closely aligned with the corporate goals. Individual goals are proposed by each executive and approved by the chief executive officer. Typically, the compensation committee sets the chief executive officer's goals and reviews and discusses with the chief executive officer the goals for all other executive officers. The individual performance goals of each named executive officer consist primarily of the key objectives and goals from our annual business plan that relate to the functional area for which the named executive officer is responsible. The individual performance goals for the chief executive officer are largely coextensive with the corporate goals.

Generally, at the end of each year, the compensation committee evaluates corporate and individual performance. The compensation committee considers the achievement of the corporate goals and individual performance as factors in determining annual salary increases, annual bonuses and annual stock option awards granted to our executives, although because of their high level of responsibility within our company, the determination of annual bonuses for our executive officers, including our named executive officers, is heavily weighted on our corporate performance. In assessing corporate performance, the committee evaluates corporate performance alongside the approved corporate goals for the year and also evaluates other aspects of corporate performance, including achievements and progress made by us outside of the corporate goals. In assessing individual performance, the compensation committee evaluates corporate performance in the areas of each officer's responsibility and relies on the chief executive officer's evaluation of each officer. The chief executive officer prepares evaluations of the other executives and in doing so compares individual performance to the individual performance goals. The chief executive officer recommends annual executive salary increases, annual stock option awards and bonuses, if any, which are then reviewed and approved by the compensation committee. In the case of the chief executive officer, the compensation committee conducts his individual performance evaluation. During this process, the compensation committee consults with its compensation consultant and, prior to approving compensation for executive officers, consults with the board of directors

For all executives, annual base salary increases, if any, are implemented during the first calendar quarter of the year. Annual stock option awards and bonuses, if any, are granted as determined by the compensation committee, typically in the fourth quarter of the applicable year.

The compensation committee does not plan to approve annual equity grants to employees, including named executive officers, at a time when our company is in possession of material non-public information. We do not award stock options to named executive officers concurrently with the release of material non-public information.

In November 2012, in light of continued uncertainties with respect to our clinical development plan, results of our ongoing clinical trials and our financial condition, the compensation committee determined not to conduct the compensation and performance review for our named executive officers that it generally conducts at the end of the year. Instead, the compensation committee agreed to defer such review until the results of our phase 2 clinical trial of IMO-3100 and our phase 1 clinical trial of IMO-8400 were known and we had sought and obtained additional financing. In May 2013, in light of our continuing focus on preserving our cash resources, the compensation committee determined to not increase the base salaries of our named executive officers for 2013 or pay any cash bonuses to our named executive officers for 2012. However, the compensation committee intends to make equity awards to our employees in recognition of their efforts in 2012 and to date in 2013 and in order to continue to offer incentives for future performance which, among other things, further our goals of executive retention.

Elements of Executive Compensation

The compensation program for our executives generally consists of five elements based upon the foregoing objectives:

- · base salary;
- annual cash bonuses;
- · stock option awards;
- · health care and life insurance and other employee benefits; and
- · severance and change in control benefits.

The value of our variable, performance-based compensation is split between short-term compensation in the form of a cash bonus and long-term compensation in the form of stock option awards that vest over time from the time of the grant of the option awards and from the time of achievement of performance milestones. The annual cash bonus is intended to provide an incentive to our executives to achieve near-term operational objectives. The stock option awards provide an incentive for our executives to achieve longer-term strategic business goals, which should lead to higher stock prices and increased stockholder value. We have not had any formal or informal policy or target for allocating compensation between long-term and short-term compensation, between cash and non-cash compensation or among the different forms of non-cash compensation. Instead, the compensation committee, after reviewing industry information and our cash resources, determines subjectively what it believes to be the appropriate level and mix of the various compensation components.

We do not have any defined benefit pension plans or any non-qualified deferred compensation plans.

We entered into a multi-year employment agreement with our chief executive officer, Sudhir Agrawal, D. Phil., in October 2005, which was amended in 2008 to ensure compliance with Section 409A of the Internal Revenue Code of 1986, as amended, or the Code. In August 2011, we entered into an amendment to our employment offer letter with our senior vice president of operations and chief financial officer, Louis J. Arcudi, III, and in December 2011, we entered into an amended and restated employment letter with Mr. Arcudi. These agreements are described below under the caption "Agreements with our Named Executive Officers."

Base Salary

In establishing base salaries for our executive officers, our compensation committee typically reviews the market compensation data presented by Radford, considers historic salary levels of the executive officer and the nature of the executive officer's responsibilities, compares the executive officer's base salary with those of our other executives and considers the executive officer's performance. The compensation committee also typically considers the challenges involved in hiring and retaining managerial personnel and scientific personnel with extensive experience in the chemistry of DNA and RNA and its application to toll-like receptors because of the new nature of this technology, general economic conditions and our financial condition. In assessing the executive officer's performance, the compensation committee considers the executive officer's role in the achievement of the annual corporate goals, as well as the performance evaluation prepared by our chief executive officer with respect to such executive officer. The compensation committee considers such evaluation as a means of informing the committee's decision as to whether the executive officer's performance was generally consistent with our expectations.

In November 2011, the compensation committee set base salaries for 2012. In light of setbacks during 2011 regarding our research and development programs, our board's adoption of new strategic goals for our company in September 2011 and our cash resources, the committee determined that annual base salaries for the named executive officers would not be increased for 2012 and would remain at 2011 levels, except that Mr. Arcudi's base salary was increased by \$5,000 as a result of his appointment in April 2011 as our senior vice president of

operations. In May 2013, the compensation committee determined that the base salaries of our named executive officers would not be increased for 2013 and would remain at 2012 levels.

Cash Bonuses

The compensation committee generally structures cash bonuses by linking them to the achievement of the annual corporate goals, corporate performance outside of the corporate goals and individual performance. The amount of the bonus paid, if any, varies among the executive officers depending on individual performance and their contribution to the achievement of our annual corporate goals and corporate performance generally. The compensation committee reviews and assesses corporate goals and individual performance by executive officers and considers the reasons why specific goals have been achieved or have not been achieved. While achievement against the applicable corporate goals is given substantial weight in connection with the determination of annual bonus, consideration is also given to an evaluation of our named executive officers' individual performance based on analysis of achievement of individual performance goals as well as the following subjective criteria:

- · leadership,
- management,
- · judgment and decision making skills,
- · results orientation and
- communication.

No formula is applied to the analysis of the achievement of corporate goals or individual goals by executive officers for purposes of the committee's determination of annual cash bonuses.

The compensation committee did not set performance goals for 2012 given the fluidity of our business plans and in light of the uncertainties with respect to our clinical development plan, results of our ongoing clinical trials and our financial condition. Instead, the compensation committee decided it would assess individual and corporate achievements as part of its annual compensation and performance review at the end of 2012. In May 2013, the compensation committee determined to not pay any cash bonuses to our named executive officers for 2012.

Equity Compensation

Our equity award program is the primary vehicle for offering long-term incentives to our executive officers, including our named executive officers. We believe that equity awards provide our executives with a strong link to our long-term performance, create an ownership culture and help to align the interest of our named executive officers and our stockholders. Equity grants are intended as both a reward for contributing to the long-term success of our company and an incentive for future performance. The vesting feature of our equity awards is intended to further our goal of executive retention by providing an incentive to our named executive officers to remain in our employ during the vesting period. In determining the size of equity awards to our executives, our compensation committee considers the achievement of our annual corporate goals, individual performance, the applicable executive officer's previous awards, including the exercise price of such previous awards, the recommendations of management and the market compensation data presented by Radford.

Our equity awards have typically taken the form of stock options. However, under the terms of our stock incentive plan, we may grant equity awards other than stock options, such as restricted stock awards, stock appreciation rights and restricted stock units.

The compensation committee approves all equity awards to our executive officers. The compensation committee reviews all components of the executive officer's compensation when determining annual equity awards to ensure that an executive officer's total compensation conforms to our overall philosophy and objectives.

The compensation committee typically makes initial stock option awards to new executive officers upon commencement of their employment and annual stock option awards thereafter. Equity awards to our named executive officers are typically granted annually in conjunction with the annual performance review. This review typically occurs at the regularly scheduled meeting of the compensation committee held in the fourth quarter of each year. In general, our option awards vest over four years in 16 equal quarterly installments. The exercise price of stock options equals the fair market value of our common stock on the date of grant, which is typically equal to the closing price of our common stock on Nasdaq on the date of grant.

In November 2011, the compensation committee granted annual option awards to our named executive officers, effective December 5, 2011. In light of setbacks during 2011 regarding our research and development programs and our board's adoption of new strategic goals in September 2011, as well as the committee's determination not to increase salaries for 2012 or grant bonuses for 2011 to our named executive officers, the committee structured these options to retain our named executive officers and to align the interests of our executive officers with the interests of our stockholders in the value creation that could arise beginning in 2012 from the achievement of our new strategic goals. As a result, the committee increased the size of the annual option awards, specifically targeting the 75th percentile of the market compensation data, and linked a portion of the vesting of the option awards to the achievement of specified milestones with the option awards having the following time based vesting and performance vesting components:

- 25% of the shares subject to the option become exercisable over four years in 16 equal quarterly installments with the first installment vesting February 28, 2012;
- 25% of the shares subject to the option become exercisable on November 28, 2012;
- 50% of the shares subject to the option become exercisable upon the achievement of specified performance milestones with 25% of the number of shares corresponding to a particular performance milestone vesting upon achievement of the performance milestone and the balance of such shares vesting in three equal installments on the first, second and third anniversaries of the achievement of such milestone; and
- 100% of the unexercisable shares subject to the option become exercisable if, upon or within 12 months after a change in control of our company,
 the named executive officer's employment is terminated by us without cause or the named executive officer terminates his employment for good
 reason.

The compensation committee adopted this vesting structure in order to address the following components of incentive compensation:

- our typical annual long-term incentive grant, vesting quarterly over four years;
- a short-term retention grant, vesting in full upon the first anniversary of the grant, which the committee adopted based on the need for executive retention and in recognition that our officers had not received salary increases for 2012 or cash bonuses for 2011; and
- a performance grant, vesting based on the achievement of specified performance milestones modeled on our strategic goals adopted by our board in September 2011.

The performance-based portion of the option awards was tied to nine specified performance milestones. These milestones relate to clinical trials and regulatory processes for our lead compounds, business development transactions and corporate financing. Each milestone must be achieved by a specified date ranging from March 31, 2012 to June 30, 2013 in order to be achieved. The committee designed these milestones to be challenging milestones that the committee believed could be reasonably achieved within the specified timing. Each milestone was weighted and assigned a percentage by the committee such that the achievement of a particular milestone will result in the commencement of vesting of that percentage of the shares subject to the performance-based portion of the option. The total weighting of the milestones equals 125% with the effect that a

named executive officer can vest with respect to all of the shares subject to the performance-based portion of the option even if one or more milestones are not achieved. However, even if milestones with aggregate weighting of more than 100% are achieved, the named executive officer will not be entitled to more than 100% of the shares subject to the performance-based portion of the option.

In determining the size of the option awards, the compensation committee reviewed the market compensation data presented by Radford regarding annual option grants on the basis of percentage ownership (as opposed to market value), specifically targeting the 75th percentile of the market compensation data. The committee also considered corporate and individual performance during 2011, the value of options then held by executive officers and our chief executive officer's recommendations with respect to the awards to be made to the other executive officers. On this basis, the committee granted options to each of our named executive officer, effective December 2011, including an option to Dr. Agrawal to purchase 500,000 shares. In addition to these options, the committee granted Dr. Agrawal a similar performance option in January 2012 to purchase 35,000 shares on the same terms.

As a result of its deferral of its annual compensation and performance review, the compensation committee did not grant any annual options awards or other equity awards for 2012.

Benefits and Other Compensation

We maintain broad-based benefits that are provided to all employees, including health and dental insurance, life and disability insurance and a 401(k) plan. During 2012, consistent with our prior practice, we matched 50% of the employee contributions to our 401(k) plan up to a maximum of 6% of the participating employee's annual salary, resulting in a maximum company match of 3% of the participating employee's annual salary, and subject to certain additional statutory dollar limitations. Named executive officers are eligible to participate in all of our employee benefit plans, in each case on the same basis as other employees and subject to any limitations in such plans. Each of our named executive officers contributed to our 401(k) plan and their contributions were matched by us.

Our board of directors has adopted a retirement policy to address the treatment of options in the event of an employee's retirement that applies to all employees, including all officers. For purposes of this policy, an employee will be deemed to have retired if the employee terminates his or her employment with us, has been an employee of ours for more than 10 years and is older than 65 upon termination of employment. Under the policy, if an employee retires, then

- all outstanding options held by the employee will automatically vest in full; and
- · the period during which the employee may exercise the options will be extended to the expiration of the term of the option under the plan.

Our board adopted this policy for our employees in recognition of the importance of stock options to the compensation of employees and in order that our employees get the full benefit of the options held by them if he or she retires after making 10 years of contributions to our company.

We occasionally pay relocation expenses for newly hired executive officers who we require to relocate as a condition to their employment by us. We also occasionally pay local housing expenses and travel costs for executives who maintain a primary residence outside of a reasonable daily commuting range to our headquarters. We believe that these are typical benefits offered by comparable companies to executives who are asked to relocate and that we would be at a competitive disadvantage in trying to attract executives who would need to relocate in order to work for us if we did not offer such assistance. In 2012, Dr. Sullivan received reimbursement for local housing expenses because Dr. Sullivan maintains a primary residence outside of a reasonable daily commuting range to our headquarters.

Our named executive officers also may participate in our employee stock purchase plan, which is generally available to all employees who work over 20 hours per week, including our executive officers so long as they own less than 5% of our common stock, including for this purpose vested and unvested stock options. Due to his stock ownership, Dr. Agrawal is not eligible to participate in the employee stock purchase plan. None of our named executive officers participated in the employee stock purchase plan during 2012.

Severance and Change-in-Control Benefits

We currently have an employment agreement with Dr. Agrawal and an employment letter agreement with Mr. Arcudi under which we agreed to provide benefits in the event of the termination of their employment under specified circumstances. We have provided more detailed information about these benefits, along with estimates of their value under various circumstances, under the captions "Agreements with our Named Executive Officers" and "Potential Payments Upon Termination or Change in Control" below.

In December 2011, we entered into an amended and restated employment letter with Mr. Arcudi. In connection with this amendment and restatement, we increased the period of time following termination of employment for which he is entitled to receive severance and healthcare, disability and life insurance benefits from three months to 12 months in connection with a termination by us without cause at any time, and provided severance and healthcare, disability and life insurance benefits for 12 months in connection with termination by Mr. Arcudi for good reason upon or within 12 months after a change of control. The committee agreed to these provisions based in part on market compensation data from Radford.

We believe providing severance and/or change-in-control benefits as a component of our compensation structure can help us compete for executive talent and attract and retain highly talented executive officers whose contributions are critical to our long-term success. After reviewing the practices of companies in general industry surveys provided by our independent compensation consultant, we believe that our severance and change-in-control benefits are appropriate.

Deductibility of Executive Compensation/Internal Revenue Code Section 162(m)

Section 162(m) of the Code generally disallows a tax deduction to public companies for certain compensation in excess of \$1 million per person paid to our chief executive officer and the three other officers (other than our chief executive officer and chief financial officer) whose compensation is required to be disclosed under the Securities Exchange Act of 1934, as amended, by reason of being among our three other most highly compensated officers. Certain compensation, including qualified performance-based compensation, will not be subject to the deduction limit if specified requirements are met. The compensation committee reserves the right to use its judgment to authorize compensation payments that may be subject to the limit when the compensation committee believes such payments are appropriate and in the best interests of our company and our stockholders. There can be no assurance that compensation attributable to awards granted under our plans will be treated as qualified performance-based compensation under Section 162(m).

Agreements with our Named Executive Officers

We have entered into agreements with certain of our named executive officers, as discussed below, that provide benefits to the executives upon their termination of employment in certain circumstances or under which we have agreed to specific compensation elements. Other than as discussed below, our named executive officers do not have employment agreements with us, other than standard employee confidentiality agreements, and are at-will employees.

Sudhir Agrawal, D. Phil.

We are a party to an employment agreement, as amended, with Dr. Agrawal, our chairman, president and chief executive officer. The agreement had an initial three-year term that is automatically extended for an

additional year on October 19th of each year during the term of the agreement unless either party provides prior written notice to the other that the term of the agreement is not to be extended. As a result, on each October 19th, the term of the agreement, as extended, will be three years. On October 19, 2012, the term was extended from October 19, 2014 to October 19, 2015.

Under the agreement, Dr. Agrawal is currently entitled to receive an annual base salary of \$549,000 or such higher amount as our compensation committee or our board of directors may determine. In addition, under the agreement, Dr. Agrawal is eligible to receive an annual bonus in an amount equal to between 20% and 70% of his base salary, as determined by the compensation committee or our board of directors.

If we terminate Dr. Agrawal's employment without cause or if he terminates his employment for good reason, as such terms are defined in the agreement, we have agreed to:

- continue to pay Dr. Agrawal his base salary as severance for a period ending on the earlier of the final day of the term of the agreement in effect immediately prior to such termination and the second anniversary of his termination date;
- pay Dr. Agrawal a lump sum cash payment equal to the pro rata portion of the annual bonus that he earned in the year preceding the year in which his termination occurs;
- continue to provide Dr. Agrawal with healthcare, disability and life insurance benefits for a period ending on the earlier of the final day of the term
 of the agreement in effect immediately prior to the termination date and the second anniversary of the termination date, except to the extent another
 employer provides Dr. Agrawal with comparable benefits;
- accelerate the vesting of any stock options or other equity incentive awards previously granted to Dr. Agrawal as of the termination date to the
 extent such options or equity incentive awards would have vested had he continued to be an employee until the final day of the term of the
 agreement in effect immediately prior to such termination; and
- · permit Dr. Agrawal to exercise any vested stock options until the second anniversary of the termination date.

If Dr. Agrawal's employment is terminated by him for good reason or by us without cause in connection with, or within one year after, a change in control, we have agreed to provide Dr. Agrawal with all of the items listed above, except that in lieu of the severance amount described above, we will pay Dr. Agrawal a lump sum cash payment equal to his base salary multiplied by the lesser of the aggregate number of years or portion thereof remaining in his employment term and two years. We have also agreed that if we execute an agreement that provides for our company to be acquired or liquidated, or otherwise upon a change in control, all unvested stock options held by Dr. Agrawal will vest in full.

If required by Section 409A of the Code, the payments we are required to make to Dr. Agrawal for the first six months following termination of his employment under his agreement will be made as a lump sum on the date that is six months and one day following such termination.

Our employment agreement with Dr. Agrawal provides that if all or a portion of the payments made under the agreement are subject to the excise tax imposed by Section 4999 of the Code, or a similar state tax or assessment, we will pay him an amount necessary to place him in the same after-tax position as he would have been had no excise tax or assessment been imposed. Any amounts paid pursuant to the preceding sentence will also be increased to the extent necessary to pay income and excise tax on those additional amounts.

In the event of Dr. Agrawal's death or the termination of his employment due to disability, we have agreed to pay Dr. Agrawal or his beneficiary a lump sum cash payment equal to the pro rata portion of the annual bonus that he earned in the year preceding his death or termination due to disability. Additionally, any stock options or

other equity incentive awards previously granted to Dr. Agrawal and held by him on the date of his death or termination due to disability will vest as of such date to the extent such options or equity incentive awards would have vested had he continued to be an employee until the final day of the term of the employment agreement in effect immediately prior to his death or termination due to disability. Dr. Agrawal or his beneficiary will be permitted to exercise such stock options until the second anniversary of his death or termination of employment due to disability.

Dr. Agrawal has agreed that during his employment with us and for a one-year period thereafter, he will not hire or attempt to hire any of our employees or compete with us.

Louis J. Arcudi, III

We are a party to an employment letter with Mr. Arcudi, our Senior Vice President of Operations, Chief Financial Officer, Treasurer and Secretary. If we terminate Mr. Arcudi's employment without cause at any time, or if he terminates his employment for good reason upon a change in control or within one year after a change of control, as such terms are defined in the agreement, we have agreed to:

- continue to pay Mr. Arcudi his base salary as severance for twelve months following such termination payable in accordance with our then current
 payroll practices; and
- continue to provide Mr. Arcudi with healthcare, disability and life insurance benefits for twelve months following such termination, except to the extent another employer provides Mr. Arcudi with comparable benefits.

Our agreement to pay severance and benefits is subject to Mr. Arcudi's entering into a separation and release agreement.

If required by Section 409A of the Code, the payments we are required to make to Mr. Arcudi in the first six months following the termination of his employment under his agreement will be made as a lump sum on the date that is six months and one day following such termination.

Compensation Committee Report

The compensation committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with our management. Based on this review and discussion, the compensation committee recommended to our board of directors that the Compensation Discussion and Analysis be included in this proxy statement.

By the compensation committee of the board of directors,

Malcolm MacCoss, Chairman Youssef El Zein Eve E. Slater

Summary Compensation Table

The table below summarizes compensation paid to or earned by our named executive officers. Our named executive officers have no stock awards, defined benefit pension or non-qualified compensation to report for 2012, 2011 and 2010.

Summary Compensation Table for Fiscal Year 2012

Name and Principal Position Sudhir Agrawal, D. Phil., Chairman, President and Chief Executive Officer	Year 2012 2011 2010	Salary (8) \$ 549,000 \$ 549,000 \$ 530,000	Option Awards (\$)(1) \$ 24,019 \$ 334,500 \$ 362,795		Compensation (2)	All Other Compensation (S)(3) \$ 75,447 \$ 30,606 \$ 29,710	Total (\$) \$ 648,466 \$ 914,156 \$1,182,505
Louis J. Arcudi, III Senior Vice President of Operations, Chief Financial Officer, Treasurer and Secretary	2012 2011 2010	\$ 315,000 \$ 310,000 \$ 290,000	\$ — \$ 133,820 \$ 148,476	\$ \$ \$	55,000	\$ 43,523 \$ 30,135 \$ 29,092	\$ 358,523 \$ 473,955 \$ 522,568
Timothy M. Sullivan, Ph. D. Vice President, Development Programs and Alliance Management	2012 2011 2010	\$ 299,000 \$ 299,000 \$ 289,120	\$ — \$ 100,365 \$ 113,247	\$ \$ \$	 51,000	\$ 49,877 \$ 46,978 \$ 45,893	\$ 348,877 \$ 446,343 \$ 499,260
Robert D. Arbeit, M.D. Vice President, Clinical Development	2012 2011 2010	\$ 300,000 \$ 300,000 \$ 290,100	\$ — \$ 100,365 \$ 112,634	\$ \$ \$	51,000	\$ 11,968 \$ 11,913 \$ 11,766	\$ 311,968 \$ 412,278 \$ 465,500

- (1) Represents the aggregate grant date fair value of options granted to each of the named executive officers as computed in accordance with ASC 718. These amounts do not represent the actual amounts paid to or realized by the named executive officers. See Note 2(j) to the financial statements in our annual report on Form 10-K for the year ended December 31, 2012 regarding assumptions we made in determining the fair value of option awards.
- (2) Represents bonuses paid under our cash bonus program based upon the achievement of corporate goals and the specified bonus target for each named executive officer.
- (3) "All Other Compensation" for 2012 for each of the named executive officers includes the following:

	Dr. Agrawal	Mr. Arcudi	Dr. Sullivan	Dr. Arbeit
Premiums paid by us for all insurance plans	\$22,681	\$22,192	\$ 25,440	\$4,468
Company match on 401(k)	\$ 7,500	\$ 7,500	\$ 7,500	\$7,500
Reimbursement for housing expenses	_	_	\$16,937	_
Unused vacation accrual	\$45,266	\$ 13,831	_	_

See "Compensation Discussion and Analysis" above for a discussion of annual cash bonuses and the amount of salary and bonus in proportion to total compensation.

Grants of Plan-Based Awards

The following table sets forth information regarding stock options granted to Dr. Agrawal during 2012. There were no other stock options and no non-equity incentive plan awards granted during 2012.

Grants of Plan-Based Awards for Fiscal Year 2012

Name_ Sudhir Agrawal, D. Phil.	Grant	All Other Option Awards: Number of Securities Underlying Options (#)(1) 35,000	Exercise or Base Price of Option Awards (\$/\$b) 1.16	Grant Date Fair Value of Option Awards (5)(2) \$ 24,019
Louis J. Arcudi, III	_	_	_	_
Timothy M. Sullivan, Ph.D.	_	_	_	_
Robert D. Arbeit, M.D.		_	_	_

- (1) The stock options granted to the named executive officer listed above were granted pursuant to our 2008 Stock Incentive Plan. The term of these options is ten years. The stock options vest based on a combination of performance-based vesting and time-based vesting. See "Compensation Discussion and Analysis Elements of Executive Compensation Equity Compensation" for a full description of the vesting terms for these options. See "Agreements with our Named Executive Officers" for further information about acceleration of vesting of Dr. Agrawal's options in the event of the termination of his employment and/or a change of control.
- (2) Represents the aggregate grant date fair value of option awards made to the named executive officer in 2012 as computed in accordance with ASC 718. These amounts do not represent the actual amounts paid to or realized by the named executive officers during 2012. See Note 2(j) to the financial statements in our annual report on Form 10-K for the year ended December 31, 2012 regarding assumptions we made in determining the fair value of option awards.

Outstanding Equity Awards At Fiscal Year-End

The following table sets forth information regarding the outstanding stock options held by our named executive officers as of December 31, 2012. None of our named executive officers held shares of unvested restricted stock as of December 31, 2012.

Outstanding Equity Awards At Fiscal Year-End for 2012

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date
Sudhir Agrawal, D. Phil. (1)	31,250		\$ 4.16	11/30/2014
	125,000	_	\$ 4.48	5/12/2015
	50,000	_	\$ 5.76	6/1/2015
	37,500	_	\$ 4.24	12/15/2015
	125,000	_	\$ 5.10	12/14/2016
	62,500	_	\$ 7.05	6/25/2017
	125,000	_	\$ 13.28	1/2/2018
	200,000	_	\$ 8.70	12/16/2018
	225,000(2)	75,000(2)	\$ 5.24	12/23/2019
	115,500(3)	115,500(3)	\$ 2.74	12/27/2020
	184,999(4)	253,751(4)	\$1.157	11/28/2021
	12,950(4)	17,764(4)	\$ 1.16	11/28/2021
Louis J. Arcudi, III	80,000	_	\$12.25	12/3/2017
	40,000	_	\$ 8.70	12/16/2018
	82,500(2)	27,500(2)	\$ 5.24	12/23/2019
	47,500(3)	47,500(3)	\$ 2.74	12/27/2020
	74,000(4)	101,500(4)	\$1.157	11/28/2021
Timothy M. Sullivan, Ph.D.	5,625	_	\$ 8.96	12/16/2013
	58,750	_	\$ 4.16	11/30/2014
	12,500	_	\$ 4.24	12/15/2015
	20,000	_	\$ 5.10	12/14/2016
	25,000	_	\$ 13.28	1/2/2018
	35,000		\$ 8.70	12/16/2018
	52,500(2)	17,500(2)	\$ 5.24	12/23/2019
	36,250(3)	36,250(3)	\$ 2.74	12/27/2020
Diling D. Adida M.D.	55,499(4)	76,126(4)	\$1.157	11/28/2021
Robert D. Arbeit, M.D.	32,500(5)	7,500(5)	\$ 6.43	8/3/2019
	12,750(2)	4,250(2)	\$ 5.24 \$ 2.74	12/23/2019
	36,250(3) 55,499(4)	36,250(3) 76,126(4)	\$ 2.74 \$1.157	12/27/2020 11/28/2021
	JJ, TJJ(1)	70,120(4)	ψ1.13/	11/20/2021

⁽¹⁾ See "Agreements with our Named Executive Officers" for further information about acceleration of vesting of Dr. Agrawal's options in the event of the termination of his employment and/or a change of control.

^{(2) 6.25%} of the shares subject to this option vest quarterly from the date of grant until December 23, 2013 when all shares will be vested. The total number of shares subject to the option equals the sum of the figures in the exercisable and unexercisable columns.

^{(3) 6.25%} of the shares subject to this option vest quarterly from the date of grant until December 27, 2014 when all shares will be vested. The total number of shares subject to the option equals the sum of the figures in the exercisable and unexercisable columns.

- (4) The shares subject to this option vest as follows:
 - 25% of the shares vest over four years in 16 equal quarterly installments with the first installment vesting February 28, 2012;
 - 25% of the shares vest on November 28, 2012;
 - 50% of the shares vest upon the achievement of specified performance milestones with 25% of the number of shares corresponding to a particular performance milestone vesting upon achievement of the performance milestone and the balance of such shares vesting in three equal installments on the first, second and third anniversaries of the achievement of such milestone; and
 - 100% of the unexercisable shares subject to the option vest if, upon or within 12 months after a change in control of our company, the named executive officer's employment is terminated by us without cause or the named executive officer terminates his employment for good reason.
- (5) 6.25% of the shares subject to this option vest quarterly from the date of grant until August 3, 2013 when all shares will be vested. The total number of shares subject to the option equals the sum of the figures in the exercisable and unexercisable columns.

Option Exercises and Stock Vested

None of our named executive officers exercised any options during the year ended December 31, 2012.

Potential Payments under Termination or Change in Control

We have an employment agreement with Dr. Agrawal that provides for severance benefits and acceleration of vesting of equity awards following a termination of his employment with our company. Additionally, Mr. Arcudi's employment offer letter provides for severance benefits in certain circumstances. These agreements are described above under the caption "Agreements with our Named Executive Officers." Neither Dr. Sullivan nor Dr. Arbeit is entitled to any severance benefits following a termination of his employment with our company. Each of our named executive officers is entitled to acceleration of vesting in connection with a termination of employment upon or within one year after a change in control for the options the compensation committee granted in November 2011, effective December 5, 2011 and January 3, 2012.

Termination of Employment Not in Connection with or following a Change in Control

The following table sets forth the estimated potential benefits that our named executive officers would be entitled to receive upon their termination of employment with our company (other than a termination in connection with or following a change in control of our company) if the named executive officers' employment terminated on December 31, 2012. This table represents estimates only and does not necessarily reflect the actual amounts that would be paid to our named executive officers, which would only be known at the time that they become eligible for payment following their termination.

Termination of Employment Not In Connection With or Following Change in Control

			Value of		
			Accelerated	Value of	
	Severance	Bonus	Vesting of	Continuation	
	Payments	Amount	Stock Options	of Benefits	Total
Name	(\$)	(S)	(\$)(3)	(\$)(1)	(\$)
Sudhir Agrawal, D. Phil.(2)	\$1,098,000	_	_	\$ 47,507	\$1,145,507
Louis J. Arcudi, III(4)	\$ 315,000	_	_	\$ 23,226	\$ 338,226
Timothy M. Sullivan, Ph.D.	<u> </u>	_	_	_	_
Robert D. Arbeit, M.D.	_				_

- (1) This amount represents the estimated cost to us of continuing the named executive officer's healthcare, disability, life and dental insurance benefits for the full severance period applicable to such named executive officer based on our costs for such benefits at December 31, 2012.
- (2) Following the termination of Dr. Agrawal's employment by him for good reason or by us other than for death, disability or cause, Dr. Agrawal will be entitled to severance payments, a pro rata portion of his bonus for the prior year, if any, benefits continuation and acceleration of vesting of his equity awards to the extent such options or equity incentive awards would have vested had he continued to be an employee until the final day of the term of the agreement in effect immediately prior to such termination. Upon termination of Dr. Agrawal's employment due to death or disability, we have agreed to pay a pro rata portion of his bonus for the prior year and to accelerate the vesting of his equity awards to the extent such options or equity incentive awards would have vested had he continued to be an employee until the final day of the term of the agreement in effect immediately prior to such termination. See "Agreements with our Named Executive Officers" for further information about acceleration of vesting and severance payments in such circumstances
- (3) Calculated by multiplying the number of shares subject to options for which vesting would be accelerated by the difference between \$0.89, the closing price of our common stock on December 31, 2012, and the per share exercise prices for such options. As of December 31, 2012, all of Dr. Agrawal's options had exercise prices that were higher than \$0.89 per share.
- (4) Severance payments and benefits continuation will only be paid to Mr. Arcudi following termination by us without cause. See "Agreements with our Named Executive Officers" for further information about our agreement with Mr. Arcudi.

Termination of Employment In Connection With or Following Change in Control

The following table sets forth the estimated potential benefits that our named executive officers would be entitled to receive upon their termination of employment with our company in connection with or following a change in control of our company if the change of control occurred on December 31, 2012 and the named executive officer's employment was immediately terminated. This table represents estimates only and does not necessarily reflect the actual amounts that would be paid to our named executive officers, which would only be known at the time that they become eligible for payment following their termination.

Termination of Employment In Connection With or Following Change in Control

			v aiue oi		
			Accelerated	Value of	
	Severance	Bonus	Vesting of	Continuation	
	Payments	Amount	Stock Options	of Benefits	Total
Name	(\$)	(\$)	(\$)(3)	(\$)(1)	(\$)
Sudhir Agrawal, D. Phil.(2)	\$1,098,000	_	_	\$ 47,507	\$1,145,507
Louis J. Arcudi, III(4)	\$ 315,000	_	_	\$ 23,226	\$ 338,226
Timothy M. Sullivan, Ph.D.	_	_	_	_	_
Robert D. Arbeit, M.D.	_		_		_

- (1) Represents the estimated cost to us of continuing the named executive officers' healthcare, disability, life and dental insurance benefits for the applicable severance period based on our costs for such benefits at December 31, 2012.
- (2) Following the termination of Dr. Agrawal's employment in connection with or following a change in control by him for good reason or by us other than for death, disability or cause, Dr. Agrawal will be entitled to a lump sum severance payment, a pro rata portion of his bonus for the prior year, benefits continuation and full acceleration of vesting of his option awards. See "Agreements with our Named Executive Officers" for further information about acceleration of vesting and severance payments in such circumstances.
- (3) Calculated by multiplying the number of shares subject to options for which vesting would be accelerated

by the difference between \$0.89, the closing price of our common stock on December 31, 2012, and the per share exercise prices for such options. As of December 31, 2012, all of the options subject to acceleration granted to these individuals had an exercise price that was higher than \$0.89 per share.

(4) Following the termination of Mr. Arcudi's employment in connection with or following a change in control by him for good reason or by us other than for death, disability or cause, Mr. Arcudi will be entitled to severance payments of his then current base salary and benefits continuation for a twelve-month period, payable in accordance with and at the times contemplated by our then current payroll practices.

EQUITY COMPENSATION PLAN INFORMATION

The following table provides information about our common stock that may be issued upon exercise of options and warrants under all of our equity compensation plans as of December 31, 2012.

		Number of Securities
	Weighted-	Remaining Available
	Average	For Future Issuance
Number of Securities	Exercise	Under Equity
to be Issued Upon	Price of	Compensation
Exercise of	Outstanding	Plans (Excluding
Outstanding Options	Options and	Securities Reflected
and Warrants	Warrants	in Column (a))
(a)	(b)	(c)
5,657,256	\$ 4.96	2,413,469
	_	
5,657,256	\$ 4.96	2,413,469
	to be Issued Upon Exercise of Outstanding Options and Warrants (a) 5,657,256	Number of Securities to be Issued Upon Exercise of Outstanding Outstanding Options and Warrants (a) 5,657,256 S 4.96

(1) Consists of our:

- 1995 Employee Stock Purchase Plan;
- 1995 Director Stock Option Plan;
- 1997 Stock Incentive Plan;
- · 2005 Stock Incentive Plan; and
- 2008 Stock Incentive Plan.

Shares are available for future issuance only under our 1995 Employee Stock Purchase Plan and our 2008 Stock Incentive Plan.

PROPOSAL FOUR

APPROVAL OF THE IDERA PHARMACEUTICALS, INC. 2013 STOCK INCENTIVE PLAN

Overview

In the opinion of our board of directors, the future success of our company depends, in large part, on our ability to maintain a competitive position in attracting, retaining and motivating key employees with experience and ability. On May 22, 2013, our board of directors adopted, subject to stockholder approval, the Idera Pharmaceuticals, Inc. 2013 Stock Incentive Plan, which we refer to as the 2013 Stock Incentive Plan.

The 2013 Stock Incentive Plan would allow for the issuance of up to 4,000,000 shares of our common stock plus such additional number of shares of common stock (up to 5,945,000) as is equal to the sum of (i) the number of shares of common stock reserved for issuance under our 2008 Stock Incentive Plan that are available for grant under the 2008 Stock Incentive Plan immediately prior to the date the 2013 Stock Incentive Plan is approved by our stockholders and (ii) the number of shares of common stock subject to awards granted under our 2008 Stock Incentive Plan which awards expire, terminate or are otherwise surrendered, cancelled, or forfeited or repurchased by us at their original issuance price pursuant to a contractual repurchase right (subject, however, in the case of incentive stock options to any limitations of the Internal Revenue Code of 1986, as amended, or the Code).

We will no longer issue awards under the 2008 Stock Incentive Plan upon approval by stockholders of the 2013 Stock Incentive Plan.

As of May 15, 2013, options covering 3,632,603 shares of our common stock with a weighted average exercise price of \$3.72 and a weighted average remaining term of 7.4 years were outstanding under the 2008 Stock Incentive Plan. In addition, as of May 15, 2013, 2,327,042 shares were available for future grant under the 2008 Stock Incentive Plan. On May 22, 2013, our compensation committee granted options covering 1,719,333 shares of our common stock under our 2008 Stock Incentive Plan.

The 2013 Stock Incentive Plan is intended to be a broad-based plan that allows for the issuance of equity awards deep into our organization. Approximately 18 employees, or about 100% of our employee population, currently participate in our equity incentive compensation programs. In addition, consultants and advisors, as well as our non-employee directors, currently participate in our equity incentive compensation programs.

The board of directors believes that approving the 2013 Stock Incentive Plan is appropriate and in the best interests of stockholders given the highly competitive environment in which we recruit and retain employees, the dilution rate of our peers and our historical rate of issuing equity awards. Our board of directors and management will carefully consider all proposed grants under the 2013 Stock Incentive Plan.

In developing our share request for the 2013 Stock Incentive Plan and analyzing the impact of utilizing equity on our shareholders, we considered our "burn rate" and "overhang."

Burn rate provides a measure of the potential dilutive impact of our annual equity award program. Set forth below is a table that reflects our burn rate for 2012, 2011 and 2010 as well as the average over those years.

			Basic Weighted Average Number of	Gross
FY	Options Granted	Total Granted	Common Shares Outstanding	Burn Rate (1)
2012	187,500	187,500	27,639,351	0.7%
2011	1,670,750	1,670,750	27,622,710	6.0%
2010	1,087,000	1,087,000	25,139,274	4.3%
Three-Year Average				3.7%

 "Gross Burn Rate" is defined as the number of shares of common stock underlying options granted in the year divided by the basic weighted average number of shares of common stock outstanding.

Overhang is a measure of potential dilution and is defined as the sum of (i) the total number of shares underlying all equity awards outstanding and (ii) the total number of shares available for future award grants, divided by: the sum of (a) the total number of shares underlying all equity awards outstanding, (b) the total number of shares available for future award grants and (c) the basic weighted average common shares outstanding for the most recently completed fiscal year. Our overhang at December 31, 2012 was 21.9%. If the 4,000,000 shares proposed to be authorized for grant under the 2013 Stock Incentive Plan are included in the calculation, our overhang would have been 29.8% at December 31, 2012.

Summary of the 2013 Stock Incentive Plan

The following summary of the 2013 Stock Incentive Plan is qualified in its entirety by reference to the 2013 Stock Incentive Plan, a copy of which is attached as <u>Appendix D</u> to this proxy statement. In addition, a copy of the 2013 Stock Incentive Plan may be obtained by making a written request to our Secretary at Idera Pharmaceuticals, Inc., 167 Sidney Street, Cambridge, Massachusetts 02139. References to the board of directors in this summary shall include the compensation committee of the board of directors or any similar committee appointed by the board of directors to administer the 2013 Stock Incentive Plan.

Types of Awards; Shares Available for Issuance

The 2013 Stock Incentive Plan allows for the issuance of incentive stock options intended to qualify under Section 422 of the Code, nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock units, other stock-based awards and performance awards; we refer to these securities as Awards. Subject to adjustment in the event of stock splits, stock dividends or similar events, Awards may be made under the 2013 Stock Incentive Plan for up to 4,000,000 shares of our common stock plus such additional number of shares of common stock (up to 5,945,000) as is equal to the sum of (i) the number of shares of common stock reserved for issuance under the 2008 Stock Incentive Plan that remain available for grant under the 2008 Stock Incentive Plan is approved by stockholders and (ii) any shares of common stock subject to awards that are currently outstanding under the 2008 Stock Incentive Plan that expire, are terminated, cancelled, surrendered or forfeited, or are repurchased by us at their original issuance price pursuant to a contractual repurchase right (subject, however, in the case of incentive stock options to any limitations under the Code). In addition, if any Award granted under the 2013 Stock Incentive Plan expires or is terminated, surrendered, cancelled, forfeited or otherwise results in any common stock not being issued, the unused common stock covered by such Award shall again be available for the grant of Awards under the 2013 Stock Incentive Plan (subject, in the case of incentive stock options, to any limitations under the Code). However, shares of common stock delivered to us by a participant to purchase common stock upon exercise of an Award or to satisfy tax withholding obligations (including shares retained from the Award creating the tax obligation) shall not be added back to the number of shares of common stock available for the future grant of Awards under the 2013 Stock Incentive Plan. In addition, common stock repurchased by us on the open market using proceeds fr

Certain sub-limitations apply to the shares available for issuance under the 2013 Stock Incentive Plan. The maximum number of shares with respect to which Awards may be granted to any participant under the 2013 Stock Incentive Plan is 1,500,000 shares per calendar year. The maximum number of shares with respect to which Awards may be granted to directors who are not employees of Idera at the time of grant shall be 20% of the maximum number of authorized shares under the 2013 Stock Incentive Plan. Performance Awards can also provide for cash payments of up to a maximum of \$1,500,000 per fiscal year per individual.

All shares of common stock covered by stock appreciation rights, if any, shall be counted against the number of shares available for grant under the 2013 Stock Incentive Plan and the sub-limitations on Awards to non-employee directors. However, stock appreciation rights that may be settled only in cash shall not be so counted, and if a stock appreciation right is granted in tandem with an option for the same number of shares of

common stock and the grant provides that only one such Award may be exercised, or tandem SAR, only the shares covered by the option shall be counted, and the expiration of one in connection with the other's exercise will not restore shares to the 2013 Stock Incentive Plan. The shares covered by a tandem SAR will not again become available for grant under the 2013 Stock Incentive Plan upon the expiration or termination of the tandem SAR. In the case of the exercise of a stock appreciation right, the number of shares counted against the shares available under the 2013 Stock Incentive Plan and the sub-limitation on Awards to non-employee directors shall be the full number of shares subject to the stock appreciation right multiplied by the percentage of the stock appreciation right actually exercised, regardless of the number of shares actually used to settle the stock appreciation right upon exercise.

Subject to adjustment in the event of changes in capitalization and reorganization events (as defined below), any Award granted under the 2013 Stock Incentive Plan that is not a "full-value award" shall be counted against the number of shares available for grant under the 2013 Stock Incentive Plan and the sub-limitation on Awards to non-employee directors as one share for each share of common stock subject to such Award, and any Award that is a "full-value award" shall be counted as 1.25 shares for each share of common stock subject to such Award. "Full-value award" means any Award of restricted stock or restricted stock units or any other stock-based Award with a per share price or per unit purchase price lower than 100% of the fair market value of our common stock on the date of grant. To the extent a share that was subject to an Award that counted as one share is returned to the plan as described above, each applicable share reserve will be credited with one share, and to the extent a share that was subject to an Award that counted as 1.25 shares is returned to the plan as described above, each applicable share reserve will be credited with 1.25 shares.

In connection with a merger or consolidation of an entity with us or our acquisition of property or stock of an entity, our board of directors may grant Awards under the 2013 Stock Incentive Plan in substitution for an option or other stock or stock-based Awards granted by such entity or an affiliate thereof on such terms as our board of directors determines appropriate in the circumstances, notwithstanding any limitation on Awards contained in the 2013 Stock Incentive Plan. Substitute Awards granted under the 2013 Stock Incentive Plan in connection with a merger or consolidation of an entity with Idera or the acquisition by Idera of property or stock of an entity shall not count against the overall share limits and sub-limitations described above, except as required by reason of Section 422 and related provisions of the Code.

Shares issued under the 2013 Stock Incentive Plan may consist in whole or in part of authorized but unissued shares or treasury shares.

Descriptions of Awards

Options. Optionees receive the right to purchase a specified number of shares of common stock at a specified option price and subject to such other terms and conditions as are specified in connection with the option grant. Options may not be granted at an exercise price that is less than 100% of the fair market value of the common stock on the effective date of grant; provided, however, that if our board of directors approves the grant of an option with an exercise price to be determined on a future date, the exercise price may not be less than 100% of the fair market value of the common stock on such future date. Under present law, incentive stock options may not be granted at an exercise price less than 110% of the fair market value in the case of stock options granted to optionees holding more than 10% of the total combined voting power of all classes of our stock. Under the terms of the 2013 Stock Incentive Plan, stock options may not be granted for a term in excess of 10 years (and, under present law, five years in the case of incentive stock options granted to optionees holding greater than 10% of the total combined voting power of all classes of our stock). Any or all of the Awards available under the 2013 Stock Incentive Plan may be in the form of incentive stock options. The 2013 Stock Incentive Plan permits participants to pay the exercise price of options using one or more of the following manners of payment: (i) payment by cash, check or wire transfer, or, except as may otherwise be provided in the applicable option agreement or approved by our board of directors, and subject to certain conditions, by surrender to us of shares of common stock owned by the

participant valued at their fair market value, (iii) to the extent provided in an applicable nonstatutory stock option agreement or approved by our board of directors, and subject to certain conditions, by delivery of a notice of "net exercise" as a result of which we will retain a number of shares of common stock otherwise issuable pursuant to the stock option equal to the aggregate exercise price for the portion of the option being exercised divided by the fair market value of our common stock on the date of exercise, (iv) to the extent provided in the applicable option agreement or approved by our board of directors, by any other lawful means, or (v) any combination of the foregoing.

Stock Appreciation Rights. A stock appreciation right, or SAR, is an award entitling the holder, upon exercise, to receive a number of shares of common stock or cash (or a combination thereof) determined by reference to appreciation, from and after the date of grant, in the fair market value of a share of our common stock over the measurement price. SARs may be granted independently or in tandem with stock options granted under the 2013 Stock Incentive Plan. When a SAR is granted in tandem with a stock option, the SAR will be exercisable only at such time or times, and to the extent, that the related stock option is exercisable (except to the extent designated by our board of directors in connection with reorganization event), will terminate and no longer be exercisable upon the termination or exercise of the related option (except to the extent designated by our board of directors in connection with a reorganization event), and will be transferable only with the related stock option. The related stock option will terminate and no longer be exercisable upon the exercise of the SAR. The 2013 Stock Incentive Plan provides that the measurement price of an SAR may not be less than 100% of the fair market value of our common stock on the effective date of grant (provided, however, that if our board of directors approves the grant of a SAR effective as of a future date, the measurement price shall not be less than 100% of the fair market value on such future date) and that SARs granted under the 2013 Stock Incentive Plan may not have a term in excess of 10 years.

Limitation on Repricing of Options or SARs; Other Limitations. With respect to options and SARS, unless such action is approved by stockholders or permitted under the terms of the 2013 Stock Incentive Plan in connection with certain changes in capitalization and reorganization events, we may not (i) amend any outstanding option or SAR granted under the 2013 Stock Incentive Plan to provide an exercise price or measurement price per share that is lower than the then-current exercise price or measurement price per share of such outstanding option or SAR, (ii) cancel any outstanding option or SAR (whether or not granted under the 2013 Stock Incentive Plan) and grant in substitution therefor new Awards under the 2013 Stock Incentive Plan (other than certain Awards granted in connection with our merger or consolidation with, or acquisition of, another entity, covering the same or a different number of shares of common stock and having an exercise price or measurement price per share lower than the then-current exercise price or measurement price per share of the cancelled option or SAR, (iii) cancel in exchange for a cash payment any outstanding option or SAR with an exercise price or measurement price per share above the then-current fair market value of our common stock, or (iv) take any other action under the 2013 Stock Incentive Plan that constitutes a "repricing" within the meaning of the rules of the Nasdaq Stock Market. No option or SAR granted under the 2013 Stock Incentive Plan shall contain any provision entitling the grantee to the automatic grant of additional options or SARs in connection with any exercise of the original option or SAR or provide for the payment or accrual of dividend equivalents.

Restricted Stock Awards. We may issue Awards entitling recipients to acquire shares of our common stock subject to our right to repurchase all or part of such shares at their issue price or other stated or formula price (or to require forfeiture of such shares if issued at no cost) from the recipient in the event that conditions specified by the board of directors in the applicable Award are not satisfied prior to the end of the applicable restriction period established for such Award. We refer to these Awards as Restricted Stock. Unless otherwise provided in the applicable Award agreement, any dividend declared and paid by us with respect to a share of Restricted Stock shall be paid to the participant (without interest) only if and when such shares of Restricted Stock become free from any applicable restrictions on transferability and forfeitability.

Restricted Stock Units. We may also grant Awards entitling the recipient to receive shares of our common stock (or cash equal to the fair market value of such shares) to be delivered at the time such Award vests. We refer to these Awards as Restricted Stock Units. Our board of directors may, in its discretion, provide that

settlement of Restricted Stock Units shall be deferred, on a mandatory basis or at the election of the participant in a manner that complies with Section 409A of the Code. A participant has no voting rights with respect to any Restricted Stock Units. A grant of Restricted Stock Units may provide the participant with a right to receive dividend equivalents, which shall be subject to the same restrictions on transfer and forfeitability as the underlying Restricted Stock Units. Dividend equivalents with respect to Restricted Stock Units will be subject to the same restrictions on transfer and forfeitability as the underlying Restricted Stock Unit Award.

Other Stock-Based Awards. Under the 2013 Stock Incentive Plan, our board of directors may grant other Awards that are valued in whole or in part by reference to, or are otherwise based upon our common stock or other property, having such terms and conditions as the board of directors may determine. We refer to these types of Awards as Other Stock-Based Awards. Other Stock-Based Awards may be available as a form of payment in the settlement of other Awards granted under the 2013 Stock Incentive Plan or as payment in lieu of compensation to which a participant is otherwise entitled. Other Stock-Based Awards may be paid in shares of our common stock or cash, as our board of directors determines. Dividend equivalents with respect to Other Stock-Based Awards will be subject to the same restrictions on transfer and forfeitability as the underlying Other Stock-Based Award.

Performance Awards. Restricted Stock, Restricted Stock Units and Other Stock-Based Awards granted under the 2013 Stock Incentive Plan may be made subject to achievement of performance goals. We refer to these types of Awards as Performance Awards. Performance Awards may also provide for cash payments of up to \$1,500,000 per fiscal year per individual. With respect to Performance Awards intended to qualify as "performance-based compensation" under Section 162(m) of the Code, the compensation committee of our board of directors shall specify, at the time of grant, that such Performance Award will be granted, vest and/or pay out solely upon the achievement of specified objective performance criteria that are based on the relative or absolute attainment of specified levels of one or any combination of the following, which may be determined pursuant to generally accepted accounting principles, or GAAP, or on a non-GAAP basis, as determined by the compensation committee:

- · earnings per share;
- return on average equity or average assets with respect to a pre-determined peer group;
- earnings;
- · earnings growth;
- revenues;
- expenses;
- stock price;
- · market share;
- · return on sales, assets, equity or investment;
- regulatory compliance;
- · achievement of balance sheet or income statement objectives;
- total shareholder return;
- net operating profit after tax;
- pre-tax or after tax income;
- · cash flow;
- · achievement of research, development, clinical or regulatory milestones;
- · product sales;

- business development activities;
- the entry into an arrangement or agreement with a third party for the development, commercialization, marketing or distribution of products, services or technologies, or for conducting a research program to discover and develop a product, service or technology, and/or the achievement of milestones under such arrangement or agreement, including events that trigger an obligation or payment right;
- achievement of domestic and international regulatory milestones, including the submission of filings required to advance products, services and technologies in clinical development and the achievement of approvals by regulatory authorities relating to the commercialization of products, services and technologies;
- the achievement of discovery, preclinical and clinical stage scientific objectives, discoveries or inventions for products, services and technologies under research and development;
- the entry into or completion of a phase of clinical development for any product, service or technology, such as the entry into or completion of phase 1, 2 and/or 3 clinical trials;
- · the consummation of debt or equity financing transactions, or acquisitions of business, technologies and assets;
- · new product or service releases;
- specified levels of product sales, net income, earnings before or after discontinued operations, interest, taxes, depreciation and/or amortization, operating profit before or after discontinued operations and/or taxes, sales, sales growth, earnings growth, cash flow or cash position, gross margins, stock price, market share, return on sales, assets, equity or investment; and
- improvement of financial ratings.

The preceding performance criteria may reflect absolute entity or business unit performance or a relative comparison to the performance of a peer group of entities or other external measure of selected performance criteria and may be absolute in their terms or measured against or in relationship to other companies comparably, similarly or otherwise situated. The compensation committee may specify that such performance measures shall be adjusted to exclude any one or more of:

- · extraordinary items;
- gains or losses on the dispositions of discontinued operations;
- · the cumulative effects of changes in accounting principles;
- the writedown of any asset;
- · fluctuation in foreign currency exchange rates; and
- · charges for restructuring and rationalization programs.

Such performance measures (i) may vary by participant and may be different for different Awards; (ii) may be particular to a participant or the department, branch, line of business, subsidiary or other unit in which the participant works and may cover such period as may be specified by the compensation committee; and (iii) shall be set by the compensation committee within the time period prescribed by, and shall otherwise comply with the requirements of, Section 162(m). The compensation committee may adjust downwards, but not upwards, the cash or number of shares payable pursuant to such Awards and may not waive the achievement of the applicable performance measures except in the case of the death or disability of the participant or a change in control of Idera. Performance Awards that are not intended to qualify as "performance-based compensation" under Section 162(m) may be based on these or other performance measures as determined by our board of directors. Dividend equivalents with respect to Performance Awards will be subject to the same restrictions on transfer and forfeitability as the underlying Performance Award.

Transferability of Awards

Except as the board of directors may otherwise determine or provide in an Award in connection with certain gratuitous transfers, Awards may not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution or, other than in the case of an incentive stock option, pursuant to a qualified domestic relations order. During the life of the participant, Awards are exercisable only by the participant.

Eligibility to Receive Awards

Employees, officers, directors, consultants and advisors of Idera and of our present or future parent or subsidiary corporations and any other business venture in which Idera has a controlling interest (as determined by our board of directors) are eligible to be granted Awards under the 2013 Stock Incentive Plan. However, incentive stock options may only be granted to our employees, employees of our present or future parent or subsidiary corporations, and employees of any other entities the employees of which are eligible to receive incentive stock options under the Code. As of May 15, 2013, approximately 18 persons were eligible to receive Awards under the 2013 Stock Incentive Plan, including our executive officers and non-employee directors. The granting of Awards under the 2013 Stock Incentive Plan is discretionary, and we cannot now determine the number or type of Awards to be granted in the future to any particular person or group, except that Awards are subject to the limitations described above. On May 23, 2013, the last reported sale price of our common stock on the Nasdaq Capital Market was \$0.70.

Administration

Our board of directors administers the 2013 Stock Incentive Plan and is authorized to grant Awards and to adopt, amend and repeal the administrative rules, guidelines and practices relating to the 2013 Stock Incentive Plan and to construe and interpret the provisions of the 2013 Stock Incentive Plan and any Award agreements entered into under the 2013 Stock Incentive Plan. Our board of directors may correct any defect, supply any omission or reconcile any inconsistency in the 2013 Stock Incentive Plan or any Award in the manner and to the extent it shall deem expedient and it shall be the sole and final judge of such expediency.

Pursuant to the terms of the 2013 Stock Incentive Plan, our board of directors may delegate authority under the 2013 Stock Incentive Plan to one or more committees or subcommittees of our board of directors. Our board of directors has authorized the compensation committee to administer certain aspects of the 2013 Stock Incentive Plan, including the granting of awards to directors and executive officers. The compensation committee, with the input of management, selects the recipients of Awards and determines, in addition to other items, and subject to the terms of the 2013 Stock Incentive Plan:

- the number of shares of common stock, cash or other consideration covered by Awards and the terms and conditions of such Awards, including
 the dates upon which such Awards become exercisable or otherwise vest;
- · the exercise price of Awards;
- · the effect on Awards of a change in control of Idera; and
- the duration of Awards.

To the extent permitted by applicable law, our board of directors may delegate to one or more of our officers the power to grant stock options and certain Awards to our employees or non-executive officers and to exercise such other powers under the 2013 Stock Incentive Plan as the board of directors may determine, provided that the board of directors shall fix the terms of the Awards to be granted by such officers (including the exercise price of such Awards, which may include a formula by which the exercise price will be determined) and the maximum number of shares subject to Awards that the officers may grant. No officer shall be authorized to grant Awards to any of our executive officers. The board of directors has delegated to our chief executive officer the authority

under the 2013 Stock Incentive Plan to grant stock options and restricted stock units to our non-executive employees subject to certain specified limitations and oversight by the compensation committee.

Awards to non-employee directors will only be granted and administered by a committee, all the members of which are independent as defined by Section 5605(a)(2) of the Nasdaq Listing Rules.

The board of directors may at any time provide that any Award will become immediately exercisable in whole or in part, free of some or all restrictions or conditions, or otherwise realizable in whole or in part, as the case may be, except as otherwise provided under the terms of the 2013 Stock Incentive Plan in the case of Performance Awards.

Except as otherwise provided under the 2013 Stock Incentive Plan, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award need not be identical, and our board of directors need not treat participants uniformly. Our board of directors shall determine the effect on an Award of the disability, death, retirement, termination or other cessation of employment, authorized leave of absence or other change in the employment or other status of a participant and the extent to which, and the period during which, the participant (or the participant's legal representative, conservator, guardian or designated beneficiary) may exercise rights under the Award.

We are required to make equitable adjustments (in the manner determined by our board of directors) to the number and class of securities available under the 2013 Stock Incentive Plan, the share counting rules and sub-limits set forth in the 2013 Stock Incentive Plan, and any outstanding Awards under the 2013 Stock Incentive Plan to reflect stock splits, stock dividends, recapitalizations, combinations of shares, reclassifications of shares, spin-offs and other similar changes in capitalization or events or any dividends or distributions to holders of our common stock other than ordinary cash dividends.

All decisions by the board of directors shall be made in the board of directors' sole discretion and shall be final and binding on all persons having or claiming any interest on the 2013 Stock Incentive Plan or in any Award. We will indemnify and hold harmless each director, officer, employee or agent to whom any duty or power relating to the administration or interpretation of the 2013 Stock Incentive Plan has been or will be delegated against any cost or expense (including attorneys' fees) or liability (including any sum paid in settlement of a claim with the board of directors' approval) arising out of any act or omission to act concerning the 2013 Stock Incentive Plan unless arising out of such person's own fraud or bad faith.

Amendment of Awards. Except as otherwise provided under the 2013 Stock Incentive Plan with respect to repricing outstanding stock options or SARs, Performance Awards or actions requiring stockholders approval, our board of directors may amend, modify or terminate any outstanding Award, including but not limited to, substituting therefor another Award of the same or a different type, changing the date of exercise or realization, and converting an incentive stock option to a nonstatutory stock option, provided that the participant's consent to any such action will be required unless our board of directors determines that the action, taking into account any related action, does not materially and adversely affect the participant's rights under the 2013 Stock Incentive Plan or the change is otherwise permitted under the terms of the 2013 Stock Incentive Plan in connection with a change in capitalization or reorganization event.

Reorganization Events

Definitions. The 2013 Stock Incentive Plan contains provisions addressing the consequences of any reorganization event. A "reorganization event" is defined under the terms of the 2013 Stock Incentive Plan to mean (a) any merger or consolidation of us with or into another entity as a result of which our common stock is converted into or exchanged for the right to receive cash, securities or other property, or is cancelled, (b) any transfer or disposition of all of our common stock for cash, securities or other property pursuant to a share exchange or other transaction or (c) our liquidation or dissolution.

Awards Other than Restricted Stock; Options Available to the Board of Directors. Under the 2013 Stock Incentive Plan, if a reorganization event occurs, our board of directors may take any one or more of the following actions as to all or any (or any portion of) outstanding Awards other than Restricted Stock on such terms as the board of directors determines (except to the extent specifically provided otherwise in an applicable Award agreement or another agreement between a participant and us): (A) provide that such Awards shall be assumed, or substantially equivalent Awards shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof), (B) upon written notice to a participant, provide that all of the participant's unexercised Awards will terminate immediately prior to the consummation of such reorganization event unless exercised by the participant (to the extent then exercisable) within a specified period following the date of such notice, (C) provide that outstanding Awards shall become exercisable, realizable, or deliverable, or restrictions applicable to an Award shall lapse, in whole or in part prior to or upon such reorganization event, (D) in the event of a reorganization event under the terms of which holders of common stock will receive upon consummation thereof a cash payment for each share surrendered in the reorganization event, which we refer to as the Acquisition Price, make or provide for a cash payment to participants with respect to each Award held by a participant equal to (X) the number of shares of common stock subject to the vested portion of the Award (after giving effect to any acceleration of vesting that occurs upon or immediately prior to such reorganization event) multiplied by (Y) the excess, if any, of (I) the Acquisition Price over (II) the exercise, measurement or purchase price of such Award and any applicable tax withholdings, in exchange for the termination of such Award, (E) provide that, in connection with our liquidation or dissolution, Awards shall convert into the right to receive liquidation proceeds (if applicable, net of the exercise, measurement or purchase price thereof and any applicable tax withholdings) and (F) any combination of the foregoing. Our board of directors is not obligated to treat all Awards, all Awards held by a participant, or all Awards of the same type, identically.

The 2013 Stock Incentive Plan also provides, however, that for Restricted Stock Units that are subject to Section 409A of the Code: (A) if the applicable Restricted Stock Unit agreement provides that the Restricted Stock Units shall be settled upon a "change in control event" within the meaning of Treasury Regulation Section 1.409A-3(i)(5)(i), and the reorganization event constitutes such a "change in control event," then no assumption or substitution of the Restricted Stock Unit shall be permitted, and the Restricted Stock Units shall instead be settled in accordance with the terms of the applicable Restricted Stock Unit agreement; and (B) the board of directors may only undertake the actions set forth in clauses (C), (D) or (E) above; if the reorganization event is a "change in control event" as so defined under the Treasury Regulation and such action is permitted or required by Section 409A of the Code. If the reorganization event does not constitute a "change in control event" as defined in the Treasury Regulation or such action is not permitted or required by Section 409A of the Code, and the acquiring or succeeding corporation does not assume or substitute the Restricted Stock Units pursuant to clause (A) above, then the unvested Restricted Stock Units shall terminate immediately prior to the consummation of the reorganization event without any payment in exchange therefor.

For purposes of clause (A) above (providing for the assumption of Awards by an acquiring or succeeding corporation), an Award (other than Restricted Stock) shall be considered assumed if, following the consummation of the reorganization event, such Award confers the right to purchase or receive pursuant to the terms of such Award, for each share of common stock subject to the Award immediately prior to the consummation of the reorganization event, the consideration (whether cash, securities or other property) received as a result of the reorganization event by holders of common stock for each share of common stock held immediately prior to the consummation of the reorganization event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of common stock); provided however, that if the consideration received as a result of the reorganization event is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), we may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise or settlement of the Award to consist solely of such number of shares of common stock of the acquiring or succeeding corporation (or an affiliate thereof) that the board of directors determined to be equivalent in value (as of the date of such determination or another date specified by the board of directors) to the per share consideration received by holders of outstanding shares of common stock as a result of the reorganization event.

Provisions Applicable to Restricted Stock. Upon the occurrence of a reorganization event other than our liquidation or dissolution, our repurchase and other rights with respect to outstanding Restricted Stock shall inure to the benefit of our successor and shall, unless the board of directors determines otherwise, apply to the cash, securities or other property which the common stock was converted into or exchanged for pursuant to such reorganization event in the same manner and to the same extent as they applied to such Restricted Stock; provided, however, that the board of directors may provide for termination or deemed satisfaction of such repurchase or other rights under the instrument evidencing any Restricted Stock or any other agreement between a participant and us, either initially or by amendment.

Upon the occurrence of a reorganization event involving our liquidation or dissolution, except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock or any other agreement between the participant and us, all restrictions and conditions on all Restricted Stock then outstanding shall automatically be deemed terminated or satisfied.

Provisions for Foreign Participants

Our board of directors may from time to time establish one or more sub-plans under the 2013 Stock Incentive Plan for purposes of satisfying applicable securities, tax or other laws of various jurisdictions. Our board of directors shall establish such sub-plans by adopting supplements to the 2013 Stock Incentive Plan containing any limitations on our board's discretion under the 2013 Stock Incentive Plan as our board shall deem necessary or desirable and any additional terms and conditions not otherwise inconsistent with the 2013 Stock Incentive Plan that our board shall deem necessary or desirable. All supplements adopted by our board of directors shall be deemed to be part of the 2013 Stock Incentive Plan, but each supplement shall apply only to participants within the affected jurisdiction.

Amendment or Termination

Our board of directors may amend, suspend or terminate the 2013 Stock Incentive Plan or any portion thereof at any time provided that (i) to the extent required by Section 162(m) of the Code, no Award granted to a participant that is intended to comply with Section 162(m) after the date of such amendment shall become exercisable, realizable or vested, as applicable to such Award, unless and until our stockholders approve such amendment in the manner required by Section 162(m); (ii) no amendment that would require stockholder approval under the rules of the Nasdaq Stock Market may be made effective unless and until our stockholders approve such amendment; and (iii) if the Nasdaq Stock Market amends the rules of the Nasdaq Stock Market so that such rules no longer require stockholder approval of material amendments to equity compensation plans, then, from and after the effective date of such amendment to the rules of the Nasdaq Stock Market, no amendment to the 2013 Stock Incentive Plan (A) materially increasing the number of shares authorized under the 2013 Stock Incentive Plan (other than as provided for in the 2013 Stock Incentive Plan in connection with substitute Awards, changes in capitalization or reorganization events), (B) expanding the types of Awards that may be granted under the 2013 Stock Incentive Plan, or (C) materially expanding the class of participants eligible to participate in the 2013 Stock Incentive Plan shall be effective unless and until our stockholders approve such amendment. In addition, if at any time the approval of our stockholders is required as to any other modification or amendment under Section 422 of the Code or any successor provision with respect to incentive stock options, the board of directors may not effect such modification or amendment without such approval. Unless otherwise specified in the amendment, any amendment to the 2013 Stock Incentive Plan adopted in accordance with the procedures described above shall apply to, and be binding on the holders of, all Awards outstanding under the 2013 Stock Incentive Plan at the time the amendment is adopted, provided that the board of directors determines that such amendment, taking into account any related action, does not materially and adversely affect the rights of participants under the 2013 Stock Incentive Plan.

Effective Date and Term of 2013 Stock Incentive Plan

The 2013 Stock Incentive Plan shall become effective on the date the plan is approved by our stockholders. No Awards shall be granted under the 2013 Stock Incentive Plan after the expiration of 10 years from the effective date, but Awards previously granted may extend beyond that date.

Federal Income Tax Consequences

The following generally summarizes the United States federal income tax consequences that generally will arise with respect to Awards granted under the 2013 Stock Incentive Plan. This summary is based on the federal tax laws in effect as of the date of this proxy statement. In addition, this summary assumes that all Awards are exempt from, or comply with, the rules under Section 409A of the Code regarding nonqualified deferred compensation. Changes to these laws or assumptions could alter the tax consequences described below.

Incentive Stock Options. A participant will not have income upon the grant of an incentive stock option. Also, except as described below, a participant will not have income upon exercise of an incentive stock option if the participant has been employed by us or our corporate parent or 50% or more-owned corporate subsidiary at all times beginning with the option grant date and ending three months before the date the participant exercises the option. If the participant has not been so employed during that time, then the participant will be taxed as described below under "Nonstatutory Stock Options." The exercise of an incentive stock option may subject the participant to the alternative minimum tax.

A participant will have income upon the sale of the stock acquired under an incentive stock option, which we refer to as ISO stock, at a profit (if sales proceeds exceed the exercise price). The type of income will depend on when the participant sells the ISO stock. If a participant sells the ISO stock more than two years after the option was granted and more than one year after the option was exercised, then all of the profit will be long-term capital gain. If a participant sells the ISO stock prior to satisfying these waiting periods, then the participant will have engaged in a disqualifying disposition and a portion of the profit will be ordinary income and a portion may be capital gain. This capital gain will be long-term if the participant has held the ISO stock for more than one year and otherwise will be short-term. If a participant sells the ISO stock for more than one year and otherwise will be long-term if the participant held the ISO stock for more than one year and otherwise will be short-term.

Nonstatutory Stock Options. A participant will not have income upon the grant of a nonstatutory stock option. A participant will have compensation income upon the exercise of a nonstatutory stock option equal to the fair market value of the stock on the day the participant exercised the option less the exercise price. Upon sale of the stock, which we refer to as NSO stock, the participant will have capital gain or loss equal to the difference between the sales proceeds and the fair market value of the NSO stock on the day the option was exercised. This capital gain or loss will be long-term if the participant has held the NSO stock for more than one year and otherwise will be short-term.

Stock Appreciation Rights. A participant will not have income upon the grant of an SAR but generally will recognize compensation income upon the exercise of an SAR equal to the amount of the cash and the fair market value of any stock received. Upon the sale of the stock, the participant will have capital gain or loss equal to the difference between the sales proceeds and the value of the stock on the day the SAR was exercised. This capital gain or loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

Restricted Stock. A participant will not have income upon the grant of Restricted Stock unless an election under Section 83(b) of the Code is made within 30 days of the date of grant. If a timely Section 83(b) election is made, then a participant will have compensation income equal to the fair market value of the stock less the purchase price, if any. When the stock is sold, the participant will have capital gain or loss equal to the difference between the sales proceeds and the fair market value of the stock on the date of grant. If the participant does not

make a Section 83(b) election, then when the shares of Restricted Stock vest the participant will have compensation income equal to the fair market value of the stock on the vesting date less the purchase price. When the stock is sold, the participant will have capital gain or loss equal to the sales proceeds less the fair market value of the stock on the vesting date. Any capital gain or loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

Restricted Stock Units. A participant will not have income upon the grant of a Restricted Stock Unit. A participant is not permitted to make a Section 83(b) election with respect to a Restricted Stock Unit. When the Restricted Stock Unit vests, the participant will have income on the vesting date in an amount equal to the fair market value of the stock on the vesting date less the purchase price, if any. When the stock is sold, the participant will have capital gain or loss equal to the sales proceeds less the value of the stock on the vesting date. Any capital gain or loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

Other Stock-Based Awards. The tax consequences associated with any Other Stock-Based Award granted under the 2013 Stock Incentive Plan will vary depending on the specific terms of the Award. Among the relevant factors are whether or not the Award has a readily ascertainable fair market value, whether or not the Award is subject to forfeiture provisions or restrictions on transfer, the nature of the property to be received by the participant under the Award and the participant's holding period and tax basis for the Award or underlying common stock.

Tax Consequences to Idera. There will be no tax consequences to us except that we will be entitled to a deduction when a participant has compensation income. Any such deduction will be subject to the limitations of Section 162(m) of the Code.

Recommendation of the Board of Directors and Required Vote

Our board of directors recommends that stockholders vote to approve the Idera Pharmaceuticals, Inc. 2013 Stock Incentive Plan by voting FOR this proposal.

The affirmative vote of the stockholders holding a majority of the issued and outstanding shares of our common stock and Series D preferred stock present in person or represented by proxy and voting on the matter, voting as a single class and on an as-converted basis, is required for approval of this Proposal Four.

PROPOSAL FIVE

RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The audit committee of our board of directors has selected the firm of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2013. Ernst & Young LLP has served as our independent accountants since 2002. Although stockholder approval of the audit committee's selection of Ernst & Young LLP is not required by law, our board of directors believes that it is advisable to give stockholders an opportunity to ratify this selection. If this proposal is not approved at the 2013 annual meeting, the audit committee of our board of directors may reconsider its selection.

Representatives of Ernst & Young LLP are expected to be present at the 2013 annual meeting. They will have the opportunity to make a statement if they desire to do so and will also be available to respond to appropriate questions from stockholders.

Recommendation of the Board of Directors and Required Vote

Our board of directors recommends that you vote FOR the ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2013.

The affirmative vote of the stockholders holding a majority of the issued and outstanding shares of our common stock and Series D preferred stock present in person or represented by proxy and voting on the matter, voting as a single class and on an as-converted basis is required for approval of this Proposal Five.

ACCOUNTING MATTERS

Report of the Audit Committee

The audit committee has reviewed our audited financial statements for the fiscal year ended December 31, 2012 and discussed them with our management and our registered public accounting firm.

The audit committee has also received from, and discussed with, our registered public accounting firm various communications that our registered public accounting firm is required to provide to the audit committee, including the matters required to be discussed by the Statement on Auditing Standards No. 61, as amended (AICPA, *Professional Standards*, Vol. 1, AU section 380), as adopted by the Public Company Accounting Oversight Board in Rule 3200T.

The audit committee has received from Ernst & Young LLP the letter and other written disclosures required by applicable requirements of the Public Company Accounting Oversight Board regarding its communication with the audit committee concerning independence, and has discussed with Ernst & Young LLP its independence from the Company. The audit committee has also considered whether the provision of other non-audit services by Ernst & Young LLP is compatible with maintaining their independence.

Based on the review and discussions referred to above, the audit committee recommended to our board of directors that the audited financial statements be included in our Annual Report on Form 10-K for the year ended December 31, 2012.

By the audit committee of the board of directors,

William S. Reardon, *Chairman* C. Keith Hartley Robert W. Karr

Independent Registered Public Accounting Firm Fees

We paid Ernst & Young LLP a total of \$338,325 for professional services rendered for the year ended December 31, 2012 and \$372,500 for professional services rendered for the year ended December 31, 2011. The following table provides information about these fees.

Fee Category	2012	2011
Audit Fees	\$ 314,000	\$351,750
Audit-Related Fees	_	_
Tax Fees	24,325	20,750
All Other Fees		
Total Fees	\$338,325	\$ 372,500

Audit Fees

Audit fees consist of fees for the audit of our financial statements, the audit of our internal control over financial reporting, the review of the interim financial statements included in our quarterly reports on Form 10-Q, and other professional services provided in connection with statutory and regulatory filings or engagements.

Audit-Related Fees

Audit-related fees consist of fees for assurance and related services that are reasonably related to the performance of audits and reviews of our financial statements that are not reported under "Audit Fees." These services include consultations regarding internal controls, financial accounting and reporting standards.

Tax Fees

Tax fees consist of fees for tax compliance, tax advice and tax planning services. Tax compliance services, which relate to preparation of tax returns, accounted for \$20,000 of the total tax fees billed in 2012 and 2011. Tax advice and tax planning services relate to consultations on our net operating loss carry forwards, collaboration agreements and stock option exercises.

All Other Fees

Ernst & Young LLP did not collect fees for any other services for 2012 or 2011.

Our audit committee believes that the non-audit services described above did not compromise Ernst & Young LLP's independence. Our audit committee charter, which you can find by clicking "Investors" and "Corporate Governance" on our website, www.iderapharma.com, requires that all proposals to engage Ernst & Young LLP for services, and all proposed fees for these services, be submitted to the audit committee for approval before Ernst & Young LLP may provide the services.

Pre-Approval Policies and Procedures

Our audit committee has adopted policies and procedures relating to the approval of all audit and non-audit services that are to be performed by our registered public accounting firm. This policy generally provides that we will not engage our 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 the pre-approval procedures described below.

From time to time, the audit committee may pre-approve specified types of services that are expected to be provided to us by our registered public accounting firm during the next 12 months. Any such pre-approval is detailed as to the particular service or type of services to be provided and is also generally subject to a maximum dollar amount. All of the services described above under the headings "Audit-Related Fees," "Tax Fees" and "All Other Fees" were pre-approved by our audit committee.

PROPOSAL SIX

ELECTION OF DIRECTORS

General Information

Article ELEVENTH of our Restated Certificate of Incorporation currently divides our board of directors into three classes (Class I, Class II and Class III). Each member of a class is elected for a three-year term, with the terms staggered so that approximately one-third of our directors stand for election at each annual meeting of stockholders. There are currently two Class I directors, whose terms expire at our 2014 annual meeting of stockholders; two Class II directors, whose terms expire at our 2015 annual meeting of stockholders; and three Class III directors, whose terms expire at the 2013 annual meeting. As described in Proposal One set forth elsewhere in this proxy statement, in connection with our Series E preferred stock financing we agreed to submit a proposal to our stockholders at the 2013 annual meeting to approve an amendment to our Restated Certificate of Incorporation to declassify our board of directors. Our board of directors is recommending that our stockholders approve Proposal One.

Our current Class III directors, whose terms are expiring at the 2013 annual meeting, are Sudhir Agrawal, D. Phil., Eve E. Slater, M.D. and Youssef El Zein. Our board of directors, on the recommendation of our nominating and corporate governance committee, has nominated Dr. Agrawal, Dr. Slater and Mr. El Zein for election to our board of directors at the 2013 annual meeting. The persons named in the enclosed proxy card will vote to elect Dr. Agrawal, Dr. Slater and Mr. El Zein to our board of directors unless you indicate that you withhold authority to vote for the election of any or all nominees. You may not vote for more than three directors. Each of the nominees is presently a director and each has indicated a willingness to serve as a director, if elected. If a nominee becomes unable or unwilling to serve, however, the persons acting under the proxy may vote for substitute nominees selected by the board of directors.

The term of office as to which Dr. Agrawal, Dr. Slater and Mr. El Zein will be elected at the 2013 annual meeting depends on the outcome of the stockholders' vote on Proposal One:

If Proposal One, as described in greater detail set forth elsewhere in this proxy statement, is approved by our stockholders at the 2013 annual meeting, Dr. Agrawal, Dr. Slater and Mr. El Zein will hold office until our 2014 annual meeting of stockholders and until their respective successors are elected and qualified or until such director's earlier resignation, death or removal.

If Proposal One, as described in greater detail set forth elsewhere in this proxy statement, is not approved by our stockholders at the 2013 annual meeting, Dr. Agrawal, Dr. Slater and Mr. El Zein will hold office until our 2016 annual meeting of stockholders and until their respective successors are elected and qualified or until such director's earlier resignation, death or removal.

Information about our Directors

Set forth below are the names of each of the nominees for election to our board of directors, the names of each of our other continuing directors, the years in which each first became a director, their ages as of May 15, 2013, their positions and offices with our company, their principal occupations and business experience during at least the past five years and the names of other public companies for which they currently serve, or have served within the past five years, as a director. We have also included information about each director's specific experience, qualifications, attributes or skills that led our board of directors to conclude that such individual should serve as one of our directors. We also believe that all of our directors, including our nominees, have a reputation for integrity, honesty and adherence to high ethical standards. They each have demonstrated business acumen and an ability to exercise sound judgment, as well as a commitment of service to Idera and our board of directors.

Recommendation of the Board of Directors and Required Vote

Our board of directors unanimously recommends that the stockholders vote FOR the election of Dr. Agrawal, Dr. Slater and Mr. El Zein.

The affirmative vote of the stockholders holding a plurality of the votes cast by holders of our common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, is required for the approval of this Proposal Six.

Class III Nominees — Terms to Expire in 2014 or 2016

Sudhir Agrawal, D. Phil. Director since 1993

Dr. Agrawal, age 59, has been the chairman of our board of directors since September 2010, our President since September 2008 and our Chief Executive Officer since August 2004. He also served as our Chief Scientific Officer from January 1993 until September 2010, as our President from February 2000 to October 2005 and as Acting Chief Executive Officer from February 2000 until September 2001. Dr. Agrawal joined us in 1990 and served in various capacities before his appointment as Chief Scientific Officer, including Vice President of Discovery and Senior Vice President of Discovery. Prior to joining us, Dr. Agrawal served as a Foundation Scholar at the Worcester Foundation for Experimental Biology and carried out his post-doctoral research at the Medical Research Council's Laboratory of Molecular Biology in Cambridge, England from 1985 to 1986. We believe that Dr. Agrawal's qualifications to sit on our board of directors include his unique insights into our challenges, opportunities and operations that he has as a result of the roles he has played with us since our founding, including scientific founder, chief scientific officer, chief executive officer and chairman.

Eve E. Slater, M.D. Director since 2010

Dr. Slater, age 67, is currently Associate Professor of Clinical Medicine at Columbia University College of Physicians and Surgeons, where she has taught in various positions since 1983. Dr. Slater was Senior Vice President, Worldwide Policy at Pfizer, Inc. from May 2007 until June 2009. Dr. Slater was the Assistant Secretary for Health, United States Department of Health and Human Services from 2002 until 2003, and was the Acting Assistant Secretary for Health from 2001 until her confirmation by the United States Senate in 2002. Dr. Slater held senior management positions at Merck Research Laboratories from 1983 to 2001, including Senior Vice President of External Policy, Vice President of Corporate Public Affairs, Senior Vice President of Clinical and Regulatory Development, Executive Director of Biochemistry and Molecular Biology, and Senior Director of Biochemical Endocrinology. Dr. Slater was trained in Internal Medicine and Cardiology at Massachusetts General Hospital, is board certified in Internal Medicine and Cardiology and is a Fellow of the American College of Cardiology. We believe that Dr. Slater's qualifications to sit on our board of directors include her extensive scientific and medical background, significant public company board experience, and years of service with pharmaceutical companies and governmental institutions.

Youssef El Zein Director since 1992

Mr. El Zein, age 64, has been the Managing Partner of Pillar Invest Corporation, a Cayman Island company that has founded and is the General Partner of a family of funds, including Pillar Pharmaceuticals I, L.P. and Pillar Pharmaceuticals II, L.P. since 2011. Mr. El Zein has been the chairman and CEO of Pillar Invest (offshore) SAL since 2009. Mr. El Zein has been managing partner of Pillar Investment Limited, a private investment firm, since 1991. Mr. El Zein obtained his Bachelor of Arts in Economics from the American University of Beirut in 1970 and a postgraduate degree in Economics from St. Catherine's College, Oxford University in 1973. We believe that Mr. El Zein's qualifications to sit on our board of directors include his knowledge of our industry, his financial experience and significant role in various financings we have conducted recently and during his 20 years of service on our board of directors.

Continuing Members of the Board of Directors

Class I Directors — Terms to Expire in 2014

C. Keith Hartley Director since 2000

Mr. Hartley, age 70, has been President of Hartley Capital Advisors, a financial consulting firm, since June 2000. Mr. Hartley was Managing Partner of Forum Capital Markets LLC, an investment banking firm, from August 1995 to May 2000. Mr. Hartley also serves as a director of Universal Display Corporation, a publicly traded company that develops organic light emitting diodes for use in flat panel displays and lighting applications. We believe that Mr. Hartley's qualifications to sit on our board of directors include his business and finance background, his investment banking background and knowledge of the capital markets and his relationship with us since 1997 when his investment banking firm led a debt financing for us.

William S. Reardon, C.P.A. Director since 2002

Mr. Reardon, age 66, has been lead independent director of our board of directors since September 2010. He was an audit partner at PricewaterhouseCoopers LLP, where he led the Life Science Industry Practice for New England and the Eastern United States from 1986 until his retirement from the firm in July 2002. Mr. Reardon served on the board of the Emerging Companies Section of the Biotechnology Industry Organization from June 1998 to June 2000 and the board of directors of the Massachusetts Biotechnology Council from April 2000 to April 2002. He serves as a director of Synta Pharmaceuticals, Inc., a publicly-traded biopharmaceutical company, and he served as a director of Oscient Pharmaceuticals Corporation, a publicly-traded pharmaceutical company from March 2003 to March 2010. Mr. Reardon has also served as a trustee of closed-end mutual funds H&Q Healthcare Investors and H&Q Life Sciences Investors since April 2010. We believe that Mr. Reardon's qualifications to sit on our board of directors include his accounting and financial experience, including as a partner at a leading accounting firm leading its life science practice, his role in keeping the board of directors and senior management team abreast of current accounting regulations and his experience as a member of several boards of directors of biotechnology companies. Additionally, we value Mr. Reardon's role in leading the board on matters of corporate governance, both as lead independent director and prior to his appointment to that position.

Abdul-Wahab Umari Director since 2012

Mr. Umari, age 45, has been a managing partner of Pillar Investment Limited, a private investment firm, since 2003. Prior to joining Pillar, Mr. Umari was the Founder, Chairman and Chief Executive Officer of Transmog Inc. SAL, a telecommunications company headquartered in Lebanon from 1995 to 2001. From 1989 to 1993, Mr. Umari was a Lead Systems Engineer at Bechtel Power Corporation in Gaithersburg, Maryland. Mr. Umari was a member of the external advisory board of the American University of Beirut from 1998 to 2008, and he has served on the advisory board of Foundation Henri Cartier-Bresson, a non-profit organization, since 2003. Mr. Umari obtained an M.B.A. from New York University's Leonard N. Stern School of Business in 1995. Mr. Umari completed his undergraduate studies in Mechanical Engineering at Boston University in 1990. We believe that Mr. Umari's qualifications to sit on our board of directors include his knowledge of our industry, his financial experience and his role in various financings that we have conducted.

Class II Directors — Terms to Expire in 2015

Robert W. Karr, M.D. Director since 2005

Dr. Karr, age 64, has been Managing Member of StartUp Partners International LLC, a consulting firm serving pharmaceutical and biotechnology clients, since January 2010. Dr. Karr has served as managing director of Karr Pharm Consulting LLC since January 2008. Dr. Karr served as our President from December 2005 until December 2007. Prior to joining us, Dr. Karr was an independent consultant. From June 2000 through December

2004, Dr. Karr was a senior executive in Global Research & Development for Pfizer, Inc., a pharmaceutical company, where he served as Senior Vice President, Strategic Management from 2003 to 2004 and Vice President, Strategic Management from 2000 to 2003. Prior to its merger with Pfizer, Dr. Karr served as Vice President, Research & Development Strategy for Warner-Lambert Company, a pharmaceutical company. He also served on the board of directors of GTx, Inc., a publicly-traded biotechnology company, from 2005 to 2011. We believe that Dr. Karr's qualifications to sit on our board of directors include his broad managerial and scientific experience in the pharmaceutical industry, his understanding of our company given his role as our former President and his continuing role as a director, and his contribution to the board of directors in discussions of our drug discovery programs, clinical development strategy and clinical programs.

Malcolm MacCoss, Ph.D. Director since 2010

Dr. MacCoss, age 65, founded Bohicket Pharma Consulting LLC in January 2010. In this position, Dr. MacCoss consults for several pharmaceutical companies worldwide on drug discovery issues. Previously, Dr. MacCoss served as the Group Vice President for Chemical Research at the Schering-Plough Research Institute of Schering-Plough Corporation, a pharmaceutical company that is now part of Merck & Co., Inc., from August 2008 to January 2010. In this role he served as the Head of Chemistry at the Schering-Plough Kenilworth, New Jersey site and as the chair of the Schering-Plough Global Chemistry Council, a forum for formulating global chemistry strategies. From 1999 to August 2008, Dr. MacCoss served as Vice President, Basic Chemistry at the Rahway, New Jersey site of Merck Research Laboratories, of Merck & Co., Inc., a pharmaceutical company. He also served as the Vice President of Basic Chemistry and Drug Discovery Sciences, as the Deputy Site-Head of the Rahway site and as the Chairman of the Merck World-Wide Chemistry Council. Dr. MacCoss is a Fellow of the Royal Society of Chemistry, and in 2009 he was admitted into the American Chemical Society Medicinal Chemistry Hall of Fame. In 2010 he received the ACS Division of Medicinal Chemistry National Award. He also serves on the Advisory Committee of the Executive Dean for the School of Arts and Sciences, Rutgers University. We believe that Dr. MacCoss' qualifications to sit on our board of directors include his extensive scientific background, his 20 plus years experience with pharmaceutical companies, and his contribution to the board of directors in discussions of our drug discovery programs, clinical development strategy and clinical programs.

Director Compensation

We use a combination of cash and equity-based compensation to attract and retain candidates to serve on our board of directors. We do not compensate directors who are also our employees for their service on our board of directors. As a result, Dr. Agrawal does not receive any compensation for his service on our board of directors, including any compensation he might otherwise receive for his service as chairman of the board of directors. We periodically review our cash and equity-based compensation for non-employee directors.

Under our director compensation program, we pay our non-employee directors retainers in cash. Each director receives a cash retainer for service on the board of directors and for service on each committee on which the director is a member. The chairmen of the board and of each committee receive higher retainers for such service. These fees are payable quarterly in arrears. The fees paid to non-employee directors for service on the board of directors and for service on each committee of the board of directors on which the director is a member are as follows:

	viember	Chairman
	Annual Fee	Annual Fee
Board of Directors	\$ 35,000	\$ —
Audit Committee	\$ 7,000	\$15,000
Compensation Committee	\$ 7,000	\$15,000
Nomination and Corporate Governance Committee	\$ 3,500	\$ 7,500
Scientific Committee(1)	\$ 7,000	\$15,000
Service as Lead Director	\$17,500	\$ —

(1) This committee was eliminated as of January 1, 2013.

We also reimburse our directors for travel and other related expenses for attendance at meetings.

Our director compensation program includes a stock-for-fees policy, under which directors have the right to elect to receive common stock in lieu of cash fees. These shares of common stock are issued under our 2008 Stock Incentive Plan. The number of shares to be issued to participating directors is determined on a quarterly basis by dividing the cash fees to be paid through the issuance of common stock by the fair market value of our common stock, which is the closing price of our common stock, on the first business day of the quarter following the quarter in which the fees were earned. In 2012, Dr. MacCoss received 1,216 shares of our common stock in lieu of \$1,425 in cash fees. No other director elected to receive common stock in lieu of cash fees during 2012.

Under our director compensation program, upon their initial election to the board of directors, new non-employee directors receive an initial option grant to purchase 30,000 shares, and all non-employee directors receive an annual option grant to purchase 20,000 shares. The annual grants are made on the date of the annual meeting of stockholders.

These options vest quarterly over three years from the date of grant, subject to continued service as a director, and are granted under our 2008 Stock Incentive Plan. These options are granted with exercise prices equal to the fair market value of our common stock, which is the closing price of our common stock on the date of grant, and become immediately exercisable in full if there is a change in control of our company.

Under our retirement policy for non-employee members of the board, if a non-employee director is deemed to retire, then:

- · all outstanding options held by such director will automatically vest in full; and
- · the period during which such director may exercise the options will be extended to the expiration of the option under the plan.

Under the policy, a member of the board of directors will be deemed to have retired if:

- · the director resigns from the board or determines not to stand for re-election and has served as a director for more than 10 years; or
- the director does not stand for re-election or is not nominated for re-election due to the fact that he or she is or will be older than 75 at the end of such director's term.

The following table sets forth a summary of the compensation we paid to our non-employee directors who served on our board in 2012.

DIRECTOR COMPENSATION FOR 2012

	Fees Earned or Paid in Cash	Option Awards	
Name	<u>(\$)</u>	(\$)(1)	Total (\$)
Youssef El Zein	\$ 53,500	\$ 9,882	\$ 63,382
C. Keith Hartley	\$ 49,500	\$ 9,882	\$59,382
Robert W. Karr	\$ 49,000(2)	\$ 9,882	\$58,882
Malcolm MacCoss	\$ 57,000(2)(3)	\$ 9,882	\$66,882
William S. Reardon	\$ 71,000	\$ 9,882	\$ 80,882
Eve E. Slater	\$ 49,000(2)	\$ 9,882	\$58,882
Abdul-Wahab Umari(4)	\$ 8,750	\$ 10,770	\$19,520

(1) These amounts represent the aggregate grant date fair value of option awards made to each listed director in 2012 as computed in accordance with Financial Accounting Standards Board Accounting Standards

Codification Topic 718, "Stock Compensation" (ASC 718). These amounts do not represent the actual amounts paid to or realized by the directors during 2012. See Note 2(j) to the financial statements in our annual report on Form 10-K for the year ended December 31, 2012 regarding assumptions we made in determining the fair value of option awards. As of December 31, 2012, our non-employee directors held options to purchase shares of our common stock as follows: Mr. El Zein: 104,752; Mr. Hartley: 107,252; Dr. Karr: 185,375; Dr. MacCoss: 66,000; Mr. Reardon: 107,252; Dr. Slater: 56,000; and Mr. Umari: 30,000.

- (2) These amounts include cash meeting fees for service on our scientific committee during 2012. Our scientific committee was eliminated as of January 1, 2013.
- (3) Includes cash meeting fees of \$1,425 in lieu of which of Dr. MacCoss elected to receive 1,216 shares of our common stock.
- (4) Mr. Umari joined our board of directors in November 2012.

CORPORATE GOVERNANCE INFORMATION

Board of Directors

Our board of directors is responsible for establishing our broad corporate policies and overseeing the management of our company. Our chief executive officer and our other executive officers are responsible for our day-to-day operations. Our board evaluates our corporate performance and approves, among other things, our corporate strategies and objectives, operating plans, major commitments of corporate resources and significant policies. Our board also evaluates and appoints our executive officers.

Our board of directors met 21 times during 2012, including regular, special and telephonic meetings. Except for Dr. James B. Wyngaarden, who resigned from our board of directors in February 2012, each director who served as a director during 2012 attended at least 75% of the total number of board meetings held during 2012 while he or she was a director and of the total number of meetings held by all board committees on which he or she served during 2012.

Board Leadership Structure

Our board does not have a policy on whether the offices of chairman of the board and chief executive officer should be separate and, if they are to be separate, whether the chairman of the board should be selected from among the independent directors or should be an employee of our company. Our board believes that it should have the flexibility to make these determinations at any given point in time in the way that it believes best to provide appropriate leadership for our company at that time. The roles of chairman of the board and chief executive officer were held by the same person from August 1991 until February 2000. From February 2000 until September 2010, the positions of chairman of the board of directors and chief executive officer were separate. Since September 2010, the positions of chairman of the board and chief executive officer have both been held by Dr. Agrawal. Concurrent with the appointment of Dr. Agrawal as chairman, Mr. Reardon was appointed as lead independent director.

In September 2010, the nominating and corporate governance committee and the full board discussed whether to appoint a new independent chairman, to unify the chairman and chief executive officer positions and/or to appoint a lead independent director. The committee and the board recognized that our bylaws do not require that our chairman and chief executive officer positions be separate, that no single leadership model is right for all companies and at all times, and that depending on the circumstances, other leadership models, such as a combined chairman and chief executive officer, might be appropriate. The committee and the board also noted that pursuant to our corporate governance guidelines, if the chairman is not an independent director, the board may elect a lead director from its independent directors. In such case, the chairman and chief executive officer would consult periodically with the lead director on board matters and on issues facing our company. In addition, the lead director would serve as the principal liaison between the chairman of the board and the independent directors and would preside at any executive session of independent directors.

The nominating and corporate governance committee recommended, and the board approved, Dr. Agrawal, our chief executive officer, as chairman of the board and Mr. Reardon as lead independent director. The board believes that Dr. Agrawal's deep knowledge of our industry and our company, his scientific leadership of our company since 1990 and his strategic leadership of our company make him best suited to serve as both chairman and chief executive officer. At the same time, the board believes that the lead independent director function and its committees of independent directors provide the appropriate level of independent oversight. The board also believes that the lead independent director position includes responsibilities similar to those performed by a chairman of the board of directors who is not also our chief executive officer. The board believes that Mr. Reardon, as lead independent director, provides appropriate balance as a corporate governance matter and that the current structure is in the best interest of stockholders at this time.

Board's Role in Risk Oversight

Our board of directors, as a whole, has responsibility for risk oversight, with reviews of certain areas being conducted by relevant committees that report directly to the board of directors. The oversight responsibility of the board of directors and its committees is enabled by management reporting processes that are designed to provide visibility to the board of directors about the identification, assessment and management of critical risks and management's risk mitigation strategies. These areas of focus include competitive, economic, operational, financial (accounting, credit, liquidity and tax), legal, regulatory, compliance, health, safety, environmental, political and reputational risks. Our board of directors regularly reviews information regarding our strategy, operations, credit and liquidity, as well as the risks associated with each. Our compensation committee is responsible for overseeing risks relating to our executive compensation plans and arrangements. Our audit committee is responsible for overseeing financial risks and risks associated with related party transactions. Our nominating and corporate governance committee is responsible for overseeing risks associated with the independence of the board of directors. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, our entire board of directors is regularly informed through committee reports about such risks.

Board Committees

Our board of directors has established four standing committees: audit, compensation, nominating and corporate governance and scientific. Each of our audit, compensation and nominating and corporate governance committees operates under a charter that has been approved by our board of directors. Our scientific committee was eliminated effective January 1, 2013. Our board of directors has also adopted corporate governance guidelines to assist our board in the exercise of its duties and responsibilities. Current copies of the charters for the audit, compensation and nominating and corporate governance committees and the corporate governance guidelines are posted on our website, www.iderapharma.com, and can be accessed by clicking "Investors" and "Corporate Governance."

Audit Committee

Our audit committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our registered public accounting firm;
- overseeing the work of our registered public accounting firm, including through the receipt and consideration of certain reports from such accounting firm;
- reviewing and discussing with management and the registered public accounting firm our annual and quarterly financial statements and related disclosures:
- · monitoring our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;
- · discussing our risk management policies;
- establishing procedures for the receipt and retention of accounting related complaints and concerns;
- reviewing and approving related party transactions;
- · meeting independently with our registered public accounting firm and management; and
- preparing the audit committee report required by SEC rules, which is included in the section of this proxy statement entitled "Accounting Matters

 Report of the Audit Committee."

The current members of our audit committee are Mr. Reardon (Chairman), Mr. Hartley and Dr. Karr. Our board of directors has determined that all three members of the audit committee are "audit committee financial experts" within the meaning of SEC rules and regulations. During 2012, our audit committee held six meetings in person or by teleconference.

Compensation Committee

Our compensation committee's responsibilities include:

- annually reviewing and approving corporate goals and objectives relevant to compensation for our executive officers;
- · determining the compensation of our senior executives;
- · overseeing the evaluation of our senior executives;
- overseeing and administering our cash and equity incentive plans;
- reviewing and making recommendations to the board of directors with respect to director compensation;
- reviewing and discussing annually with management the compensation discussion and analysis required by the SEC rules and included in this
 proxy statement; and
- preparing the compensation committee report required by SEC rules, which is included in the section of this proxy statement entitled "Executive Compensation — Compensation Committee Report."

The current members of our compensation committee are Dr. MacCoss (Chairman), Mr. El Zein, and Dr. Slater. During 2012, the compensation committee held four meetings in person or by teleconference.

The processes and procedures followed by our compensation committee in considering and determining director and executive compensation are described above under the heading "Executive Compensation."

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee's responsibilities include:

- · identifying individuals qualified to become members of our board of directors;
- recommending to our board of directors the persons to be nominated for election as directors or to fill vacancies on our board of directors, and the
 persons to be appointed to each of the committees of the board of directors;
- reviewing and making recommendations to the board of directors with respect to management succession planning;
- developing and recommending to the board of directors corporate governance principles; and
- overseeing periodic evaluations of the board of directors.

The current members of our nominating and corporate governance committee are Mr. Hartley (Chairman), Mr. El Zein and Mr. Reardon. During 2012, the nominating and corporate governance committee held five meetings in person or by teleconference.

The processes and procedures followed by our nominating and corporate governance committee in identifying and evaluating director candidates are described below under the heading "Director Nomination Process."

Scientific Committee

The responsibilities of our scientific committee, which was eliminated effective January 1, 2013, included:

- · assisting the board of directors in overseeing our science and drug development programs; and
- advising the board of directors with respect to strategic and tactical scientific issues.

During 2012, the scientific committee held two meetings in person or by teleconference.

Director Independence

Under applicable rules of the Nasdaq Stock Market, a director will only qualify as an "independent director" if, in the opinion of our board of directors, that person does not have a relationship which would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Our board of directors has determined that Mr. Hartley, Dr. Karr, Dr. MacCoss, Mr. Reardon, Dr. Slater, Mr. Umari and Mr. El Zein and all of the members of each of the audit, compensation and nominating and corporate governance committees are independent as defined under applicable rules of the Nasdaq Stock Market including, in the case of all members of the audit committee, the independence requirements contemplated by Rule 10A-3 under the Securities Exchange Act of 1934, as amended.

Director Nomination Process

The process followed by our nominating and corporate governance committee to identify and evaluate director candidates includes requests to members of our board of directors and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates and interviews of selected candidates by members of our nominating and corporate governance committee and our board of directors. The nominating and corporate governance committee has from time to time used a third-party recruiting firm to identify and interview potential candidates.

In considering whether to recommend any particular candidate for inclusion in the board's slate of recommended director nominees, the nominating and corporate governance committee will apply the criteria set forth in our corporate governance guidelines. These criteria include the candidate's:

- business acumen:
- · knowledge of our business and industry;
- age
- experience;
- diligence;
- · conflicts of interest;
- ability to act in the interests of all stockholders; and
- in the case of the renomination of existing directors, performance on our board of directors and on any committee of which the director was a
 member.

Our corporate governance guidelines also provide that candidates should not be discriminated against on the basis of race, religion, national origin, sex, sexual orientation, disability or any other basis proscribed by law and that our nominating and corporate governance committee should consider the value of diversity of the board of directors when evaluating particular candidates. The committee has not adopted any formal or informal diversity policy and treats diversity as one of the criteria to be considered by the committee. The committee does not assign specific weights to particular criteria that the committee reviews and no particular criterion is a prerequisite for the consideration of any prospective nominee. We believe that the backgrounds and qualifications of our directors, considered as a group, should provide a composite and diverse mix of experience, knowledge and abilities that will allow the board of directors to fulfill its responsibilities.

Stockholder Nominees

Stockholders may recommend individuals to the nominating and corporate governance committee for consideration as potential director candidates by submitting the individuals' names, together with appropriate biographical information and background materials and a statement as to whether the stockholder or group of

stockholders making the recommendation has beneficially owned more than 5% of our common stock for at least one year as of the date such recommendation is made, to Nominating and Corporate Governance Committee, c/o Secretary, Idera Pharmaceuticals, Inc., 167 Sidney Street, Cambridge, Massachusetts 02139. Assuming that appropriate biographical and background material has been provided on a timely basis, the nominating and corporate governance committee will evaluate stockholder-recommended candidates by following substantially the same process, and applying substantially the same criteria, as it follows for candidates submitted by others. If the board of directors determines to nominate a stockholder-recommended candidate and recommends his or her election, then his or her name will be included in our proxy card for the next annual meeting.

Stockholders also have the right under our bylaws to nominate director candidates directly, without any action or recommendation on the part of the nominating and corporate governance committee or the board of directors, by following the procedures set forth in our bylaws, including advance notice requirements. Candidates nominated by stockholders in accordance with the procedures set forth in our bylaws will not be included in our proxy card for the next annual meeting. See "Information about the 2013 annual meeting — How and when may I submit a proposal for the 2014 annual meeting?" for more information about these procedures.

Communicating with our Board of Directors

Our board of directors will give appropriate attention to written communications that are submitted by stockholders and will respond if and as appropriate. The chairman of the board of directors (if an independent director) or the lead independent director, if any, is primarily responsible for monitoring communications from stockholders and for providing copies or summaries to the other directors, as he or she considers appropriate.

Communications are forwarded to all directors if they relate to important substantive matters and include suggestions or comments that the chairman of the board of directors or lead independent director, as the case may be, considers to be important for the directors to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters that involve repetitive or duplicative communications.

Stockholders who wish to send communications on any topic to the board of directors should address such communications to Board of Directors, c/o Secretary, Idera Pharmaceuticals, Inc., 167 Sidney Street, Cambridge, Massachusetts 02139.

Each communication from a stockholder should include the following information in order to permit stockholder status to be confirmed and to provide an address to forward a response if deemed appropriate:

- the name, mailing address and telephone number of the stockholder sending the communication;
- the number of shares held by the stockholder; and
- if the stockholder is not a record owner of our securities, the name of the record owner of our securities beneficially owned by the stockholder.

Director Attendance at Annual Meeting of Stockholders

Directors are responsible for attending the 2013 annual meeting. All directors attended the 2012 annual meeting of stockholders.

Compensation Committee Interlocks and Insider Participation

Our compensation committee currently consists of Mr. El Zein, Dr. MacCoss and Dr. Slater. No member of our compensation committee was at any time during 2012, or was formerly, an officer or employee of ours. No member of our compensation committee engaged in any related person transaction involving our company during 2012 other than

Mr. El Zein. See "Transactions with Related Persons" for information about the terms of the transaction we engaged in with affiliates of Mr. El Zein. None of our executive officers has served as a director or member of the compensation committee (or other committee serving the same function as the compensation committee) of any other entity, while an executive officer of that other entity served as a director or member of our compensation committee.

Executive Officers of Idera

The following table sets forth the names, ages and positions of our executive officers as of May 15, 2013:

Name	Age	Position
Sudhir Agrawal, D. Phil.*	59	Chairman of the Board of Directors, President and Chief Executive Officer
Louis J. Arcudi, III, M.B.A.	52	Senior Vice President of Operations, Chief Financial Officer, Treasurer and Secretary
Timothy M. Sullivan, Ph.D.	58	Vice President, Development Programs and Alliance Management
Robert D. Arbeit, M.D.	65	Vice President, Clinical Development

^{*} Dr. Agrawal is a continuing member of our board of directors. See "Proposal Six — Election of Directors" for more information about Dr. Agrawal.

Louis J. Arcudi, III, M.B.A., has been our Senior Vice President of Operations since April 2011 and our Chief Financial Officer, Treasurer and Secretary since he joined us in December 2007. Prior to joining us, Mr. Arcudi served as Vice President of Finance and Administration and Treasurer for Peptimmune, Inc., a biotechnology company, from 2003 to 2007. From 2000 to 2003 Mr. Arcudi was Senior Director of Finance and Administration at Genzyme Molecular Oncology Corporation, a division of Genzyme Corporation, a biotechnology company. He was Director of Finance Business Planning and Operations International at Genzyme from 1998 to 2000. Prior to joining Genzyme, he held finance positions with increasing levels of responsibility at Cognex Corporation, a supplier of machine vision systems, Millipore Corporation, a provider of technologies, tools and services for bioscience, research and biopharmaceutical manufacturing, and General Motors Corporation, an automobile manufacturer. Mr. Arcudi received a M.B.A. from Bryant College and a B.S. in accounting and information systems from the University of Southern New Hampshire.

Timothy M. Sullivan, Ph.D., has been our Vice President, Development Programs and Alliance Management since April 2010 and was our Vice President, Development Programs from August 2004 until April 2010. He joined us in 2002 as Senior Director, Preclinical Drug Development. His prior professional experience includes positions as Executive Director of Non-clinical Drug Safety Evaluation for Purdue Pharma L.P., a pharmaceutical company, from 1999 to 2002, and Vice President of Eastern Operations for Oread, Inc., a contract drug development organization, from 1997 to 1999. Prior to 1997, Dr. Sullivan held a variety of technical management roles with other pharmaceutical companies and contract research organizations, including Adria, Battelle, Roma Toxicology Centre, and in veterinary medicine, including International Minerals & Chemical. Dr. Sullivan earned his B.S. in microbiology from Michigan State University in 1975. His graduate studies were at Purdue University, where he earned a M.S. degree in health physics in 1978 and a Ph.D. in toxicology in 1981.

Robert D. Arbeit, M.D., joined us in August 2009 as Vice President, Clinical Development. Prior to joining us, Dr. Arbeit was Vice President, Clinical Development, from July 2007 to July 2009, and Executive Director, Clinical Development, from February 2003 until July 2007, at Paratek Pharmaceuticals, Inc., a pharmaceutical company. Prior to that, from January 2001 to January 2003, he served at Cubist Pharmaceuticals, Inc., a pharmaceutical company, as Executive Medical Director. From 1979 to 2000, Dr. Arbeit held positions with increasing levels of responsibility at the VA Medical Center in Boston, where his last position was Associate Chief of Staff for Research. Dr. Arbeit received his B.A. from Williams College and earned an M.D. at Yale University School of Medicine. He completed a medical residency at Yale-New Haven Hospital, CT and a Clinical Fellowship in Infectious Diseases at Beth Israel Hospital, Boston, MA.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

On May 15, 2013, we had 45,163,330 shares of common stock issued and outstanding, 424,242 shares of Series E preferred stock issued and outstanding and 1,124,260 shares of Series D preferred stock issued and outstanding. The following table sets forth information we know about the beneficial ownership of our common stock, our Series E preferred stock and our Series D preferred stock, as of May 15, 2013, by:

- each person known by us to own beneficially more than 5% of the outstanding shares of our common stock;
- each person known to us to beneficially own more than 5% of the outstanding shares of our Series E preferred stock;
- · each person known to us to beneficially own more than 5% of the outstanding shares of our Series D preferred stock;
- · each of our directors;
- each of our named executive officers; and
- · all directors and executive officers as a group.

We have determined beneficial ownership in accordance with the rules of the SEC, and the information in the table below is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership of a person includes any shares as to which such person has the sole or shared voting power or investment power. In addition, under such rules, beneficial ownership of a person includes any shares that such person has the right to acquire within 60 days after May 15, 2013 through the conversion of any convertible security or the exercise of any stock option, warrant or other right. These shares, however, are not considered outstanding when computing the percentage ownership of each other person.

Unless otherwise indicated in the footnotes to the table below, each stockholder named in the table has sole investment and voting power (or shares such power with his or her spouse) with respect to the shares shown as

beneficially owned by them. The inclusion of any shares deemed beneficially owned does not constitute an admission of beneficial ownership of such shares.

Name and Address of Beneficial Owner(1)	Amount and Nature of Beneficial Ownership of Common Stock	% of Common Stock Beneficially Owned	Amount and Nature of Beneficial Ownership of Series D Preferred Stock	% of Series D Preferred Stock Beneficially Owned	Amount and Nature of Beneficial Ownership of Series E Preferred Stock	% of Series E Preferred Stock Beneficially Owned	% of Combined Voting Power of Series D Preferred Stock and Common Stock(2)
5% Stockholders Pillar Investment Entities c/o Pillar Invest Offshore SAL							
Starco Ctr Bloc B, 3rd Flr, Omar Daouk St. Beirut, M8 2020-3313	9,888,127(3)	19.99%(3)	1,124,260(4)	100%	424,242(5)	100%	19.99%(3)
Affiliates of Baker Brothers Advisors, LLC, 667 Madison Avenue, 21st Floor New York, NY 10065	4,500,000(6)	9.96%	_	_	_	_	8.75%(6)
Directors and Named Executive Officers							
Youssef El Zein	9,888,127(7)	19.99%(3)	1,124,260(8)	100%	424,242(9)	100%	19.99%(3)
Sudhir Agrawal, D. Phil.	1,512,427(10)	3.25%		_		_	*
Robert D. Arbeit, M.D.	167,777(11)	*	_	_	_	_	*
Louis J. Arcudi, III	364,863(12)	*	_	_	_	_	*
C. Keith Hartley	318,468(13)	*	_	_	_	_	*
Robert W. Karr, M.D.	165,925(14)	*			_		*
Malcolm MacCoss, Ph.D.	49,092(15)	*	_	_	_	_	*
William S. Reardon	89,517(16)	*					*
Eve E. Slater	36,001(17)	*	_	_	_	_	*
Timothy M. Sullivan, Ph.D.	350,881(18)	*					*
Abdul-Wahab Umari	51,117(19)	*	_	_	_	_	*
All current directors and executive officers as a group (11 individuals)	12,994,195(20)	24.89%	1,124,260(4)	100%	424,242(5)	100%	20.70%

- * Less than 1%
- Except as otherwise noted, the address for each person listed above is c/o Idera Pharmaceuticals, Inc., 167 Sidney Street, Cambridge, Massachusetts 02139.
- (2) The percentage of the combined voting power of the Series D preferred stock and the common stock is calculated by dividing (a) the sum of the total number of shares of common stock owned by the stockholder and the total number of shares of common stock then issuable upon conversion of the Series D preferred stock owned by the stockholder by (b) the sum of the total number of shares of common stock outstanding and the total number of shares of common stock then issuable upon conversion of the Series D preferred stock outstanding. The sum of the total number of shares of common stock outstanding and the total number of shares of common stock outstanding and the total number of shares of common stock then issuable upon conversion of the Series D preferred stock outstanding as of May 15, 2013 was 51,429,505. As of May 15, 2013, the Series E preferred stock is nonvoting stock.
- (3) Consists of (i) 4,217,742 shares of common stock issuable upon conversion of 756,736 shares of Series D preferred stock held by Pillar Pharmaceuticals I, L.P., or Pillar II, (ii) 2,600,000 shares of common stock held by Pillar Pharmaceuticals III, L.P., or Pillar III, (iii) 2,400,000 shares of common stock held by

Participations Besancon, or Besancon, and over which Pillar Invest Corporation has investment discretion, pursuant to an advisory agreement between Pillar Invest Corporation and Besancon, or the Advisory Agreement, (iv) 586,101 shares of common stock held directly by Mr. El Zein and (v) 84,284 shares of common stock subject to outstanding stock options that are exercisable within 60 days after May 15, 2013 held by Mr. El Zein. As a result of the application of the Conversion Cap, as described below in this footnote, the table above does not include the following as being beneficially owned by the Pillar Investment Entities: (a) 2,048,433 shares of common stock issuable upon conversion of 367,524 shares of Series D preferred stock held by Pillar I; (b) 6,266,820 shares of common stock issuable upon conversion of 313,341 shares of Series E preferred stock held by Pillar Pharmaceuticals II, L.P., or Pillar II; (c) 2,218,020 shares of common stock issuable upon conversion of 110,901 shares of Series E preferred stock held by Besancon and over which Pillar Invest Corporation has investment discretion, pursuant to the Advisory Agreement; (d) 6,580,161 shares of common stock issuable upon exercise of warrants to purchase common stock held by Pillar II; (e) 4,728,921 shares of common stock issuable upon exercise of warrants to purchase common stock held by Besancon and over which Pillar Invest Corporation has investment discretion pursuant to the Advisory Agreement; (f) 4,386,408 shares of common stock issuable upon exercise of warrants to purchase common stock held by Pillar I; and (g) 2,600,000 shares of common stock issuable upon exercise of a warrant to purchase common stock held by Pillar III. Mr. El Zein is a director and controlling stockholder of Pillar Invest Corporation, which is the general partner of Pillar I, Pillar II and Pillar III, and is a limited partner of Pillar I, Pillar II and Pillar III. Mr. El Zein expressly disclaims beneficial ownership over shares held directly by Pillar I, Pillar II, Pillar III and indirectly by Pillar Invest Corporation, including the shares of Series E preferred stock and warrants issued in connection therewith held by Besancon, or the Besancon Securities. Pillar I, Pillar II and Pillar III expressly disclaim beneficial ownership of the Besancon Securities. Besancon is an investment fund having no affiliation with Mr. El Zein, Pillar I, Pillar II, Pillar III or Pillar Invest Corporation. The information in this footnote is based on a Schedules 13D/A filed with the SEC on November 16, 2012 and a Schedule 13D filed with the SEC on November 14, 2011. Pursuant to the terms of the Series D preferred stock and the warrants to purchase common stock issued in connection with the issuance of the Series D preferred stock, the Series E preferred stock and the warrants to purchase common stock issued in connection with the issuance of the Series E preferred stock, the shares of Series E preferred stock and Series D preferred stock cannot be converted by the holder thereof into shares of our common stock and the warrants issued to the Pillar Investment Entities cannot be exercised by the holders thereof with respect to any portion of the shares, to the extent that such conversion or exercise would result in the Pillar Investment Entities beneficially owning more than 19.99% of (x) the number of shares of common stock outstanding or (y) the combined voting power of our securities outstanding immediately after giving effect to the issuance of shares of common stock issuable upon exercise of the Series E warrants and the Series D warrants. This limitation on conversion and exercise of the Series D preferred stock, Series E preferred stock and warrants issued to the Pillar Investment Entities is referred to in this footnote as the Conversion Cap. In addition, pursuant to the terms of the purchase agreements under which such securities were acquired, the purchasers have each agreed that for so long as such purchaser and its affiliates beneficially own more than 19.99% of our outstanding common stock, such purchase, and its affiliates will vote any shares held by them in excess of the number of shares equal to 19.99% of the outstanding common stock (including the shares of common stock issuable upon conversion of the Series E preferred stock and the Series D preferred stock) with respect to any matter put to a vote of the holders of common stock in the same manner and percentage as the holders of the common stock vote on such matter. See "Transactions with Related Persons" for further information about the Series E preferred stock and warrants issued in connection with the issuance of the Series E preferred stock and the terms of the purchase agreement between Pillar II and us and information about the Series D preferred stock and warrants issued in connection with the issuance of the Series D preferred stock and the terms of the purchase agreement between Pillar I and us.

- (4) Consists of shares of preferred stock held by Pillar I.
- (5) Consists of shares of preferred stock held by Pillar II and the preferred stock held by Besancon.
- (6) Consists of (i) 498,555 shares of our common stock owned by 667, L.P., (ii) 3,904,200 shares of our common stock owned by Baker Brothers Life Sciences, L.P. and (iii) 97,245 shares of our common stock

- owned by 14159, L.P., and excludes (a) warrants to purchase up to an aggregate of 4,003,137 shares of our common stock owned by 667, L.P., (b) warrants to purchase up to an aggregate of 31,348,690 shares of our common stock owned by Baker Brothers Life Sciences, L.P. and (c) warrants to purchase up to an aggregate of 780,827 shares of our common stock owned by 14159, L.P.
- (7) Consists of shares reported under footnote 3 to this table above. Mr. El Zein is a director and controlling stockholder of Pillar Invest Corporation, which is the general partner of Pillar I, Pillar II and Pillar III, and is a limited partner of Pillar I, Pillar II and Pillar III. Accordingly, Mr. El Zein may be deemed to have sole power to direct the voting and disposition of the shares of common stock held directly by Pillar I, Pillar II and Pillar III and indirectly by Pillar Invest Corporation, including the Besancon Securities. Mr. El Zein expressly disclaims beneficial ownership over shares held directly by Pillar I, Pillar III and indirectly by Pillar Invest Corporation, including the Besancon Securities, except to the extent of his pecuniary interest therein, if any, by virtue of his ownership interest in Pillar Invest Corporation and his limited partnership interest in Pillar I and Pillar II.
- (8) Consists of shares of preferred stock held by Pillar I. Mr. El Zein is a director and controlling stockholder of Pillar Invest Corporation, which is the general partner of Pillar I, and is a limited partner of Pillar I. Accordingly, Mr. El Zein may be deemed to have sole power to direct the voting and disposition of the shares of preferred stock held directly by Pillar I. Mr. El Zein expressly disclaims beneficial ownership of any shares of preferred stock held directly by Pillar Invest Corporation.
- (9) Consists of shares of preferred stock held by Pillar II. Mr. El Zein is a director and controlling stockholder of Pillar Invest Corporation, which is the general partner of Pillar II, and is a limited partner of Pillar II. Accordingly, Mr. El Zein may be deemed to have sole power to direct the voting and disposition of the shares of preferred stock held directly by Pillar II. Mr. El Zein expressly disclaims beneficial ownership of any shares of preferred stock held directly by Pillar Invest Corporation, including the Besancon Securities.
- (10) Includes 1,386,150 shares of common stock subject to outstanding stock options that are exercisable within 60 days after May 15, 2013.
- (11) Includes 160,217 shares of common stock subject to outstanding stock options that are exercisable within 60 days after May 15, 2013.
- (12) Includes 358,998 shares of common stock subject to outstanding stock options that are exercisable within 60 days after May 15, 2013.
- (13) Includes 84,284 shares of common stock subject to outstanding stock options that are exercisable within 60 days after May 15, 2013. Also includes 92,434 shares of common stock and a warrant to purchase 90,000 shares of common stock held in a Defined Benefit Pension Plan, owned and controlled solely by Mr. Hartley.
- (14) Includes 549 shares of common stock held by the Robert W. Karr Revocable Trust. Dr. Karr disclaims beneficial ownership of all shares held in this trust. Also includes 165,376 shares of common stock subject to outstanding stock options that are exercisable within 60 days after May 15, 2013.
- (15) Includes 46,001 shares of common stock subject to outstanding stock options that are exercisable within 60 days after May 15, 2013.
- (16) Includes 84,284 shares of common stock subject to outstanding stock options that are exercisable within 60 days after May 15, 2013.
- (17) Consists of shares of common stock subject to outstanding stock options that are exercisable within 60 days after May 15, 2013.
- (18) Includes 325,967 shares of common stock subject to outstanding stock options that are exercisable within 60 days after May 15, 2013.
- (19) Includes 5,000 shares of common stock subject to outstanding stock options that are exercisable within 60 days after May 15, 2013.
- (20) Includes 2,736,562 shares of common stock subject to outstanding stock options held by the directors and executive officers as a group that are exercisable within 60 days after May 15, 2013, shares reported in clauses (i) through (iii) of the first sentence of footnote 3 to this table above and shares reported in the second sentence of footnote 14 to this table above.

PROPOSAL SEVEN

APPROVE THE ISSUANCE AND SALE BY US TO CERTAIN AFFILIATES OF PILLAR INVEST CORPORATION (INCLUDING OUR PRIOR ISSUANCES AND SALES OF OUR SECURITIES TO SUCH AFFILIATES IN NOVEMBER 2011 AND NOVEMBER 2012) OF A NUMBER OF SHARES OF OUR COMMON STOCK (INCLUDING SECURITIES CONVERTIBLE INTO OR EXERCISABLE FOR SHARES OF OUR COMMON STOCK) THAT IS GREATER THAN 19.99% OF THE TOTAL NUMBER OF ISSUED AND OUTSTANDING SHARES OF COMMON STOCK AND OF THE OUTSTANDING VOTING POWER OF OUR SECURITIES AFTER SUCH ISSUANCE AND SALE IN ACCORDANCE WITH NASDAQ LISTING RULE 5635(B).

Overview

In November 2011, we issued and sold to certain affiliates of Pillar Invest Corporation, or Pillar, 1,124,260 shares of our Series D preferred stock and warrants to purchase up to 2,810,650 shares of our common stock, for an aggregate purchase price of approximately \$9.5 million. In November 2012, we issued and sold to other affiliates of Pillar 424,242 shares of our Series E preferred stock and warrants to purchase up to 8,484,840 shares of our common stock, for an aggregate purchase price of approximately \$7.0 million.

Nasdaq Listing Rule 5635(b), or Rule 5635(b), requires companies to obtain stockholder approval of the issuance of securities that would result in a "change in control." Without action, each of these transactions would have resulted in a "change of control" under Rule 5635(b). As a result, in order for these transactions to not constitute a change of control, we limited the ability of Pillar and its affiliates to beneficially own 20% or more of our common stock (including shares of common stock issuable upon conversion or exercise of the securities issued in the transactions) or the combined voting power of all of our securities then outstanding. Specifically, under the Certificates of Designations for the Series D preferred stock and Series E preferred stock, shares of Series D preferred stock and Series E preferred stock may not be converted into shares of our common stock to the extent that such conversion would result in Pillar and its affiliates beneficially owning more than 19.99% of our outstanding. In addition, the warrants issued in the transactions provide that the warrants cannot be exercised to the extent that such exercise would result in Pillar and its affiliates beneficially owning more than 19.99% of our outstanding common stock (assuming the exercise of all such shares into shares of our common stock) or the combined voting power of all of our securities then outstanding.

At the time of the November 2012 preferred stock financing transaction, we agreed to seek stockholder approval at the 2013 annual meeting of the issuance and sale by us to certain affiliates of Pillar (including our prior issuances and sales of our securities to such affiliates in November 2011 and November 2012) of a number of shares of our common stock (including securities convertible into or exercisable for shares of our common stock) that is greater than 19.99% of the total number of issued and outstanding shares of common stock or outstanding voting power of our securities after such issuance and sale in accordance with Rule 5635(b). We have included this Proposal Seven, which we refer to as the Nasdaq Proposal, in this proxy statement pursuant to this agreement.

In the event that the Nasdaq Proposal is approved by our stockholders at the 2013 annual meeting, the beneficial ownership limitations that restrict Pillar and its affiliates from converting their respective shares of Series D preferred stock and Series E preferred stock into, and from exercising their warrants for, shares of our common stock will be increased from 19.99% to 35% and will have related consequences, all as more fully described below.

Our board of directors unanimously recommends that the stockholders vote for the approval of the Nasdaq Proposal.

Summary of November 2011 and November 2012 Preferred Stock Financing Transactions

Terms of November 2011 Series D Preferred Stock Financing

In November 2011, we entered into the Series D Purchase Agreement for the issuance and sale of shares of our Series D preferred stock and warrants to purchase shares of our common stock, with Pillar Pharmaceuticals I, L.P., or Pillar I. The Series D Purchase Agreement was amended in November 2012 in connection with the Series E preferred stock financing. Pursuant to the Series D Purchase Agreement, we issued and sold to Pillar I, for an aggregate purchase price of approximately \$9.5 million, 1,124,260 shares of our Series D preferred stock and warrants to purchase up to 2,810,650 shares of our common stock, or the Series D warrants.

The shares of Series D preferred stock were initially convertible, subject to limitations, into 5,621,300 shares of our common stock at an initial conversion price of \$1.63. The initial exercise price of the warrants was \$1.63 per share. The sale of shares of Series E preferred stock and related warrants to purchase shares of our common stock, or Series E warrants, in our November 2012 Series E preferred stock financing triggered an anti-dilution adjustment under the terms of the Series D preferred stock, resulting in the conversion price of the Series D preferred stock being reduced and fixed at the minimum \$1.46 per share, the warrant exercise price being reduced to \$1.46 per share, and the Series D preferred stock and warrants no longer being subject to any anti-dilution adjustments. Based on this conversion price adjustment, the shares of Series D preferred stock are convertible into 6,266,175 shares of common stock.

Under the terms of the Series D Purchase Agreement, Pillar I agreed to be subject to a standstill provision that continues for so long as Pillar I and its affiliates beneficially own more than 15% of the outstanding common stock of the Company. In addition, under the terms of the Series E Purchase Agreement, that we entered into with certain affiliates of Pillar in connection with our Series E preferred stock financing, the holders of our Series D preferred stock participation rights in future financings.

In connection with our November 2012 Series E preferred stock financing, the Series D Purchase Agreement was amended to provide:

- that, for so long as Pillar I and its affiliates beneficially own more than 19.99% or 25% (if our stockholders approve the Nasdaq Proposal) of the outstanding common stock, Pillar I and its affiliates will vote any shares held by them in excess of the number of shares equal to 19.99% or 25%, as applicable, of the outstanding common stock (including the shares of common stock issuable upon conversion of securities convertible into or exercisable for shares of common stock held by Pillar I and its affiliates) with respect to any matter put to a vote of the holders of our common stock in the same manner and percentage as the holders of our common stock (other than Pillar I and its affiliates) vote on such matter; and
- for certain restrictions on the transfer of any securities issued to Pillar I (including securities convertible into or exercisable for common stock) pursuant to the Series D Purchase Agreement, including to not sell or transfer any such securities in one or a series of transactions if such transfer would, in the aggregate, result in the transfer of more than 5% of the then outstanding combined voting power of our outstanding securities (excluding from this restriction certain transfers to permitted transferees or in connection with an underwritten public offering that has been approved by our board of directors).

In connection with the Series D Purchase Agreement, we filed a registration statement that became effective on December 21, 2011, registering the resale of the shares of common stock issuable upon conversion of the Series D preferred stock and the shares of common stock issuable upon exercise of the Series D warrants. In February 2013, we filed a registration statement that became effective on February 8, 2013, covering the resale of the additional shares of common stock issuable upon conversion of the Series D preferred stock.

Series D Preferred Stock

The rights, preferences and privileges of our Series D preferred stock as currently in effect are set forth in the Series D Certificate of Designations, a copy of which is attached as Exhibit 3.1 to our Current Report on

Form 8-K that we filed with the Securities and Exchange Commission on November 10, 2011, and are summarized below.

• Dividends — The holders of our Series D preferred stock are entitled to receive dividends payable quarterly in arrears at the rate of 7% per annum. Such dividends are payable in cash through December 31, 2014 and thereafter in cash or with shares of our common stock, as determined by our board of directors in its sole discretion, except that we may not pay any dividends to a holder of our Series D preferred stock in shares of common stock to the extent the issuance of such shares would result in such holder and its affiliates beneficially owning more than 19.99% of our outstanding common stock or the combined voting power of all of our securities outstanding immediately after giving effect to the issuance of such shares of common stock. In addition, under the terms of the Series D preferred stock, any dividends that we pay to holders of our Series E preferred stock will also be paid to holders of our Series D preferred stock on an as-converted basis. Accordingly, the 4.6% dividends that we pay to holders of our Series E preferred stock pursuant to the Series E Certificate of Designations are also paid to the holders of our Series D preferred stock on an as-converted basis, which results in holders of our Series D preferred stock being entitled to an additional 2.2% per annum cash dividend payable quarterly in arrears.

In connection with the Series E preferred stock financing, we agreed to submit a proposal at the 2013 annual meeting to approve an amendment to our Restated Certificate of Incorporation to amend the Series D Certificate of Designations to, among other things, modify the terms of the Series D preferred stock that require payment of dividends to holders of our Series D preferred stock upon payment of dividends to holders of our Series E preferred stock. If our stockholders approve this amendment at the 2013 annual meeting, the holders of our Series D preferred stock would cease to be entitled to corresponding dividends with respect to the Series E preferred stock. In addition, under agreements with the sole holder of our Series D preferred stock, we agreed to modify the dividend provisions of the Series D Certificate of Designations to (i) modify the dividend provisions of the Series D preferred stock are not required to be paid to the holders of our Series D preferred stock, (ii) change the date after which we may elect to pay dividends to the holders of our Series D preferred stock in shares of our common stock in lieu of cash from December 31, 2014 to October 1, 2013, and (iii) allow for the payment of such dividends in shares of a to-be-created new series of our preferred stock in the event that the payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series D Certificate of Designations. See Proposal Eight set forth elsewhere in this proxy statement, and specifically Proposals 8(b) and 8(c) described therein, for more information regarding the proposals to amend our Restated Certificate of Incorporation to amend the dividend provisions of the Series D Certificate of Designations.

• Liquidation, Redemption by Holders and Other Events — Under the original terms of the Series D preferred stock, in the event of a liquidation, dissolution or winding up of our company, or Liquidation, whether voluntary or involuntary, after payment or provision for payment of our debts and other liabilities, the holders of our Series D preferred stock then outstanding were entitled to be paid out of the assets of our company available for distribution to our stockholders an amount equal to the greater of (a) the original per share purchase price of the Series D preferred stock (\$8.1375 per share) plus all accrued or declared but unpaid dividends thereon and (b) the amount that the holder of our Series D preferred stock would be entitled to receive with respect to each share of Series D preferred stock pursuant to such Liquidation if all of the outstanding shares of our Series D preferred stock had been converted into common stock as of the date immediately prior to the date fixed for determination of stockholders entitled to receive a distribution in such Liquidation. Such amount would be paid before any cash distribution may be made or any other assets distributed in respect of junior securities to the holders of any junior securities including, without limitation, our common stock and Series A convertible preferred stock, or Series A preferred stock. In addition, upon the occurrence of specified fundamental changes such as mergers, consolidations, business combinations, stock purchases or

similar transactions resulting in a person or group unaffiliated with any holder of our Series D preferred stock owning 66.67% or more of the outstanding voting securities of our company or successor entity, the holders of shares of our Series D preferred stock then outstanding were entitled to require us to purchase such shares of Series D preferred stock at a price equal to the original Series D preferred stock purchase price per share plus all accrued or declared but unpaid dividends thereon.

In April 2013, the sole holder of our Series D preferred stock irrevocably waived their right to receive, in the event of a Liquidation, an amount per share of Series D preferred stock equal to the original issue price of such share of Series D preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation, and agreed that upon a Liquidation the holders of our Series D preferred stock will receive an amount per share of Series D preferred stock equal to the amount that would be payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation. In addition, in April 2013, we and the sole holder of our Series D preferred stock also agreed to modify the terms of our Series D preferred stock to provide, in the event of a sale of the corporation (as defined in the Series D Certificate of Designations), for the distribution of any assets that remain available for distribution to our stockholders, after payment to the holders of our Series A preferred stock and any other class of our capital stock that ranks senior to the Series D preferred stock, to the holders of the Series D preferred stock on a pro rata basis with the holders of our common stock, Series E preferred stock and any new series of non-voting preferred stock that ranks pari passu with the Series D preferred stock. See Proposal Eight set forth elsewhere in this proxy statement, and specifically Proposal 8(d) described therein, for more information regarding this proposal to approve amendments to our Restated Certificate of Incorporation amending the Series D Certificate of Designations.

- Conversion Each share of Series D preferred stock is convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of our common stock as is determined by dividing the Series D preferred stock original issue price by the Series D preferred stock conversion price in effect at the time of conversion. The Series D preferred stock conversion price was initially equal to \$1.63 and the Series D preferred stock issue price was initially equal to the \$8.1375 original purchase price of the Series D preferred stock. Accordingly, each share of Series D preferred stock was initially convertible at the option of the holder into five fully paid and nonassessable shares of the common stock and all of the shares of Series D preferred stock were initially convertible into 5,621,300 shares of our common stock. As a result of our Series E preferred stock financing, the Series D preferred stock conversion price was reduced to \$1.46 per share, and the 1,124,260 shares of our Series D preferred stock became convertible, subject to limitations described below, into 6,266,175 shares of our common stock. No holder may convert its shares to the extent such conversion would result in the holder and its affiliates beneficially owning more than 19.99% of our outstanding common stock (assuming the conversion of all such shares into shares of our common stock) or the combined voting power of all of our securities then outstanding. The Series D preferred stock conversion price, and the rate at which shares of Series D preferred stock may be converted into shares of our common stock, may be subject to adjustment for stock dividends, stock splits and other events, as provided in the Series D Certificate of Designations.
- Redemption by Company After November 4, 2013, we may redeem, for a cash payment equal to the \$8.1375 original Series D preferred stock issue price per share plus any accrued or declared but unpaid dividends thereon, all or a portion of our outstanding Series D preferred stock if the closing price of our common stock for 20 or more trading days in a period of 30 consecutive trading days is greater than or equal to 200% of the \$1.46 Series D preferred stock conversion price.

Series D Warrants

The Series D warrants issued in connection with our Series D preferred stock financing may be exercised at Pillar I's option, subject to limitations described below, at any time on or before November 4, 2016. The initial exercise price of the Series D warrants was \$1.63 per share. In connection with our November 2012 Series E preferred stock financing, the exercise price of the Series D warrants was reduced to \$1.46 per share. The Series D warrants provide that we may not effect any exercise of the Series D warrants, and the Series D warrants may not be exercised with respect to any portion of the Series D warrants, to the extent that such exercise would result in the holder thereof and its affiliates beneficially owning more than 19.99% of our outstanding common stock (assuming the exercise of all such shares into shares of our common stock) or the combined voting power of all of our securities then outstanding. After November 4, 2013, we may redeem the Series D warrants for \$0.01 per share of common stock issuable on exercise of the Series D warrants following notice to Pillar I if the closing price of our common stock for 20 or more trading days in a period of 30 consecutive trading days is greater than or equal to \$6.51 per share (subject to adjustment); provided, that we may not redeem any Series D warrants from a holder that cannot exercise such Series D warrants as a result of the beneficial ownership limitations described above.

Terms of November 2012 Series E Preferred Stock Financing

In November 2012, we entered into the Series E Purchase Agreement for the issuance and sale of shares of our Series E preferred stock and warrants to purchase shares of our common stock, with Pillar II, and a second purchaser, or the Series E purchasers. Pursuant to the Series E Purchase Agreement, we issued and sold to the Series E purchasers, for an aggregate purchase price of approximately \$7.0 million, 424,242 shares of Series E preferred stock and warrants to purchase up to 8,484,840 shares of our common stock. The shares of Series E preferred stock are convertible, subject to limitations, into an aggregate of 8,484,840 shares of common stock at a conversion price of \$0.70 per share. The exercise price of the warrants is \$0.70 per share.

Under the terms of the Series E Purchase Agreement, we granted the holders of our Series E preferred stock participation rights in future financings, and each Series E purchaser agreed:

- for so long as the Series E purchaser and its affiliates beneficially own more than 19.99% or 25% (if the stockholders approve the Nasdaq Proposal) of the outstanding common stock, that the Series E purchaser and its affiliates will vote any shares held by them in excess of the number of shares equal to 19.99% or 25%, as applicable, of the outstanding common stock (including the shares of common stock issuable upon conversion or exercise of securities that are convertible into or exercisable for shares of common stock held by such Series E purchaser and its affiliates) with respect to any matter put to a vote of the holders of our common stock in the same manner and percentage as the holders of our common stock (other than the Series E purchaser) vote on such matter;
- to certain restrictions on the transfer of any securities issued to such Series E purchaser (including securities convertible into or exercisable for common stock) pursuant to the Series E Purchase Agreement including to not sell or transfer any such securities in one or a series of transactions if such transfer would, in the aggregate, result in the transfer of more than 5% of the then outstanding combined voting power of our outstanding securities (excluding from this restriction certain transfers to permitted transferees or in connection with an underwritten public offering that has been approved by our board of directors); and
- to be subject to a standstill provision that continues for so long as such Series E purchaser and its affiliates beneficially own more than 15% of the outstanding common stock of the Company.

In connection with the Series E Purchase Agreement, we filed a registration statement that became effective on January 17, 2013, registering the resale of the shares of common stock issuable upon conversion of the Series E preferred stock and the shares of common stock issuable upon exercise of the Series E warrants.

Series E Preferred Stock

The rights, preferences and privileges of our Series E preferred stock as currently in effect are set forth in Series E Certificate of Designations, a copy of which is attached as Exhibit 3.1 to our Current Report on Form 8-K that we filed with the Securities and Exchange Commission on November 14, 2012, and are summarized below.

- Dividends Under the Series E Certificate of Designations, the holders of our Series E preferred stock are entitled to receive cash dividends payable quarterly in arrears at the rate of 4.6%. In connection with the Series E preferred stock financing, we agreed to submit to our stockholders the proposal outlined in Proposal 8(b) set forth elsewhere in this proxy statement to approve an amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to, among other things, modify the terms of the Series D preferred stock that currently require payment of dividends to the holders of our Series D preferred stock upon payment of dividends to the holders of our Series E preferred stock. If our stockholders approve Proposal 8(b), we will cease to owe dividends to the holders of our Series D preferred stock on the payment of dividends to the holders of our Series E preferred stock, and the dividend rate with respect to the Series E preferred stock will increase from the initial dividend rate to the rate of 8% per annum. The initial dividend rate is also subject to increase to 8% per annum in the event that, as of any Series E preferred stock dividend payment date, there are no shares of Series D preferred stock outstanding. In the event that Proposal 8(b) is not approved, then the holders of our Series E preferred stock will no longer be entitled to any dividends on the Series E preferred stock. Under agreements with the holders of our Series E preferred stock, we agreed to modify the dividend provisions of the Series E Certificate of Designations to (i) permit us to elect to pay dividends to the holders of our Series E preferred stock in shares of our common stock in lieu of cash commencing on October 1, 2013, and (ii) allow for the payment of such dividends in shares of a to-be-created new series of our preferred stock in the event that the payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series E Certificate of Designations. See Proposal Nine set forth elsewhere in this proxy statement, and specifically Proposal 9(a) described therein, for more information regarding the proposals to amend our Restated Certificate of Incorporation to amend the dividend provisions of the Series E Certificate of Designations.
- Liquidation and Other Events Under the original terms of the Series E preferred stock, in the event of a Liquidation (other than a sale of the corporation, as defined in the Series E Certificate of Designations), whether voluntary or involuntary, after payment or provision for payment of our debts and other liabilities, the holders of our Series E preferred stock then outstanding were entitled to be paid out of the assets of our company available for distribution to our stockholders an amount equal to the greater of (a) the original per share purchase price of the Series E preferred stock (\$14.00 per share) plus all accrued or declared but unpaid dividends thereon and (b) the amount that the holder of our Series E preferred stock would be entitled to receive with respect to each share of Series E preferred stock pursuant to such Liquidation if all of the outstanding shares of our Series E preferred stock had been converted into common stock as of the date immediately prior to the date fixed for determination of stockholders entitled to receive a distribution in such Liquidation. Such amount would be paid before any cash distribution may be made or any other assets distributed in respect of the holders of our common stock, Series A preferred stock, Series D preferred stock or any other class of our capital stock ranking junior to our Series E preferred stock as to Liquidation. In the event of a sale of the corporation, after payment to the holders of our Series A preferred stock, Series D preferred stock and any other class of our capital stock ranking senior to our Series E preferred stock, our remaining assets available for distribution to our stockholders would be distributed among the holders of shares of our Series E preferred stock and common stock on a pro rata (and as converted to common stock) basis based on the number of shares held by each such holder.

In April 2013, the holders of our Series E preferred stock irrevocably waived their right to receive, in the event of a Liquidation, an amount per share of Series E preferred stock equal to the original issue price of such share of Series E preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation, and agreed that upon a Liquidation the holders of our Series E preferred stock will receive an amount per share of Series E preferred stock equal to the amount that would be payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation. See Proposal Nine set forth elsewhere in this proxy statement, and specifically Proposal 9(b) described therein, for more information regarding this proposal to approve amendments to our Restated Certificate of Incorporation amending the Series E Certificate of Designations.

- Voting Except with respect to the protective provisions described below, the Series E preferred stock is non-voting.
- Protective Provisions For so long as at least 84,849 shares of our Series E preferred stock remain outstanding, we cannot, directly or indirectly, (a) amend our Restated Certificate of Incorporation or bylaws in a manner that adversely and uniquely affects the Series E preferred stock, (b) except as expressly permitted by the Series E Certificate of Designations, purchase or redeem or pay or declare any dividend or make any distribution on, any shares of our capital stock, or (c) recapitalize or reclassify any of our common stock, without in each case the written consent or affirmative vote of the holders of at least 51% of the then outstanding shares of Series E preferred stock.
- Conversion Each share of Series E preferred stock is convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of our common stock as is determined by dividing the Series E preferred stock original issue price by the Series E preferred stock conversion price in effect at the time of conversion. The Series E preferred stock conversion price is equal to \$0.70 and the Series E preferred stock issue price is initially equal to the \$14.00 original purchase price of the Series E preferred stock. Accordingly, each share of Series E preferred stock is convertible at the option of the holder into 20 fully paid and nonassessable shares of our common stock. No holder may convert its shares to the extent such conversion would result in the holder and its affiliates beneficially owning more than 19.99% of our outstanding common stock (assuming the conversion of all such shares into shares of our common stock) or the combined voting power of all of our securities then outstanding. The Series E preferred stock conversion price, and the rate at which shares of Series E preferred stock may be converted into shares of our common stock, are subject to adjustment for stock dividends, stock splits and other similar events, as provided in the Series E Certificate of Designations.
- Redemption by Company After the later of November 9, 2014 and the date that no shares of Series D preferred stock remain outstanding, we may redeem all or a portion of our outstanding Series E preferred stock for a cash payment equal to the \$14.00 original Series E preferred stock issue price per share plus any accrued or declared but unpaid dividends thereon following notice to the holders of our Series E preferred stock if the closing price of our common stock for 20 or more trading days in a period of 30 consecutive trading days is greater than or equal to 400% of the \$0.70 Series E preferred stock conversion price. We may not redeem any shares of Series E preferred stock from a holder that cannot convert such shares of Series E preferred stock into common stock as a result of the beneficial ownership limitations on conversion of the Series E preferred stock as described above. In such event, we may redeem such nonredeemable shares pursuant to alternative redemption provisions set forth in the Series E Certificate of Designations following notice to the holders of the nonredeemable shares, for a cash payment equal to the greater of the 20 consecutive trading day average closing price per share of our common stock ending on the trading day immediately prior to redemption date plus any dividends accrued or declared but unpaid thereon.

Series E Warrants

The Series E warrants are exercisable at an exercise price of \$0.70 per share at any time on or prior to November 9, 2017. The Series E warrants provide that we may not effect any exercise of the Series E warrants, and the Series E warrants may not be exercised with respect to any portion of the Series E warrants, to the extent that such exercise would result in the holder of the warrant and its affiliates beneficially owning more than 19.99% of our outstanding common stock (assuming the exercise of all such shares into shares of our common stock) or the combined voting power of all of our securities then outstanding. The Series E warrants also provide that at any time after November 9, 2014 we may redeem the Series E warrants for \$0.01 per share of common stock issuable upon exercise of the Series E warrants following notice to the holder of the Series E warrants if the closing price of our common stock for 20 or more trading days in a period of 30 consecutive trading days is greater than or equal to \$2.80 per share (subject to adjustment); provided, that we may not redeem any Series E warrants from a holder that cannot exercise such Series E warrants as a result of the beneficial ownership limitations described above.

Changes in the Terms of the Preferred Stock and Warrants if the Nasdaq Proposal is Approved by Our Stockholders

Changes to Series D Preferred Stock

In the event that the Nasdaq Proposal and the amendments to our Restated Certificate of Incorporation to amend the Series D Certificate of Designations described in Proposal 8(a) set forth elsewhere in this proxy statement are approved by our stockholders at the 2013 annual meeting, the rights, preferences and privileges of our Series D preferred stock will change as follows:

- *Dividends* The beneficial ownership limitation that prohibits a holder of our Series D preferred stock from receiving dividends payable in shares of common stock to the extent the issuance of such shares would result in the holder of our Series D preferred stock and its affiliates beneficially owning more than 19.99% of our outstanding common stock (assuming the conversion of all such shares into shares of our common stock) or the combined voting power of all of our securities then outstanding will be increased from 19.99% to 35%.
- Conversion The beneficial ownership limitation that restricts a holder of our Series D preferred stock from converting its shares of Series D preferred stock to the extent such conversion would result in the holder and its affiliates beneficially owning more than 19.99% of our outstanding common stock (assuming the conversion of all such shares into shares of our common stock) or the combined voting power of all of our securities then outstanding, will be increased from 19.99% to 35%.

Changes to Series D Warrants

In the event that the Nasdaq Proposal is approved by our stockholders at the 2013 annual meeting, the beneficial ownership limitation that restricts Pillar and its affiliates from exercising their Series D warrants for shares of our common stock to the extent such exercise would result in Pillar and its affiliates beneficially owning more than 19.99% of our outstanding common stock or the combined voting power of all of our securities then outstanding (including shares of our common stock issuable upon conversion of the Series D preferred stock and Series D warrants held by Pillar and its affiliates) will be increased from 19.99% to 35%.

Changes to Series E Preferred Stock

In the event that the Nasdaq Proposal is approved by our stockholders at the 2013 annual meeting, the rights, preferences and privileges of our Series E preferred stock will change as follows:

• Voting — The Series E preferred stock will become voting stock with all the voting rights of the common stock and the Series D preferred stock. Each holder of outstanding shares of our Series E preferred stock will be entitled to cast a number of votes equal to the lesser of (a) the number of whole

shares of common stock into which the shares of Series E preferred stock held by such holder are convertible and (b) the product of the Voting Adjustment Percentage, as defined in the Series E Certificate of Designations, multiplied by the number of whole shares of common stock into which the shares of Series E preferred stock held by such holder are convertible. The intent of the Voting Adjustment Percentage is to provide that the maximum aggregate voting power that the holders of our Series E preferred stock and their affiliates may hold does not exceed 35% of our total outstanding voting power at any time. The Voting Adjustment Percentage does not modify the provisions set forth in the Series E Purchase Agreement that require the Series E purchasers and their affiliates to vote any shares held by them in excess of the applicable percentage of our outstanding common stock (including shares of our common stock issuable upon conversion or exercise of securities that are convertible into or exercisable for shares of common stock held by the Series E purchasers and their affiliates) in the same manner and percentage as the holders of our common stock (other than the Series E purchasers and their affiliates) vote on such matter.

Conversion — The beneficial ownership limitation that restricts a holder of our Series E preferred stock from converting its shares of Series E preferred stock to the extent such conversion would result in the holder and its affiliates beneficially owning more than 19.99% of our outstanding common stock (including shares of our common stock issuable upon conversion of the Series E preferred stock) or the combined voting power of all of our securities then outstanding will be increased from 19.99% to 35%.

Changes to Series E Warrants

In the event that the Nasdaq Proposal is approved by our stockholders at the 2013 annual meeting, the beneficial ownership limitation that restricts Pillar and its affiliates from exercising their Series E warrants for shares of our common stock to the extent such exercise would result in Pillar and its affiliates beneficially owning more than 19.99% of our outstanding common stock (including shares of our common stock issuable upon conversion of the Series E preferred stock and Series E warrants held by Pillar and its affiliates) or the combined voting power of all of our securities then outstanding will be increased from 19.99% to 35%.

Changes to Pillar Voting Rights

In the event that the Nasdaq Proposal is approved by our stockholders at the 2013 annual meeting, under the terms of the Series E Purchase Agreement and the Series D Purchase Agreement, as amended in connection with our Series E preferred stock financing, the requirement that Pillar and its affiliates vote any shares held by them in excess of the number of shares equal to 19.99% of our outstanding common stock (including the shares of our common stock issuable upon conversion or exercise of securities that are convertible into or exercisable for shares of our common stock held by Pillar and its affiliates) with respect to any matter put to a vote of the holders of our common stock in the same manner and percentage as the holders of our common stock (other than Pillar and its affiliates) vote on such matter will be modified such that the 19.99% will be increased to 25%.

Effect on Holders of Common Stock if the Nasdaq Proposal is Approved by our Stockholders

The approval of the Nasdaq Proposal by our stockholders at the 2013 annual meeting (and with respect to the rights, preferences and privileges of our Series D preferred stock, the approval of Proposal 8(a) by our stockholders at the 2013 annual meeting) will result in the increase in the beneficial ownership limitations that restrict Pillar and its affiliates from converting their respective shares of Series D preferred stock and Series E preferred stock into, and from exercising their warrants for, shares of our common stock to the extent such conversion or exercise would result in Pillar and its affiliates beneficially owning more than 19.99% of our outstanding common stock (assuming the conversion and exercise of all such securities into shares of our common stock) or the combined voting power of all of our securities then outstanding from 19.99% to 35%. The increases and application of these beneficial ownership limitations will result in Pillar and its affiliates beneficially owning 35% of our outstanding common stock. In addition, the approval of the Nasdaq Proposal by our stockholders at the 2013 annual meeting will likely have the effect of increasing the voting power of Pillar and its affiliates as a result of the conversion of the Series E preferred stock from non-voting stock to voting

stock, in accordance with the Series E Certificate of Designations, and of the increase in the voting rights threshold imposed on the securities held by Pillar and its affiliates from 19.99% to 25% of our outstanding common stock.

Pillar and its affiliates are our largest stockholder group. In addition, two members of our board of directors are affiliates of Pillar. In connection with their ownership of our Series D preferred Stock, Series D warrants, Series E preferred stock and Series E warrants, Pillar and its affiliates have various rights, preferences and privileges that are not held by the holders of our common stock and that in certain instances are preferential to the rights of the holders of our common stock. As a result, the interests of Pillar and its affiliates may differ from the interests of the holders of our common stock in material respects. Although there would continue to be contractual and other limitations on the beneficial ownership and voting rights of Pillar and its affiliates following the approval of the Nasdaq Proposal (and with respect to the rights, preferences and privileges of our Series D preferred stock, the approval of Proposal 8(a) at the 2013 annual meeting) by our stockholders at the 2013 annual meeting, Pillar and its affiliates may still be able to exert substantial influence over our business.

Consequences if Stockholder Approval of the Nasdaq Proposal is Not Obtained

If the Nasdaq Proposal is not approved by our stockholders at the 2013 annual meeting, then (regardless of whether Proposal 8(a) is approved by our stockholders at the 2013 annual meeting), the existing 19.99% beneficial ownership limitations imposed on the Series D preferred stock, Series D warrants, Series E preferred stock and Series E warrants held by Pillar and its affiliates, and the 19.99% voting rights threshold imposed on the securities held by Pillar and its affiliates, will remain in effect. In addition, the Series E preferred stock will remain non-voting stock in accordance with the Series E Certificate of Designations.

Recommendation of the Board of Directors and Required Vote

Our board of directors unanimously recommends that the stockholders vote FOR the approval of the Nasdaq Proposal.

The affirmative vote of (i) the stockholders holding a majority of the outstanding shares of our common stock and Series D preferred stock present in person or represented by proxy and voting on the matter, voting as a single class, on an as-converted basis and (ii) the stockholders (other than us, Pillar and their respective affiliates) holding a majority of the issued and outstanding shares of our common stock and Series D preferred stock entitled to vote and held by such stockholders, voting as a single class, on an as-converted basis, is required for the approval of this Proposal Seven.

PROPOSAL EIGHT

APPROVAL OF AMENDMENTS TO OUR RESTATED CERTIFICATE OF INCORPORATION AMENDING THE CERTIFICATE OF DESIGNATIONS, PREFERENCES AND RIGHTS OF SERIES D CONVERTIBLE PREFERRED STOCK

Overview

In November 2012 and April 2013 we entered into agreements with certain affiliates of Pillar Invest Corporation, or Pillar. These agreements are described in greater detail below, in "Transactions with Related Persons" set forth elsewhere in this proxy statement and in Proposal Seven set forth elsewhere in this proxy statement. Under these agreements, we agreed to seek stockholder approval at the 2013 annual meeting of amendments to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to:

- provide that, if the Nasdaq Proposal were approved by our stockholders, the beneficial ownership limitation applicable to our Series D preferred stock would be increased from 19.99% to 35% consistent with the beneficial ownership limitations applicable to our Series E preferred stock (see Proposal 8(a) below);
- modify the dividend provisions of the Series D Certificate of Designations so that dividends on the Series E preferred stock are not required to be paid to the holders of our Series D preferred stock (see Proposal 8(b) below);
- modify the dividend provisions of our Series D preferred stock to (i) change the date after which we may elect to pay dividends to the holders of our Series D preferred stock in shares of our common stock in lieu of cash from December 31, 2014 to October 1, 2013, and (ii) allow for the payment of dividends in shares of a to-be-created new series of our preferred stock in the event that the payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series D Certificate of Designations (see Proposal 8(c) below); and
- modify the provisions of our Series D preferred stock to:
 - (i) eliminate the provision of the Series D Certificate of Designations that had provided the holders of our Series D preferred stock with the right to require us to redeem the Series D preferred stock upon the occurrence of specified fundamental changes and to provide, in the event of a sale of the corporation (as defined the Series D Certificate of Designations), for the distribution of any assets that remain available for distribution to our stockholders, after payment to the holders of our Series A preferred stock and any other class of our capital stock that ranks senior to the Series D preferred stock, to the holders of the Series D preferred stock on a pro rata basis with the holders of our common stock, Series E preferred stock and any new series of non-voting preferred stock that ranks pari passu with the Series D preferred stock; and
 - (ii) eliminate the right of the holders of our Series D preferred stock to receive, in the event of a liquidation, dissolution or winding up of our company, or Liquidation, whether voluntary or involuntary, an amount per share of Series D preferred stock equal to the original issue price of such share of Series D preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation, such that upon a Liquidation, the holders of our Series D preferred stock will receive an amount per share of Series D preferred stock equal to the amount that would be payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation and not any amount greater than that amount in preference to our common stock (see Proposal 8(d) below).

We have included this Proposal Eight in this proxy statement pursuant to our agreements with Pillar and its affiliates. Under these agreements, Pillar and its affiliates have agreed to vote all shares of our voting stock held by Pillar and its affiliates in favor of the amendments described in this Proposal Eight.

Our board of directors unanimously recommends that the stockholders vote for the approval of each of the proposed amendments to our Restated Certificate of Incorporation amending the Series D Certificate of Designations as described in this Proposal Eight.

Proposals

Proposals 8(a), 8(b), 8(c) and 8(d) all relate to amendments to our Restated Certificate of Incorporation to amend the Series D Certificate of Designations for which we agreed, under our agreements with Pillar and its affiliates, to seek approval from our stockholders at the 2013 annual meeting, but each proposal concerns different amendments to our Restated Certificate of Incorporation. We are submitting these amendments to our stockholders as separate items so that our stockholders are able to express their views on each set of proposed amendments separately. No individual proposal included in this Proposal Eight is conditioned on the approval of any other individual proposal included in this Proposal Eight.

- If Proposals 8(a), 8(b), 8(c) and 8(d) each receive the requisite stockholder vote, then our Restated Certificate of Incorporation will be amended to reflect all of the amendments to the Series D Certificate of Designations set forth in Part (A) of Appendix E.
- If Proposal 8(a) receives the requisite stockholder vote, but Proposals 8(b), 8(c) and 8(d) do not, then the amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations will reflect the amendments to the Series D Certificate of Designations set forth in Part (B) of Appendix E.
- If Proposal 8(b) receives the requisite stockholder vote, but Proposals 8(a), 8(c) and 8(d) do not, then the amendment to our Restated Certificate of
 Incorporation amending the Series D Certificate of Designations will reflect the amendments to the Series D Certificate of Designations set forth in
 Part (C) of Appendix E.
- If Proposal 8(c) receives the requisite stockholder vote, but Proposals 8(a), 8(b) and 8(d) do not, then the amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations will reflect the amendments to the Series D Certificate of Designations set forth in Part (D) of Appendix E.
- If Proposal 8(d) receives the requisite stockholder vote, but Proposals 8(a), 8(b) and 8(c) do not, then the amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations will reflect the amendments to the Series D Certificate of Designations set forth in Part (E) of Appendix E.
- If none of Proposals 8(a), 8(b), 8(c) and 8(d) receive the requisite stockholder vote, then no changes will be made to our Restated Certificate of Incorporation under this Proposal Eight.

To the extent any or all of Proposals 8(a), 8(b), 8(c) and 8(d) receive the requisite stockholder vote, the appropriate amendments to the Series D Certificate of Designations, as described above, will be set forth in a Certificate of Amendment to Series D Certificate of Designations which will be filed with the Secretary of State of the State of Delaware promptly following the 2013 annual meeting. The forms of resolutions to be included in the Certificate of Amendment (subject, in each case, to the approval of our stockholders) for each of the proposed amendments to the Series D Certificate of Designations described in Proposals 8(a), 8(b), 8(c) and 8(d) will be as set forth in Appendix E (subject to any changes required by applicable law).

The following description of the proposed amendments to our Restated Certificate of Incorporation amending the Series D Certificate of Designations is a summary and is qualified by the full text of the proposed amendments, which are attached to this proxy statement as Appendix E. Our board of directors reserves the right, at any time prior to the effectiveness of the filing of the Certificate of Amendment to the Series D Certificate of Designations, to abandon one or more of the proposed amendments.

Proposal 8(a): Proposed amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to provide that, if the Nasdaq Proposal were approved by our stockholders, the beneficial ownership limitation applicable to our Series D preferred stock would be increased from 19.99% to 35%, consistent with the beneficial ownership limitations applicable to our Series E preferred stock

Restated Certificate of Incorporation sections affected: Sections 1.1 and 4.1.1 of the Series D Certificate of Designations

In November 2012, we agreed, among other things, to seek stockholder approval at the 2013 annual meeting of the issuance and sale by us to certain affiliates of Pillar (including our prior issuances and sales of our securities to such affiliates in November 2011 and November 2012) of a number of shares of our common stock (including securities convertible into or exercisable for shares of our common stock) that is greater than 19.99% of the total number of issued and outstanding shares of common stock or outstanding voting power of our securities after such issuance and sale in accordance with Rule 5635(b). Additional details regarding this proposal, which we refer to as the Nasdaq Proposal, and the terms of our Series D preferred stock and Series E preferred stock financings are set forth in Proposal Seven to this proxy statement.

In connection with the Series E preferred stock financing, we also agreed to seek stockholder approval at the 2013 annual meeting of amendments to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to, among other things, provide that, if the Nasdaq Proposal were approved by our stockholders, the beneficial ownership limitation applicable to our Series D preferred stock would be increased from 19.99% to 35% consistent with the beneficial ownership limitations applicable to our Series E preferred stock. We have included this Proposal 8(a) in this proxy statement pursuant to the Series E Purchase Agreement.

The rights, preferences and privileges of our Series D preferred stock are set forth in the Series D Certificate of Designations, a copy of which is attached as Exhibit 3.1 to our Current Report on From 8-K that we filed with the Securities and Exchange Commission on November 10, 2011, and are summarized in Proposal Seven set forth elsewhere in this proxy statement. In the event that Proposal 8(a) is approved by our stockholders at the 2013 annual meeting, the rights, preferences and privileges of our Series D preferred stock will change as follows:

- Dividends The beneficial ownership limitation that prohibits us from paying a holder of Series D preferred stock dividends payable in shares of common stock to the extent the issuance of such shares would result in the holder of our Series D preferred stock and its affiliates beneficially owning more than 19.99% of our outstanding common stock (including shares of our common stock issuable upon conversion of our Series D preferred stock) will be modified to allow for the increase in such beneficial ownership limitation from 19.99% to 35% in the event the Nasdaq Proposal is approved by our stockholders. The modifications to the dividend provisions of the Series D Certificate of Designations described in this Proposal 8(a) are in addition to, and not in lieu of the modifications to the dividend provisions of the Series D Certificate of Designations described in Proposals 8(b) and 8(c) to the extent such modifications are approved by our stockholders.
- Conversion Each share of Series D preferred stock will continue to be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of any additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing the Series D preferred stock original issue price by the Series D preferred stock conversion price then in effect at the time of conversion. However, the beneficial ownership limitation that prohibits a holder of Series D preferred stock from converting its shares to the extent such conversion would result in the holder and its affiliates beneficially owning more than 19.99% of our outstanding common stock (including shares of our common stock issuable upon conversion of the Series D preferred stock) will be modified to allow for the increase in such beneficial ownership limitation from 19.99% to 35% in the event the Nasdaq Proposal is approved by our stockholders.

The forms of resolutions to be included in the Certificate of Amendment to Series D Certificate of Designations to effect the changes described in this Proposal 8(a) are set forth in Part (B) of Appendix E attached to this proxy statement.

Recommendation of the Board of Directors and Required Vote

Our board of directors unanimously recommends that the stockholders vote FOR the approval of an amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to provide that, if the Nasdaq Proposal were approved by our stockholders, the beneficial ownership limitation applicable to our Series D preferred stock would be increased from 19.99% to 35%, consistent with the beneficial ownership limitations applicable to our Series E preferred stock.

The affirmative vote of (i) stockholders holding a majority of our issued and outstanding common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, and (ii) stockholders holding a majority of our issued and outstanding Series D preferred stock entitled to vote, voting separately as a series, is required for the approval of this Proposal 8(a).

Proposal 8(b): Proposed amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to eliminate the requirement that we pay dividends to the holders of our Series D preferred stock upon payment of dividends to the holders of our Series E preferred stock

Restated Certificate of Incorporation sections affected: Section 1.3 of the Series D Certificate of Designations

Also under the Series E Purchase Agreement, we agreed to seek stockholder approval at the 2013 annual meeting of an amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to eliminate the requirement that we pay dividends to the holders of our Series D preferred stock upon payment of dividends to the holders of our Series E preferred stock. We have included this Proposal 8(b) in this proxy statement pursuant to the Series E Purchase Agreement.

In the event that Proposal 8(b) is approved by our stockholders at the 2013 annual meeting, the rights, preferences and privileges of our Series D preferred stock will change as follows:

• Dividends — The holders of our Series D preferred stock shall continue to be entitled to receive dividends payable quarterly in arrears at the rate of 7% per annum. However, the dividend provisions that currently require that we pay dividends to the holders of our Series D preferred stock upon payment of dividends to the holders of our Series E preferred stock will be eliminated. The modifications to the dividend provisions of the Series D Certificate of Designations described in this Proposal 8(b) are in addition to, and not in lieu of the modifications to the dividend provisions of the Series D Certificate of Designations described in Proposals 8(a) and 8(c) to the extent such modifications are approved by our stockholders at the 2013 annual meeting.

Under the existing terms of the Series D preferred stock, any dividends that we pay to holders of our Series E preferred stock must also be paid to holders of our Series D preferred stock on an as-converted basis. Accordingly, the 4.6% dividends that we currently pay to holders of our Series E preferred stock pursuant to the Series E Certificate of Designations are also paid to the holders of our Series D preferred stock on an as-converted basis, which results in holders of our Series D preferred stock being entitled to an additional 2.2% per annum cash dividend payable quarterly in arrears. If this Proposal 8(b) is approved by our stockholders, the holders of our Series D preferred stock would cease to be entitled to corresponding dividends with respect to the Series E preferred stock but would continue to be entitled to receive dividends payable quarterly in arrears at the rate of 7% per annum. In the event that Proposal 8(b) is not approved by our stockholders, the holders of our Series E preferred stock will no longer be entitled to receive dividends. The form of resolution to be included in the Certificate of Amendment to Series D Certificate of Designations to effect the changes described in this Proposal 8(b) is set forth in Part (C) of Appendix E attached to this proxy statement.

Recommendation of the Board of Directors and Required Vote

Our board of directors unanimously recommends that the stockholders vote FOR the approval of an amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to modify the dividend provisions of the Series D Certificate of Designations so that dividends on the Series E preferred stock are not required to be paid to the holders of our Series D preferred stock.

The affirmative vote of (i) stockholders holding a majority of our issued and outstanding common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, and (ii) stockholders holding a majority of our issued and outstanding Series D preferred stock entitled to vote, voting separately as a series, is required for the approval of this Proposal 8(b).

Proposal 8(c): Proposed amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to modify the dividend provisions of our Series D preferred stock to (i) change the date after which we may elect to pay dividends to the holders of our Series D preferred stock in shares of our common stock in lieu of cash from December 31, 2014 to October 1, 2013, and (ii) allow for the payment of such dividends in shares of a to-be-created new series of our preferred stock in the event that payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series D Certificate of Designations

Restated Certificate of Incorporation sections affected: Section 1.1 of the Series D Certificate of Designations

On April 22, 2013, we entered into an agreement with certain affiliates of Pillar, which we refer to as the April 22, 2013 Pillar Agreement. Under the April 22, 2013 Pillar Agreement, we and each of the Pillar affiliates agreed to modify the dividend provisions of the Series D Certificate of Designations to (i) change the date after which we may elect to pay dividends to the holders of our Series D preferred stock in shares of our common stock from December 31, 2014 to October 1, 2013 and (ii) allow for the payment of such dividends in shares of a to-be-created new series of our preferred stock in the event that payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series D Certificate of Designations.

Under the April 22, 2013 Pillar Agreement, we agreed to seek stockholder approval at the 2013 annual meeting of an amendment to our Restated Certificate of Incorporation to affect these changes to the dividend provisions of our Series D preferred stock. We have included this Proposal 8(c) in this proxy statement pursuant to the April 22, 2013 Pillar Agreement.

In the event that Proposal 8(c) is approved by our stockholders at the 2013 annual meeting, the rights, preferences and privileges of our Series D preferred stock will change as follows:

• Dividends — Under the Series D Certificate of Designations we have the right to pay dividends on our Series D preferred stock in shares of our common stock. However, we do not have the right to do so until December 31, 2014, and we may not pay any dividends to a holder of our Series D preferred stock in shares of common stock to the extent the issuance of such shares would result in such holder and its affiliates beneficially owning more than 19.99% of our common stock (assuming the conversion of all such shares into shares of our common stock) or the combined voting power of all of our securities then outstanding. If Proposal 8(c) is approved by our stockholders, the dividend provisions of the Series D Certificate of Designations will be modified to change the date after which we may elect to pay dividends in shares of our common stock from December 31, 2014 to October 1, 2013, and to allow for the payment of such dividends in shares of a to-be-created new series of non-voting preferred stock in the event that payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitation set forth in the Series D Certificate of Designations. The modifications to the dividend provisions of the Series D Certificate of Designations

described in this Proposal 8(c) are in addition to, and not in lieu of the modifications to the dividend provisions of the Series D Certificate of Designations described in Proposals 8(a) and 8(b) to the extent such modifications are approved by our stockholders at the 2013 annual meeting.

The form of resolution to be included in the Certificate of Amendment to Series D Certificate of Designations to effect the changes described in this Proposal 8(c) is set forth in Part (D) of <u>Appendix F</u> attached to this proxy statement.

Recommendation of the Board of Directors and Required Vote

Our board of directors unanimously recommends that the stockholders vote FOR the approval of an amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to modify the dividend provisions of our Series D preferred stock to (i) change the date after which we may elect to pay dividends to the holders of our Series D preferred stock in shares of our common stock in lieu of cash from December 31, 2014 to October 1, 2013, and (ii) allow for the payment of such dividends in shares of a to-be-created new series of our preferred stock in the event that payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series D Certificate of Designations.

The affirmative vote of (i) stockholders holding a majority of our issued and outstanding common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, and (ii) stockholders holding a majority of our issued and outstanding Series D preferred stock entitled to vote, voting separately as a series, is required for the approval of this Proposal 8(c).

Proposal 8(d): Proposed amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to modify the provisions of our Series D preferred stock to (i) eliminate the provision of the Series D Certificate of Designations that had provided the holders of our Series D preferred stock with the right to require us to redeem the Series D preferred stock upon the occurrence of specified fundamental changes and provide, in the event of a sale of the corporation (as defined the Series D Certificate of Designations), for the distribution of any assets that remain available for distribution to our stockholders, after payment to the holders of our Series A preferred stock and any other class of our capital stock that ranks senior to the Series D preferred stock, to the holders of the Series D preferred stock on a pro rata basis with the holders of our common stock, Series E preferred stock and any new series of non-voting preferred stock that ranks pari passu with the Series D preferred stock and (ii) modify the Series D Certificate of Designations to eliminate the right of the holders of our Series D preferred stock to receive, in the event of a Liquidation, an amount per share of Series D preferred stock equal to the original issue price of such share of Series D preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series D preferred stock will receive an amount per share of Series D preferred stock equal to the amount that would be payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation.

Restated Certificate of Incorporation sections affected: Sections 2.1, 4.1.2 and 6 of the Series D Certificate of Designations

In connection with the April 22, 2013 Pillar Agreement, the Pillar affiliate that is the sole holder of our Series D preferred stock, irrevocably waived and agreed to not exercise the rights, powers, preferences and other terms of the Series D preferred stock under Section 6 of the Series D Certificate of Designations, including without limitation the right to require us to purchase all or any portion of the shares of our Series D preferred

stock at a price equal to the original Series D preferred stock purchase price per share plus all accrued or declared but unpaid dividends thereon upon the occurrence of specified fundamental changes such as mergers, consolidations, business combinations, stock purchases or similar transactions resulting in a person or group unaffiliated with any holder of our Series D preferred stock owning 66.67% or more of the outstanding voting securities of our company or such successor entity. Also in connection with the April 22, 2013 Pillar Agreement, we and the Pillar affiliate that is the sole holder of our Series D preferred stock agreed to modify the provisions of our Series D preferred stock to provide, in the event of a sale of the corporation, for the distribution of any assets that remain available for distribution to our stockholders, after payment to the holders of our Series A preferred stock and any other class of our capital stock that ranks senior to the Series D preferred stock, to the holders of the Series D preferred stock on a pro rata basis with the holders of our common stock, Series E preferred stock and any new series of non-voting preferred stock that ranks pari passu with the Series D preferred stock.

On April 30, 2013, we entered into a second agreement with certain affiliates of Pillar, which we refer to as the April 30, 2013 Pillar Agreement and together with the April 22, 2013 Pillar Agreement, the April Pillar Agreements. Under the April 30, 2013 Pillar Agreement, the Pillar affiliate that is the sole holder of our Series D preferred stock, irrevocably waived the right of the holders of our Series D preferred stock under Section 2.1 of the Series D Certificate of Designations to receive, in the event of a Liquidation, an amount per share of Series D preferred stock equal to the original issue price of such share of Series D preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation, and agreed that, upon a Liquidation, the holders of our Series D preferred stock will receive an amount per share of Series D preferred stock equal to the amount that would be payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation.

Under the April Pillar Agreements, we agreed to seek stockholder approval at the 2013 annual meeting of amendments to our Restated Certificate of Incorporation to (i) modify the redemption rights of the holders of our Series D preferred stock and the liquidation provisions of our Series D preferred stock consistent with Pillar and its affiliates' waiver and agreement not to exercise the rights, powers, preferences and other terms of the Series D preferred stock under such provisions and (ii) modify the provisions of our Series D preferred stock to provide, in the event of a sale of the corporation, for the distribution of any assets that remain available for distribution to our stockholders, after payment to the holders of our Series A preferred stock and any other class of our capital stock that ranks senior to the Series D preferred stock, to the holders of the Series D preferred stock on a pro rata basis with the holders of our common stock, Series E preferred stock and any new series of non-voting preferred stock that ranks pari passu with the Series D preferred stock. We have included this Proposal 8(d) in this proxy statement pursuant to the April Pillar Agreements.

In the event that Proposal 8(d) is approved by our stockholders at the 2013 annual meeting, the rights, preferences and privileges of our Series D preferred stock will change as follows:

• Liquidation and Other Events — The liquidation provisions of the Series D Certificate of Designations will be modified to eliminate the right of the holders of our Series D preferred stock to receive, in the event of a Liquidation, an amount per share of Series D preferred stock equal to the original issue price of such share of Series D preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation, such that upon a Liquidation the holders of our Series D preferred stock will receive an amount per share of Series D preferred stock equal to the amount that would be payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation. In addition, the Series D Certificate of Designations will be modified to provide, in the event of a sale of the corporation, for the

distribution of any assets that remain available for distribution to our stockholders, after payment to the holders of our Series A preferred stock and any other class of our capital stock that ranks senior to the Series D preferred stock, to the holders of the Series D preferred stock on a pro rata basis with the holders of our common stock, Series E preferred stock and any new series of non-voting preferred stock that ranks pari passu with the Series D preferred stock.

The form of resolution to be included in the Certificate of Amendment to Series D Certificate of Designations to effect the changes described in this Proposal 8(d) is set forth in Part (E) of Appendix E attached to this proxy statement.

Recommendation of the Board of Directors and Required Vote

Our board of directors unanimously recommends that the stockholders vote FOR the approval of an amendment to our Restated Certificate of Incorporation amending the Series D Certificate of Designations to modify the provisions of our Series D preferred stock to (i) eliminate the provision of the Series D Certificate of Designations that had provided the holders of our Series D preferred stock with the right to require us to redeem the Series D preferred stock upon the occurrence of specified fundamental changes and provide, in the event of a sale of the corporation, for the distribution of any assets that remain available for distribution to our stockholders, after payment to the holders of our Series A preferred stock and any other class of our capital stock that ranks senior to the Series D preferred stock, to the holders of the Series D preferred stock on a pro rata basis with the holders of our common stock, Series E preferred stock and any new series of non-voting preferred stock that ranks pari passu with the Series D preferred stock and (ii) provide that upon a Liquidation the holders of our Series D preferred stock will receive an amount per share of Series D preferred stock equal to the amount that would be payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation and not any amount greater than that amount in preference to our common stock.

The affirmative vote of (i) stockholders holding a majority of our issued and outstanding common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, and (ii) stockholders holding a majority of our issued and outstanding Series D preferred stock entitled to vote, voting separately as a series, is required for the approval of this Proposal 8(d).

PROPOSAL NINE

APPROVAL OF AMENDMENTS TO OUR RESTATED CERTIFICATE OF INCORPORATION AMENDING THE CERTIFICATE OF DESIGNATIONS, PREFERENCES AND RIGHTS OF SERIES E PREFERRED STOCK

Overview

In April 2013 we entered into agreements with certain affiliates of Pillar. These agreements are described in greater detail below and in "Transactions with Related Persons" set forth elsewhere in this proxy statement. Under these agreements, we agreed to seek stockholder approval at the 2013 annual meeting of amendments to our Restated Certificate of Incorporation to amend the Series E Certificate of Designations to:

- modify the dividend provisions of our Series E preferred stock to (i) permit us to elect to pay dividends to the holders of our Series E preferred stock in shares of our common stock in lieu of cash commencing on October 1, 2013, and (ii) allow for the payment of dividends in shares of a to-be-created new series of our preferred stock in the event that the payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series E Certificate of Designations (see Proposal 9(a) below); and
- modify the provisions of our Series E preferred stock to provide that upon a liquidation, dissolution or winding up of our company, which we refer to as a Liquidation, the holders of our Series E preferred stock will receive an amount per share of Series E preferred stock equal to the amount that would be payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation and not any amount greater than that amount in preference to our common stock (see Proposal 9(b) below).

We have included this Proposal Nine in this proxy statement pursuant to our agreements with Pillar and its affiliates. Under these agreements, Pillar and its affiliates have agreed to vote all shares of our voting stock held by Pillar and its affiliates in favor of the amendments described in this Proposal Nine.

Our board of directors unanimously recommends that the stockholders vote for the approval of each of the proposed amendments to our Restated Certificate of Incorporation to amend the Series E Certificate of Designations described in this Proposal Nine.

Proposals

Proposals 9(a) and 9(b) each relate to amendments to our Restated Certificate of Incorporation to amend the Series E Certificate of Designations for which we agreed, under our agreements with Pillar and its affiliates, to seek approval from our stockholders at the 2013 annual meeting, but each proposal concerns different amendments to our Restated Certificate of Incorporation. We are submitting these amendments to our stockholders as separate items so that our stockholders are able to express their views on each set of proposed amendments separately. Neither individual proposal included in this Proposal Nine is conditioned on the approval of the other individual proposal included in this Proposal Nine.

- If Proposals 9(a) and 9(b) each receive the requisite stockholder vote, then our Restated Certificate of Incorporation will be amended to reflect all of the amendments to the Series E Certificate of Designations set forth in Part (A) of <u>Appendix F</u>.
- If Proposal 9(a) receives the requisite stockholder vote, but Proposal 9(b) does not, then the amendment to our Restated Certificate of Incorporation to amend the Series E Certificate of Designations will reflect the amendments to the Series E Certificate of Designations set forth in Part (B) of Appendix F.
- If Proposal 9(b) receives the requisite stockholder vote, but Proposal 9(a) does not, then the amendment to our Restated Certificate of Incorporation to amend the Series E Certificate of Designations will reflect the amendments to the Series E Certificate of Designations set forth in Part (C) of Appendix F.

• If neither Proposal 9(a) or Proposal 9(b) receive the requisite stockholder vote, then no changes will be made to our Restated Certificate of Incorporation under this Proposal Nine.

To the extent either or both of Proposals 9(a) and 9 (b) receive the requisite stockholder vote, the approved amendments to the Series E Certificate of Designations will be set forth in a Certificate of Amendment to Series E Certificate of Designations which will be filed with the Secretary of State of the State of Delaware promptly following the 2013 annual meeting. The forms of resolutions to be included in the Certificate of Amendment to Series E Certificate of Designations (subject, in each case, to the approval of our stockholders) for each of the proposed amendments to the Series E Certificate of Designations described in Proposals 9(a) and 9(b) will be as set forth in Appendix F (subject to any changes required by applicable law).

The following description of the proposed amendments to our Restated Certificate of Incorporation to amend the Series E Certificate of Designations is a summary and is qualified by the full text of the proposed amendments, which are attached to this proxy statement as Appendix F. Our board of directors reserves the right, at any time prior to the effectiveness of the filing of the Certificate of Amendment, to amend our Restated Certificate of Incorporation to amend the Series E Certificate of Designations, to abandon one or more of the proposed amendments.

Proposal 9(a): Proposed amendment to our Restated Certificate of Incorporation to amend the Series E Certificate of Designations to modify the dividend provisions of our Series E preferred stock to (i) permit us to elect to pay dividends to the holders of our Series E preferred stock in shares of our common stock in lieu of cash commencing October 1, 2013, and (ii) allow for the payment of such dividends in shares of a to-be-created new series of our preferred stock in the event that payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series E Certificate of Designations

Restated Certificate of Incorporation sections affected: Section 1.1 of the Series E Certificate of Designations

On April 22, 2013, we entered into an agreement with certain affiliates of Pillar. Under the April 22, 2013 Pillar Agreement, we and each of the Pillar affiliates agreed, among other things, to modify the dividend provisions of the Series E Certificate of Designations to (i) permit us to elect to pay dividends to the holders of our Series E preferred stock in shares of our common stock in lieu of cash beginning October 1, 2013 and (ii) allow for the payment of such dividends in shares of a to-be-created new series of our preferred stock in the event that payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series E Certificate of Designations.

Under the April 22, 2013 Pillar Agreement, we agreed to seek stockholder approval at the 2013 annual meeting of an amendment to our Restated Certificate of Incorporation to affect these changes to the dividend provisions of our Series E preferred stock. We have included this Proposal 9(a) in this proxy statement pursuant to the April 22, 2013 Pillar Agreement.

In the event that Proposal 9(a) is approved by our stockholders at the 2013 annual meeting, the rights, preferences and privileges of our Series E preferred stock will change as follows:

• Dividends — Under the Series E Certificate of Designations we currently do not have the right to pay dividends on our Series E preferred stock in shares of common stock. If Proposal 9(a) is approved by our stockholders, the dividend provisions of the Series E Certificate of Designations will be modified to permit us to elect to pay dividends to the holders of our Series E preferred stock in shares of our common stock in lieu of cash beginning October 1, 2013, and to allow for the payment of such dividends in shares of a to-be-created new series of non-voting preferred stock in the event that payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitation set forth in the Series E Certificate of Designations.

The forms of resolutions to be included in the Certificate of Amendment to Series E Certificate of Designations to effect the changes described in this Proposal 9(a) are set forth in Part (B) of Appendix F attached to this proxy statement.

Recommendation of the Board of Directors and Required Vote

Our board of directors unanimously recommends that the stockholders vote FOR the approval of an amendment to our Restated Certificate of Incorporation to amend the Series E Certificate of Designations to modify the dividend provisions of our Series E preferred stock to (i) permit us to elect to pay dividends to the holders of our Series E preferred stock in shares of our common stock in lieu of cash commencing October 1, 2013, and (ii) allow for the payment of such dividends in shares of a to-be-created new series of our preferred stock in the event that payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership limitations set forth in the Series E Certificate of Designations.

The affirmative vote of (i) stockholders holding a majority of our issued and outstanding common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, and (ii) stockholders holding a majority of our issued and outstanding Series E preferred stock entitled to vote, voting separately as a series, is required for the approval of this Proposal 9(a).

Proposal 9(b): Proposed amendment to our Restated Certificate of Incorporation to modify the Series E Certificate of Designations to eliminate the right of the holders of our Series E preferred stock to receive, in the event of a Liquidation, an amount per share of Series E preferred stock equal to the original issue price of such share of Series E preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation, such that upon a Liquidation the holders of our Series E preferred stock will receive an amount per share of Series E preferred stock equal to the amount that would be payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation

Restated Certificate of Incorporation sections affected: Sections 2.1.1 and 2.3.1 of the Series E Certificate of Designations

On April 30, 2013, we entered into a second agreement with certain affiliates of Pillar. Under the April 30, 2013 Pillar Agreement, the Pillar affiliates holding 100% of our outstanding Series E preferred stock irrevocably waived the right of the holders of our Series E preferred stock under Section 2.1 of the Series E Certificate of Designations to receive, in the event of a Liquidation, an amount per share of Series E preferred stock equal to the original issue price of such share of Series E preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation, and agreed that, upon a Liquidation, the holders of our Series E preferred stock will receive an amount per share of Series E preferred stock equal to the amount that would be payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation.

Under the April 30, 2013 Pillar Agreement, we agreed to seek stockholder approval at the 2013 annual meeting of amendments to our Restated Certificate of Incorporation modify the liquidation provisions of our Series E preferred stock consistent with Pillar and its affiliates' waiver and agreement not to exercise the rights, powers, preferences and other terms of the Series E preferred stock under such provisions. We have included this Proposal 9(b) in this proxy statement pursuant to the April 30, 2013 Pillar Agreement.

In the event that Proposal 9(b) is approved by our stockholders at the 2013 annual meeting, the rights, preferences and privileges of our Series E preferred stock will change as follows:

Liquidation — The liquidation provisions of the Series E Certificate of Designations will be modified to eliminate the right of the holders of our Series E preferred stock to receive, in the event of a Liquidation, an amount per share of Series E preferred stock equal to the original issue price of such share of Series E preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation, such that upon a Liquidation the holders of our Series E preferred stock will receive an amount per share of Series E preferred stock equal to the amount that would be payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation.

The forms of resolutions to be included in the Certificate of Amendment to Series E Certificate of Designations to effect the changes described in this Proposal 9(b) is set forth in Part (C) of <u>Appendix F</u> attached to this proxy statement.

Recommendation of the Board of Directors and Required Vote

Our board of directors unanimously recommends that the stockholders vote FOR the approval of an amendment to our Restated Certificate of Incorporation to modify the Series E Certificate of Designations to eliminate the right of the holders of our Series E preferred stock to receive, in the event of a Liquidation, an amount per share of Series E preferred stock equal to the original issue price of such share of Series E preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation, such that upon a Liquidation the holders of our Series E preferred stock will receive an amount per share of Series E preferred stock equal to the amount that would be payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation.

The affirmative vote of (i) stockholders holding a majority of our issued and outstanding common stock and Series D preferred stock entitled to vote, voting together as a single class and on an as-converted basis, and (ii) stockholders holding a majority of our issued and outstanding Series E preferred stock entitled to vote, voting separately as a series, required for the approval of this Proposal 9(b).

TRANSACTIONS WITH RELATED PERSONS

Since January 1, 2012, except as discussed below regarding transactions with Pillar Pharmaceuticals I, L.P., or Pillar I, Pillar Pharmaceuticals II, L.P., or Pillar II, and Pillar Pharmaceuticals III, L.P., or Pillar III, which are currently greater than 5% stockholders, and Mr. El Zein, and Mr. Umari, whom are currently members of our board of directors and affiliates of Pillar I, Pillar II and Pillar III, we have not entered into or engaged in any related party transactions, as defined by the SEC, with our directors, officers and stockholders who beneficially owned more than 5% of our outstanding common stock, as well as affiliates or immediate family members of those directors, officers and stockholders. We believe that the terms of our transactions described below were no less favorable than those that we could have obtained from unaffiliated third parties.

Series E Preferred Stock and Warrant Financing

In November 2012, we entered into a Convertible Preferred Stock and Warrant Purchase Agreement, or Series E Purchase Agreement, with Pillar II and a second purchaser, which we collectively refer to as the Series E purchasers. Pillar II is an investment partnership managed by two of our directors and one of our significant stockholders. Mr. El Zein, a member of our board of directors, is a director and controlling stockholder of Pillar Invest, which is the general partner of Pillar II, and is a limited partner of Pillar II. Pillar Invest also entered into an Advisory Agreement with the second purchaser of our Series E convertible preferred stock, or Series E preferred stock, and related warrants to purchase shares of our common stock, or Series E warrants, pursuant to which Pillar Invest has investment discretion over the shares purchased by such second purchaser. Mr. El Zein has voting and investment control over the securities beneficially owned by Pillar II and Besancon. In addition, Abdul-Wahab Umari, also a member of our board of directors, is a managing partner of Pillar Invest.

Under the Series E Purchase Agreement, we issued and sold to the Series E purchasers, for an aggregate purchase price of approximately \$7.0 million, 424,242 shares of Series E preferred stock and Series E warrants to purchase up to 8,484,840 shares of common stock. The shares of Series E preferred stock are convertible, subject to limitations, into an aggregate of 8,484,840 shares of common stock at a conversion price of \$0.70 per share. No Series E preferred stockholder may convert its shares to the extent such conversion would result in the holder and its affiliates beneficially owning more than 19.99% of our common stock outstanding. The exercise price of the warrants is \$0.70 per share. The warrants to purchase common stock are exercisable immediately, and will expire if not exercised on or prior to November 9, 2017.

We agreed to pay to the Series E preferred stockholders quarterly dividends payable in cash in arrears at the rate of 4.6% per annum with the first dividend payment being due on March 31, 2013. Under the terms of the Series D preferred stock, any dividends that we pay to Series E preferred stockholders will also be paid to Series D preferred stockholders on an as-converted to common stock basis. We also agreed that, at our 2013 annual meeting of stockholders, we would propose an amendment to the Series D Certificate of Designations, to modify the terms of the Series D preferred stock that currently require the payment of dividends to Series D preferred stockholders upon payment of dividends to Series E preferred stockholders. See Proposal Eight set forth elsewhere in this proxy statement. If Proposal Eight is approved by our stockholders, the Series E preferred stockholders would become entitled to receive dividends quarterly in arrears at the rate of 8% per annum and the Series D preferred stockholders would cease to be entitled to corresponding dividends. If Proposal Eight is not approved, the Series E preferred stockholders will no longer be entitled to receive dividends.

Under the terms of the Series E Purchase Agreement, we granted Pillar II participation rights in future financings. In addition, we agreed to use our best efforts to file a preliminary proxy statement for our 2013 annual meeting of stockholders that would, among other things, seek approval from our stockholders of the following matters:

• the issuance and sale by us to Pillar II (together with all prior issuances and sales to Pillar I) of a number of shares of common stock (including securities converted into or exercisable for common

stock) that is greater than 19.99% of our outstanding common stock or the combined voting power of all of our securities then outstanding after such issuance and sale in accordance with Nasdaq Listing Rule 5635(b), or the Nasdaq Proposal;

- · an amendment to our Restated Certificate of Incorporation and bylaws, as necessary, to eliminate the classification of our board of directors; and
- amendments to the Series D Certificate of Designations for our Series D preferred stock to modify the dividend provisions of the Series D
 Certificate of Designations so that dividends on the Series E preferred stock are not required to be paid to the Series D preferred stockholders and
 to conform the beneficial ownership limitations applicable to the conversion of the Series D preferred stock to the beneficial ownership limitations
 applicable to the conversion of the Series E preferred stock.

These matters are set forth in Proposals Seven, Eight and Nine set forth elsewhere in this proxy statement.

Also under the terms of the Series E Purchase Agreement, each Series E preferred stockholder agreed:

- for so long as the Series E preferred stockholder and its affiliates beneficially own more than 19.99% (prior to the date that our stockholders approve the Nasdaq Proposal) or 25% (effective upon the date that our stockholders approve the Nasdaq Proposal) of the outstanding common stock, that the Series E preferred stockholder and its affiliates will vote any shares held by them in excess of the number of shares equal to 19.99% or 25%, as applicable, of the outstanding common stock (including the shares of common stock issuable upon conversion or exercise of securities that are convertible into or exercisable for shares of common stock held by such Series E preferred stockholder and its affiliates) with respect to any matter put to a vote of the holders of common stock in the same manner and percentage as the holders of the common stock (other than the Series E preferred stockholder) vote on such matter;
- to certain restrictions on the transfer of any securities issued to such Series E preferred stockholder (including securities convertible into or exercisable for common stock) pursuant to the convertible preferred stock and warrant purchase agreement including to not sell or transfer any such securities in one or a series of transactions if such transfer would, in the aggregate, result in the transfer of more than 5% of the then outstanding combined voting power of our outstanding securities (excluding from this restriction certain transfers to permitted transferees or in connection with an underwritten public offering by us that has been approved by our board of directors); and
- to be subject to a standstill provision that continues for so long as such Series E preferred stockholder and its affiliates beneficially own more than 15% of our outstanding common stock.

After the later of November 9, 2014 and the date that no shares of Series D preferred stock remain outstanding, we may redeem all or a portion of the Series E preferred stock for a cash payment equal to the \$14.00 original Series E preferred stock issue price per share plus any accrued or declared but unpaid dividends thereon following notice to the Series E preferred stockholders if the closing price of our common stock for 20 or more trading days in a period of 30 consecutive trading days is greater than or equal to \$2.80 (400% of the \$0.70 Series E preferred stock conversion price). We may not redeem any shares of Series E preferred stock from a Series E preferred stockholder that cannot convert such shares of Series E preferred stock into common stock as a result of the beneficial ownership limitations described above. In such event, we may redeem such nonredeemable shares for a cash payment equal to the greater of the 20 consecutive trading day average closing price per share of the common stock ending on the trading day immediately prior to redemption date plus any dividends accrued or declared but unpaid thereon and the Series E conversion price plus any dividends accrued or declared but unpaid thereon. After November 9, 2014, we also may redeem the Series E warrants for \$0.01 per share of common stock issuable on exercise of the Series D warrants following notice to the warrant holder if the closing price of the common stock for 20 or more trading days in a period of 30 consecutive trading days is greater than or equal to \$2.80 per share.

In connection with the Series E Purchase Agreement, we filed a registration statement that became effective on January 17, 2013, registering the resale of the shares of common stock issuable upon conversion of the Series E preferred stock and the shares of common stock issuable upon exercise of the Series E warrants.

April 2013 Pillar Agreements

On April 22, 2013, we entered into an agreement with Pillar I and Pillar II, which we refer to as the April 22, 2013 Pillar Agreement. Under the April 22, 2013 Pillar Agreement, Pillar I irrevocably agreed to waive and not exercise the rights, powers, preferences and other terms of the Series D preferred stock under Section 6 of the Series D Certificate of Designations, including without limitation the right to require us to purchase all or any portion of the shares of our Series D preferred stock at a price equal to the original Series D preferred stock purchase price per share plus all accrued or declared but unpaid dividends thereon upon the occurrence of specified fundamental changes such as mergers, consolidations, business combinations, stock purchases or similar transactions resulting in a person or group unaffiliated with any holder of Series D preferred stock owning 66.67% or more of the outstanding voting securities of our company or successor entity.

Under the April 22, 2013 Pillar Agreement, we and each of Pillar I and Pillar II agreed, among other things:

- to an amendment to the Series D Certificate of Designations for our Series D preferred stock that would:
 - modify the dividend provisions of the Series D Certificate of Designations to change the date after which we may elect to pay dividends in shares of our common stock from December 31, 2014 to October 1, 2013, and to allow for the payment of such dividends in shares of a to-be-created new series of non-voting preferred stock in the event that payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership and voting power limitations set forth the Series D Certificate of Designations; and
 - in connection with the waiver of the right to require us to purchase the Series D preferred stock upon the occurrence of specified fundamental changes, to modify the Series D Certificate of Designations to provide, in the event of a sale of the corporation, for the distribution of any assets that remain available for distribution to our stockholders, after payment to the holders of our Series A convertible preferred stock and any other class of our capital stock that ranks senior to our Series D preferred stock, to the holders of our Series D preferred stock on a pro rata basis with the holders of our common stock, Series E preferred stock and such new series of non-voting preferred stock; and
- to an amendment to the Certificate of Designations, Preferences and Rights of Series E Preferred Stock, or the Series E Certificate of Designations, that would:
 - modify the dividend provisions of the Series E Certificate of Designations to allow for the payment of dividends in shares of our common stock commencing October 1, 2013; and
 - allow for the payment of dividends in shares of a to-be-created new series of non-voting preferred stock in the event that payment of such dividends may not be made in shares of our common stock as a result of the application of the beneficial ownership and voting power limitations set forth in the Series E Certificate of Designations.

These matters are set forth in Proposals Eight and Nine set forth elsewhere in this proxy statement.

In addition, on April 30, 2013, we entered into a second agreement with Pillar I, Pillar II and an entity affiliated with Pillar I and Pillar II, which we refer to collectively as the Pillar Entities, which we refer to as the April 30, 2013 Pillar Agreement. We refer to the April 30, 2013 Pillar Agreement and the April 22, 2013 Pillar Agreement collectively as the April Pillar Agreements.

Under the April 30, 2013 Pillar Agreement, Pillar I irrevocably agreed to waive the right of the holders of the Series D preferred stock under Section 2.1 of the Series D Certificate of Designations to receive, in the event of a voluntary or involuntary liquidation, dissolution or winding up of our company, or Liquidation, an amount per share of Series D preferred stock equal to the original issue price of such share of Series D preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation, and that upon a Liquidation the holders of the Series D preferred stock will receive an amount per share of Series D preferred stock equal to the amount that would be payable with respect to such share had all shares of Series D preferred stock been converted into shares of our common stock immediately prior to such Liquidation.

In addition, under the April 30, 2013 Pillar Agreement, Pillar II and the entity affiliated with Pillar II, together the holders of 100% of the Series E preferred stock, irrevocably agreed to waive the right of the holders of the Series E preferred stock under Section 2.1.1 of the Series E Certificate of Designations to receive, in the event of a Liquidation, an amount per share of Series E preferred stock equal to the original issue price of such share of Series E preferred stock plus any dividends accrued or declared but unpaid thereon to the extent such amount is greater than the amount that would have been payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation, and that upon a Liquidation the holders of the Series E preferred stock will receive under Section 2.1 of the Series E Certificate of Designations an amount per share of Series E preferred stock equal to the amount that would be payable with respect to such share had all shares of Series E preferred stock been converted into shares of our common stock immediately prior to such Liquidation.

Under the April Pillar Agreements, we agreed to seek approval from our stockholders at our 2013 annual meeting of stockholders of amendments to the Series D Certificate of Designations and Series E Certificate of Designations to effect these changes to the dividend and liquidation provisions of the Series D Certificate of Designations and Series E Certificate of Designations, the redemption rights of the holders of our Series D preferred stock and the rights of the holders of our Series D preferred stock to distributions in the event of a sale of the corporation. These matters are set forth in Proposals Eight and Nine set forth elsewhere in this proxy statement. Each applicable Pillar Entity agreed:

- to vote, and to cause its affiliates to vote, all shares of our voting stock held by such Pillar Entity or its affiliates, and over which such Pillar Entity or its affiliates has the power to vote, in favor of such amendments; and
- not to, and to cause its affiliates not to, sell or transfer any shares of our common stock, Series D preferred stock or Series E preferred stock held
 by such Pillar Entity or its affiliates to any person, entity or group unless such proposed transferee agrees in a written instrument executed by
 such transferee, the applicable Pillar Entity and us to take and hold such securities subject to, among other things, the April Pillar Agreements and
 to be bound by the terms of the April Pillar Agreements, including the waiver of rights, voting agreements and restrictions on transfer set forth
 therein.

Under the April 22, 2013 Pillar Agreement, in consideration of the agreements of Pillar I and II under the April 22, 2013 Pillar Agreement and the delivery of the waiver by Pillar I, and for no additional cash consideration, we have agreed to issue to Pillar I warrants, the Pillar I warrants, to purchase up to 1,000,000 shares of our common stock. The Pillar I warrants have an exercise price per share equal to the greater of \$0.61.

In addition, under the April 30, 2013 Pillar Agreement, in consideration of the agreements of the Pillar Entities under the April 30, 2013 Pillar Agreement and the delivery of the waivers by the Pillar Entities, and for no additional cash consideration, we have agreed to issue to the Pillar Entities warrants, the Additional Pillar Warrants, and together with the Pillar I Warrants, the Pillar Warrants, to purchase up to an aggregate of 1,000,000 shares of our common stock. The Additional Pillar Warrants have an exercise price per share equal to the greater of \$0.79.

The Pillar I Warrants are exercisable immediately and will expire if not exercised on or prior to the fifth anniversary from the date of issuance. The Additional Pillar Warrants are each exercisable immediately and will expire if not exercised on or prior to June 1, 2014. The Pillar I Warrants provide that, after the second anniversary of the date of issuance, we may redeem such Pillar I Warrants for \$0.01 per share of common stock issuable on exercise of such Pillar I Warrants following notice to the holder thereof if the closing price of our common stock for 20 or more trading days in a period of 30 consecutive trading days is greater than or equal to \$2.80 per share.

In addition, we have agreed to file a registration statement to register the resale of the shares of common stock issuable upon exercise of the Pillar Warrants.

Public Offering

On May 7, 2013, we consummated an underwritten public offering of (i) 17,500,000 shares of our common stock and related warrants to purchase up to 17,500,000 shares of our common stock at an exercise price of \$0.47 per share, and (ii) pre-funded warrants to purchase up to 15,816,327 shares of our common stock at an exercise price of \$0.01 per share and related warrants to purchase up to 15,816,327 shares of our common stock at an exercise price of \$0.47 per share. The gross proceeds to us from this offering were approximately \$16.5 million, before deducting underwriting discounts and commissions and other estimated offering expenses payable by Idera and excluding the proceeds, if any, from the exercise of warrants.

Certain affiliates of Pillar Invest Corporation, including Pillar I and Pillar II, which as a group are currently a greater than 5% stockholder, participated in our underwritten public offering and purchased in the aggregate 5,000,000 shares of our common stock and warrants to purchase up to 5,000,000 shares of our common stock for an aggregate purchase price of \$2,500,000. Mr. El Zein, and Mr. Umari, whom are currently members of our board of directors, are affiliates of Pillar I and Pillar II.

Policies and Procedures for Related Person Transactions

Our board of directors is committed to upholding the highest legal and ethical conduct in fulfilling its responsibilities and recognizes that related party transactions can present a heightened risk of potential or actual conflicts of interest. Accordingly, as a general matter, it is our preference to avoid related party transactions.

In accordance with our audit committee charter, members of the audit committee, all of whom are independent directors, review and approve all related party transactions for which approval is required under applicable laws or regulations, including SEC and the Nasdaq Listing Rules. Current SEC rules define a related party transaction to include any transaction, arrangement or relationship in which we are a participant and the amount involved exceeds \$120,000, and in which any of the following persons has or will have a direct or indirect interest:

- our executive officers, directors or director nominees;
- any person who is known to be the beneficial owner of more than 5% of our common stock;
- any person who is an immediate family member, as defined under Item 404 of Regulation S-K, of any of our executive officers, directors or director nominees or beneficial owners of more than 5% of our common stock; or
- any firm, corporation or other entity in which any of the foregoing persons is employed or is a partner or principal or in a similar position or in which such person, together with any other of the foregoing persons, has a 5% or greater beneficial ownership interest.

In addition, the audit committee reviews and investigates any matters pertaining to the integrity of management, including conflicts of interest and adherence to our code of business conduct and ethics. Under our

code of business conduct and ethics, our directors, officers and employees are expected to avoid any relationship, influence or activity that would cause or even appear to cause a conflict of interest. Under our code of business conduct and ethics, a director is required to promptly disclose to our board of directors any potential or actual conflict of interest involving him or her. In accordance with our code of business conduct and ethics, the board of directors will determine an appropriate resolution on a case-by-case basis. All directors must recuse themselves from any discussion or decision affecting their personal, business or professional interests.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Based solely on our review of copies of reports filed by individuals and entities required to make filings pursuant to Section 16(a) of the Exchange Act or written representations from such individuals or entities, we believe that during 2012 all filings required to be made by such individuals or entities were timely made in accordance with the Exchange Act, with the exception of one late Form 4 filed by Mr. El Zein on November 15, 2012 to report the purchase of 424,242 shares of Series E convertible preferred stock and warrants to purchase 8,484,840 shares of our common stock acquired on November 9, 2012 in connection with our November 2012 Series E preferred stock and warrant financing. See "Transactions with Related Persons – Series E Preferred Stock and Warrant Financing" above for further information about our Series E preferred stock and warrant financing.

By order of the board of directors,

Louis J. Arcudi, III, Secretary June 10, 2013

APPENDIX A

PROPOSED AMENDMENTS TO OUR RESTATED CERTIFICATE OF INCORPORATION TO DECLASSIFY OUR BOARD OF DIRECTORS

The following are proposed changes to Article ELEVENTH of our Restated Certificate of Incorporation as described in Proposals 1(a), 1(b) and 1(c). The text indicated by underline will be added, and the text indicated by strike-through will be deleted.

"ELEVENTH. This Article is inserted for the management of the business and for the conduct of the affairs of the Corporation -and shall not become effective until the closing of the sale of shares of Common Stock in an underwritten public offering pursuant to an effective registration statement under the Securities -Act of 1933, as amended, resulting in at least \$10,000,000 of gross proceeds to the Corporation (a "Public Offering") -.

- 1. <u>Number of Directors</u>. The number of directors of the Corporation shall not be less than three. The exact number of directors within the limitations specified in the preceding sentence shall be fixed from time to time by, or in the manner provided in, the Corporation's By-Laws.
- 2. Classes of Directors. The Until the election of directors at the annual meeting in 2015, the Board of Directors shall be and is divided into three classes. Class I, Class II and Class III. No one class shall have more than one director more than any other class. If a fraction is contained in the quotient arrived at by dividing the designated number of directors by three, then, if such fraction is one-third, the extra director shall be a member of Class II, and if such fraction is two-thirds, one of the extra directors shall be a member of Class II, unless otherwise provided from time to time by resolution adopted by, with directors in each class having the terms of office specified in Section 4 of this Article ELEVENTH. Commencing with the election of directors at the annual meeting scheduled to be held in 2015, the classification of the Board of Directors shall cease, and all of the directors shall thereupon be elected for a term expiring at the next annual meeting of stockholders.
- 3. Election of Directors. Elections of directors need not be by written ballot except as and to the extent provided in the By-Laws of the Corporation.
- 4. <u>Terms of Office</u>. Each director shall serve for a term ending onat the dateelection of directors at the third annual meeting following the annual meeting at which such director was elected; provided, that each initial director in Class I shall serve for a term ending on the date of the annual meeting in 1996; each initial director in Class II shall serve for a term ending on the date of the annual meeting in 1998; and provided further, that the. Notwithstanding the foregoing, commencing with the election of directors at the annual meeting in 2013, the successor of each director whose term expires at such meeting shall be elected for a term expiring at the annual meeting in 2014, the successor of each director whose term expires at such meeting shall be elected for a term expiring at the annual meeting scheduled to be held in 2015; and for the election of directors at the annual meeting in 2015 and for the election of directors at each annual meeting thereafter, each director shall be elected for a term expiring at the next succeeding annual meeting. The term of each director shall be subject to the election and qualification of his successor and to his earlier death, resignation or removal.
- 5. Allocation of Directors Among Classes in the Event of Increases or Decreases in the Number of Directors. In Until the election of directors at the annual meeting in 2015, in the event of any increase or decrease in the authorized number of directors, (i) each director then serving as such shall nevertheless continue as a director of the class of which he is a member and (ii) the newly created or eliminated directorships resulting from such increase or decrease shall be apportioned by the Board of Directors among the three classes of directors so as to ensure that no one class has more than one director more than any other class. To the extent possible, consistent

with the foregoing rule, any newly created directorships shall be added to those classes whose terms of office are to expire at the latest dates following such allocation, and any newly eliminated directorships shall be subtracted from those classes whose terms of offices are to expire at the earliest dates following such allocation, unless otherwise provided from time to time by resolution adopted by the Board of Directors. in it discretion.

- 6. Quorum; Action at Meeting. A majority of the directors at any time in office shall constitute a quorum for the transaction of business. In the event one or more of the directors shall be disqualified to vote at any meeting, then the required quorum shall be reduced by one for each director so disqualified, provided that in no case shall less than one-third of the number of directors fixed pursuant to Section 1 above constitute a quorum. If at any meeting of the Board of Directors there shall be less than such a quorum, a majority of those present may adjourn the meeting from time to time. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present shall be regarded as the act of the Board of Directors unless a greater number is required by law, by the By-Laws of the Corporation or by this Restated Certificate of Incorporation.
- 7. Removal. Directors Until the election of directors at the annual meeting in 2015, directors of the Corporation may be removed only for cause by the affirmative vote of the holders of at least two-thirds of the shares of the capital stock of the Corporation issued and outstanding and entitled to vote generally in the election of directors. Thereafter, any director of the Corporation may be removed, with or without cause, by the affirmative vote of the holders of a majority of the shares of the capital stock of the Corporation issued and outstanding and entitled to vote generally in the election of such director.
- 8. <u>Vacancies</u>. Any vacancy in the Board of Directors, however occurring, including a vacancy or any newly created directorship resulting from an enlargement of increase in the boardauthorized number of directors, shall be filled only by a vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. A director elected to fill a vacancy shall be elected to for the unexpired term of his predecessor in office, and, until the election of directors at the annual meeting in 2015, a director chosen to fill a newly created directorship resulting from an increase in the number of directors shall hold office until the next election of the class for which such director shall have been chosen, subject to the election and qualification of his successor and to his earlier death, resignation or removal.
- 9. <u>Stockholder Nominations and Introduction of Business, Etc.</u> Advance notice of stockholder nominations for election of directors and other business to be brought by stockholders before a meeting of stockholders shall be given in the manner provided by the By-Laws of the Corporation."
- 10. Amendments to Article. Notwithstanding any other provisions of law, this Restated Certificate of Incorporation or the By-Laws of the Corporation, and-notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least seventy-five percent (75%) of the shares-of-capital stock of the Corporation issued and outstanding and entitled to vote shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article ELEVENTH.

PROPOSED AMENDMENTS TO OUR BYLAWS TO DECLASSIFY OUR BOARD OF DIRECTORS

The following are proposed changes to Article 2 of our Bylaws as described in Proposals 1(a), 1(b) and 1(c). The text indicated by underline will be added, and the text indicated by strike-through will be deleted.

"ARTICLE 2 - Directors

- 2.1 <u>General Powers</u>. The business and affairs of the corporation shall be managed by or under the direction of a Board of Directors, who may exercise all of the powers of the corporation except as otherwise provided by law, the Certificate of Incorporation or these By-Laws. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law, may exercise the powers of the full Board until the vacancy is filled.
- 2.2 Number; Election and Qualification. The number of directors which shall constitute the whole Board of Directors shall be determined by resolution of the Board of Directors, but in no event shall be less than three. The number of directors may be decreased at any time and from time to time by a majority of the directors then in office, but only to eliminate vacancies existing by reason of the death, resignation, removal or expiration of the term of one or more directors. The directors shall be elected at the annual meeting of stockholders by such stockholders as have the right to vote on such election. Directors need not be stockholders of the corporation.
- 2.3 Classes of Directors. The Until the election of directors at the annual meeting in 2015, the Board of Directors shall be and is divided into three classes: Class I, Class II and Class III. No one class shall have more than one director more than any other class. If a fraction is contained in the quotient arrived at by dividing the designated number of directors by three, then, if such fraction is one-third, the extra director shall be a member of Class I, and if such fraction is two-thirds, one of the extra directors shall be a member of Class I and one of the extra directors shall be a member of Class II, unless otherwise provided from time to time by resolution adopted by, with directors in each class having the terms of office specified in Section 2.4. Commencing with the election of directors at the annual meeting in 2015, the classification of the Board of Directors shall cease, and directors shall thereupon be elected for a term expiring at the next annual meeting of stockholders.
- 2.4 Terms of Office. Each director shall serve for a term ending onat the date election of directors at the third annual meeting following the annual meeting at which such director was elected; provided, that each initial director in Class I shall serve for a term ending on the date of the annual meeting of stockholders in 1995; and each initial director in Class II shall serve for a term ending on the date of the annual meeting of stockholders in 1996; and that each initial director in Class III shall serve for a term ending on the date of the annual meeting of stockholders in 1997; and provided further, that the Notwithstanding the foregoing, commencing with the election of directors at the annual meeting in 2013, the successor of each director whose term expires at such meeting shall be elected for a term expiring at the annual meeting in 2014; for the election of directors at the annual meeting in 2014, the successor of each director whose term expires at such meeting shall be elected for a term expiring at the annual meeting in 2015; and for the election of directors at the annual meeting in 2015 and for the election of directors at each annual meeting thereafter, each director shall be elected for a term expiring at the next succeeding annual meeting. The term of each director shall be subject to the election and qualification of his successor and to his earlier death, resignation or removal.
- 2.5 Allocation of Directors Among Classes in the Event of Increases or Decreases in the Number of Directors. In Until the election of directors at the annual meeting in 2015, in the event of any increase or decrease in the authorized number of directors, (i) each director then serving as such shall nevertheless continue as a director of the class of which he is a member and (ii) the newly created or eliminated directorships resulting from

such increase or decrease shall be apportioned by the Board of Directors among the three classes of directors so as to ensure that no one class has more than one director more than any other class. To the extent possible, consistent with the foregoing rule, any newly created directorships shall be added to those classes whose terms of office are to expire at the latest dates following such allocation, and any newly climinated directorships shall be subtracted from those classes whose terms of offices are to expire at the earliest dates following such allocation, unless otherwise provided from time to time by resolution adopted by the Board of Directors. in its discretion.

- 2.6 <u>Vacancies</u>. Any vacancy in the Board of Directors, however occurring, including a vacancy or any newly created directorship resulting from an enlargement of increase in the <u>Boardauthorized number of directors</u>, shall be filled only by <u>a</u> vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. A director elected to fill a vacancy shall be elected for the unexpired term of his predecessor in office, and <u>, until the election of directors at the annual meeting in 2015</u>, a director chosen to fill a <u>positionnewly created directorship</u> resulting from an increase in the number of directors shall hold office until the next election of the class for which such director shall have been chosen, subject to the election and qualification of his successor and to his earlier death, resignation or removal.
- 2.7 <u>Resignation</u>. Any director may resign by delivering his written resignation to the corporation at its principal office or to the President or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.
- 2.8 <u>Regular Meetings</u>. Regular meetings of the Board of Directors may be held without notice at such time and place, either within or without the State of Delaware, as shall be determined from time to time by the Board of Directors; provided that any director who is absent when such a determination is made shall be given notice of the determination. A regular meeting of the Board of Directors may be held without notice immediately after and at the same place as the annual meeting of stockholders.
- 2.9 <u>Special Meetings</u>. Special meetings of the Board of Directors may be held at any time and place, within or without the State of Delaware, designated in a call by the Chairman of the Board, Chief Executive Officer, or if there is no Chief Executive Officer, the President, two or more directors, or by one director in the event that there is only a single director in office.
- 2.10 Notice of Special Meetings. Notice of any special meeting of directors shall be given to each director by the Secretary or by the officer or one of the directors calling the meeting. Notice shall be duly given to each director (i) by giving notice to such director in person or by telephone at least 24 hours in advance of the meeting, (ii) by sending a telegram, telecopy, or telex, or delivering written notice by hand, to his last known business or home address at least 24 hours in advance of the meeting, or (iii) by mailing written notice to his last known business or home address at least 72 hours in advance of the meeting. A notice or waiver of notice of a meeting of the Board of Directors need not specify the purposes of the meeting.
- 2.11 Meetings by Telephone Conference Calls. Directors or any members of any committee designated by the directors may participate in a meeting of the Board of Directors or such committee by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation by such means shall constitute presence in person at such meeting.
- 2.12 Quorum. A majority of the total number of the whole Board of Directors shall constitute a quorum at all meetings of the Board of Directors. In the event one or more of the directors shall be disqualified to vote at any meeting, then the required quorum shall be reduced by one for each such director so disqualified; provided, however, that in no case shall less than one-third (1/3) of the number so fixed constitute a quorum. In the absence of a quorum at any such meeting, a majority of the directors present may adjourn the meeting from time to time without further notice other than announcement at the meeting, until a quorum shall be present.

- 2.13 Action at Meeting. At any meeting of the Board of Directors at which a quorum is present, the vote of a majority of those present shall be sufficient to take any action, unless a different vote is specified by law, the Certificate of Incorporation or these By-Laws.
- 2.14 <u>Action by Consent</u>. Any action required or permitted to be taken at any meeting of the Board of Directors or of any committee of the Board of Directors may be taken without a meeting, if all members of the Board or committee, as the case may be, consent to the action in writing, and the written consents are filed with the minutes of proceedings of the Board or committee.
- 2.15 <u>Removal</u>. Directors Until the election of directors at the annual meeting in 2015, directors of the corporation may be removed only for cause by the affirmative vote of the holders of two-thirds of the shares of the capital stock of the corporation issued and outstanding and entitled to vote —generally in the election of directors. Thereafter, any director of the corporation may be removed, with or without cause, by the affirmative vote of the holders of a majority of the shares of the capital stock of the corporation issued and outstanding and entitled to vote generally in the election of such director.
- 2.16 Committees. The Board of Directors may, by resolution passed by a majority of the whole Board, designate one or more committees, each committee to consist of one or more of the directors of the corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members of the committee present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors and subject to the provisions of the General Corporation Law of the State of Delaware, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation and may authorize the seal of the corporation to be affixed to all papers which may require it. Each such committee shall keep minutes and make such reports as the Board of Directors may from time to time request. Except as the Board of Directors may otherwise determine, any committee may make rules for the conduct of its business, but unless otherwise provided by the directors or in such rules, its business shall be conducted as nearly as possible in the same manner as is provided in these By-Laws for the Board of Directors.
- 2.17 <u>Compensation of Directors</u>. Directors may be paid such compensation for their services and such reimbursement for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any director from serving the corporation or any of its parent or subsidiary corporations in any other capacity and receiving compensation for such service."

APPENDIX C

CERTIFICATE OF AMENDMENT TO THE RESTATED CERTIFICATE OF INCORPORATION OF IDERA PHARMACEUTICALS, INC.

Idera Pharmaceuticals, Inc. (hereinafter called the "Corporation"), organized and existing under and by virtue of the General Corporation Law of the State of Delaware, does hereby certify as follows:

By action of the Board of Directors of the Corporation at a meeting held on May 22, 2013, the Board of Directors of the Corporation duly adopted a resolution, pursuant to Section 242 of the General Corporation Law of the State of Delaware, setting forth an amendment to the Restated Certificate of Incorporation of the Corporation, as amended to date (the "Certificate of Incorporation"), and declaring said amendment to be advisable. The stockholders of the Corporation duly approved said proposed amendment in accordance with Section 242 of the General Corporation Law of the State of Delaware at a meeting of stockholders held on July 26, 2013. The resolution setting forth the amendment is as follows:

RESOLVED: That the first paragraph of Article FOURTH of the Certificate of Incorporation be and hereby is amended and restated in its entirety so that the same shall read as follows:

"FOURTH. The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) Two Hundred Eight Million (280,000,000) shares of Common Stock, \$.001 par value per share ("Common Stock"), and (ii) Five Million (5,000,000) shares of Preferred Stock, \$.01 par value per share ("Preferred Stock"), which may be issued from time to time in one or more series as set forth in Part B of this Article FOURTH."

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be signed by its duly authorized officer this [\bullet] day of [\bullet], 2013.

IDERA PHARMACEUTICALS, INC.

By:

Sudhir Agrawal, D. Phil. Chairman of the Board of Directors, President and Chief Executive Officer

IDERA PHARMACEUTICALS, INC.

2013 STOCK INCENTIVE PLAN

1. Purpose

The purpose of this 2013 Stock Incentive Plan (the "*Plan*") of Idera Pharmaceuticals, Inc., a Delaware corporation (the "*Company*"), is to advance the interests of the Company's stockholders by enhancing the Company's ability to attract, retain and motivate persons who are expected to make important contributions to the Company and by providing such persons with equity ownership opportunities and performance-based incentives that are intended to better align the interests of such persons with those of the Company's stockholders. Except where the context otherwise requires, the term "*Company*" shall include any of the Company's present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Internal Revenue Code of 1986, as amended, and any regulations thereunder (the "*Code*") and any other business venture (including, without limitation, joint venture or limited liability company) in which the Company has a controlling interest, as determined by the Board of Directors of the Company (the "*Board*").

2. Eligibility

All of the Company's employees, officers and directors, as well as consultants and advisors to the Company (as such terms are defined and interpreted for purposes of Form S-8 under the Securities Act of 1933, as amended (the "Securities Act"), or any successor form) are eligible to be granted Awards under the Plan. Each person who is granted an Award under the Plan is deemed a "Participant." "Award" means Options (as defined in Section 5), SARs (as defined in Section 6), Restricted Stock (as defined in Section 7), Restricted Stock Units (as defined in Section 7) and Other Stock-Based Awards (as defined in Section 8).

3. Administration and Delegation

- (a) <u>Administration by Board of Directors</u>. The Plan will be administered by the Board. The Board shall have authority to grant Awards and to adopt, amend and repeal such administrative rules, guidelines and practices relating to the Plan as it shall deem advisable. The Board may construe and interpret the terms of the Plan and any Award agreements entered into under the Plan. The Board may correct any defect, supply any omission or reconcile any inconsistency in the Plan or any Award in the manner and to the extent it shall deem expedient and it shall be the sole and final judge of such expediency. All decisions by the Board shall be made in the Board's sole discretion and shall be final and binding on all persons having or claiming any interest in the Plan or in any Award.
- (b) <u>Appointment of Committees</u>. To the extent permitted by applicable law, the Board may delegate any or all of its powers under the Plan to one or more committees or subcommittees of the Board (a "*Committee*"). All references in the Plan to the "*Board*" shall mean the Board or a Committee of the Board or the officers referred to in Section 3(c) to the extent that the Board's powers or authority under the Plan have been delegated to such Committee or officers.
- (c) <u>Delegation to Officers</u>. To the extent permitted by applicable law, the Board may delegate to one or more officers of the Company the power to grant Options and other Awards that constitute rights under Delaware law (subject to any limitations under the Plan) to employees or officers of the Company and to exercise such other powers under the Plan as the Board may determine, *provided* that the Board shall fix the terms of such Awards to be granted by such officers (including the exercise price of such Awards, which may include a formula by which the exercise price will be determined) and the maximum number of shares subject to such Awards that the officers may grant; *provided further*, however, that no officer shall be authorized to grant such Awards to any "executive officer" of the Company (as defined by Rule 3b-7 under the Securities Exchange Act

of 1934, as amended (the "*Exchange Act*")) or to any "officer" of the Company (as defined by Rule 16a-1 under the Exchange Act). The Board may not delegate authority under this Section 3(c) to grant Restricted Stock, unless Delaware law then permits such delegation.

(d) <u>Awards to Non-Employee Directors</u>. Discretionary Awards to non-employee directors may be granted and administered only by a Committee, all of the members of which are independent directors as defined by Section 5605(a)(2) of the NASDAQ Marketplace Rules.

Stock Available for Awards

- (a) Number of Shares; Share Counting.
- (1) <u>Authorized Number of Shares</u>. Subject to adjustment under Section 9, Awards may be made under the Plan, any or all of which Awards may be in the form of Incentive Stock Options (as defined in Section 5(b)) for up to such number of shares of common stock, \$0.001 par value per share, of the Company (the "*Common Stock*") as is equal to the sum of:
 - (A) 4,000,000 shares of Common Stock; plus
- (B) such additional number of shares of Common Stock (up to 5,945,000 shares) as is equal to the sum of (x) the number of shares of Common Stock reserved for issuance under the Company's 2008 Stock Incentive Plan (the "*Existing Plan*") that remain available for grant under the Existing Plan immediately prior to the date this Plan is approved by the Company's stockholders and (y) the number of shares of Common Stock subject to awards granted under the Existing Plan which awards expire, terminate or are otherwise surrendered, canceled, forfeited or repurchased by the Company at their original issuance price pursuant to a contractual repurchase right (subject, however, in the case of Incentive Stock Options to any limitations of the Code).

Shares issued under the Plan may consist in whole or in part of authorized but unissued shares or treasury shares.

- (2) <u>Fungible Share Pool.</u> Subject to adjustment under Section 9, any Award that is not a Full-Value Award shall be counted against the share limits specified in Sections 4(a)(1) and 4(b)(2) as one share for each share of Common Stock subject to such Award and any Award that is a Full-Value Award shall be counted against the share limits specified in Sections 4(a)(1) and 4(b)(2) as 1.25 shares for each one share of Common Stock subject to such Full-Value Award. "Full-Value Award" means any Award of Restricted Stock, Restricted Stock Unit Award or Other Stock-Based Award (as defined below) with a per share price or per unit purchase price lower than 100% of Fair Market Value (as defined below) on the date of grant. To the extent a share that was subject to an Award that counted as one share is returned to the Plan pursuant to Section 4(a)(3), each applicable share reserve will be credited with one share. To the extent that a share that was subject to an Award that counts as 1.25 shares is returned to the Plan pursuant to Section 4(a)(3), each applicable share reserve will be credited with 1.25 shares.
- (3) Share Counting. For purposes of counting the number of shares available for the grant of Awards under the Plan and under the sublimits contained in Section 4(b)(2):
- (A) all shares of Common Stock covered by SARs shall be counted against the number of shares available for the grant of Awards under the Plan and against the sublimit listed in the first clause of this Section 4(a)(3); provided, however, that (i) SARs that may be settled only in cash shall not be so counted and (ii) if the Company grants an SAR in tandem with an Option for the same number of shares of Common Stock and provides that only one such Award may be exercised (a "Tandem SAR"), only the shares covered by the Option, and not the shares covered by the Tandem SAR, shall be so counted, and the expiration of one in connection with the other's exercise will not restore shares to the Plan;

- (B) if any Award (i) expires or is terminated, surrendered or canceled without having been fully exercised or is forfeited in whole or in part (including as the result of shares of Common Stock subject to such Award being repurchased by the Company at the original issuance price pursuant to a contractual repurchase right) or (ii) results in any Common Stock not being issued (including as a result of an SAR that was settleable either in cash or in stock actually being settled in cash), the unused Common Stock covered by such Award shall again be available for the grant of Awards; *provided, however*, that (1) in the case of Incentive Stock Options, the foregoing shall be subject to any limitations under the Code, (2) in the case of the exercise of an SAR, the number of shares counted against the shares available under the Plan and against the sublimit listed in the first clause of this Section 4(a)(3) shall be the full number of shares subject to the SAR multiplied by the percentage of the SAR actually exercised, regardless of the number of shares actually used to settle such SAR upon exercise and (3) the shares covered by a Tandem SAR shall not again become available for grant upon the expiration or termination of such Tandem SAR;
- (C) shares of Common Stock delivered (either by actual delivery, attestation, or net exercise) to the Company by a Participant to (i) purchase shares of Common Stock upon the exercise of an Award or (ii) satisfy tax withholding obligations (including shares retained from the Award creating the tax obligation) shall not be added back to the number of shares available for the future grant of Awards; and
- (D) shares of Common Stock repurchased by the Company on the open market using the proceeds from the exercise of an Award shall not increase the number of shares available for future grant of Awards.
 - (b) Sub-limits. Subject to adjustment under Section 9, the following sub-limits on the number of shares subject to Awards shall apply:
- (1) Section 162(m) Per-Participant Limit. The maximum number of shares of Common Stock with respect to which Awards may be granted to any Participant under the Plan shall be 1,500,000 per calendar year. For purposes of the foregoing limit, (i) the combination of an Option in tandem with an SAR shall be treated as a single Award and (ii) each share of Common Stock subject to an Award (including each share of Common Stock subject to a Full-Value Award) shall be counted as one share of Common Stock. The per Participant limit described in this Section 4(b)(1) shall be construed and applied consistently with Section 162(m) of the Code or any successor provision thereto, and the regulations thereunder ("Section 162(m)").
- (2) <u>Limit on Awards to Directors</u>. The maximum number of shares with respect to which Awards may be granted to directors who are not employees of the Company at the time of grant shall be 20% of the maximum number of authorized shares set forth in Section 4(a)(1).
- (c) <u>Substitute Awards</u>. In connection with a merger or consolidation of an entity with the Company or the acquisition by the Company of property or stock of an entity, the Board may grant Awards in substitution for any options or other stock or stock-based awards granted by such entity or an affiliate thereof. Substitute Awards may be granted on such terms as the Board deems appropriate in the circumstances, notwithstanding any limitations on Awards contained in the Plan. Substitute Awards shall not count against the overall share limit set forth in Section 4(a)(1) or any sublimits contained in the Plan, except as may be required by reason of Section 422 and related provisions of the Code.

5. Stock Options

(a) <u>General</u>. The Board may grant options to purchase Common Stock (each, an " *Option*") and determine the number of shares of Common Stock to be covered by each Option, the exercise price of each Option and the conditions and limitations applicable to the exercise of each Option, including conditions relating to applicable federal or state securities laws, as it considers necessary or advisable.

- (b) Incentive Stock Options. An Option that the Board intends to be an "incentive stock option" as defined in Section 422 of the Code (an " Incentive Stock Option") shall only be granted to employees of Idera Pharmaceuticals, Inc., any of Idera Pharmaceuticals, Inc.'s present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Code, and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code, and shall be subject to and shall be construed consistently with the requirements of Section 422 of the Code. An Option that is not intended to be an Incentive Stock Option shall be designated a "Nonstatutory Stock Option." The Company shall have no liability to a Participant, or any other party, if an Option (or any part thereof) that is intended to be an Incentive Stock Option is not an Incentive Stock Option or if the Company converts an Incentive Stock Option to a Nonstatutory Stock Option.
- (c) Exercise Price. The Board shall establish the exercise price of each Option and specify the exercise price in the applicable Option agreement. The exercise price shall be not less than 100% of the fair market value per share of Common Stock as determined by (or in a manner approved by) the Board ("Fair Market Value") on the date the Option is granted; provided that if the Board approves the grant of an Option with an exercise price to be determined on a future date, the exercise price shall be not less than 100% of the Fair Market Value on such future date.
- (d) <u>Duration of Options</u>. Each Option shall be exercisable at such times and subject to such terms and conditions as the Board may specify in the applicable option agreement; *provided, however*, that no Option will be granted with a term in excess of 10 years.
- (e) Exercise of Options. Options may be exercised by delivery to the Company of a notice of exercise in a form (which may be electronic) approved by the Company, together with payment in full (in the manner specified in Section 5(f)) of the exercise price for the number of shares for which the Option is exercised. Shares of Common Stock subject to the Option will be delivered by the Company as soon as practicable following exercise.
 - (f) Payment Upon Exercise. Common Stock purchased upon the exercise of an Option granted under the Plan shall be paid for as follows:
 - (1) in cash, by check or by wire transfer, payable to the order of the Company;
- (2) except as may otherwise be provided in the applicable Option agreement or approved by the Board, in its sole discretion, by (i) delivery of an irrevocable and unconditional undertaking by a creditworthy broker to deliver promptly to the Company sufficient funds to pay the exercise price and any required tax withholding or (ii) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a creditworthy broker to deliver promptly to the Company cash or a check sufficient to pay the exercise price and any required tax withholding;
- (3) to the extent provided for in the applicable Option agreement or approved by the Board, in its sole discretion, by delivery (either by actual delivery or attestation) of shares of Common Stock owned by the Participant valued at their Fair Market Value, provided (i) such method of payment is then permitted under applicable law, (ii) such Common Stock, if acquired directly from the Company, was owned by the Participant for such minimum period of time, if any, as may be established by the Board in its discretion and (iii) such Common Stock is not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements;
- (4) to the extent provided for in the applicable Nonstatutory Stock Option agreement or approved by the Board in its sole discretion, by delivery of a notice of "net exercise" to the Company, as a result of which the Participant would receive (i) the number of shares underlying the portion of the Option being exercised, less (ii) such number of shares as is equal to (A) the aggregate exercise price for the portion of the Option being exercised divided by (B) the Fair Market Value on the date of exercise:

- (5) to the extent permitted by applicable law and provided for in the applicable Option agreement or approved by the Board, in its sole discretion, by payment of such other lawful consideration as the Board may determine; or
 - (6) by any combination of the above permitted forms of payment.
- (g) <u>Limitation on Repricing</u>. Unless such action is approved by the Company's stockholders, the Company may not (except as provided for under Section 9): (1) amend any outstanding Option granted under the Plan to provide an exercise price per share that is lower than the then-current exercise price per share of such outstanding Option, (2) cancel any outstanding option (whether or not granted under the Plan) and grant in substitution therefor new Awards under the Plan (other than Awards granted pursuant to Section 4(c)) covering the same or a different number of shares of Common Stock and having an exercise price per share lower than the then-current exercise price per share of the cancelled option, (3) cancel in exchange for a cash payment any outstanding Option with an exercise price per share above the then-current Fair Market Value, other than pursuant to Section 9, or (4) take any other action under the Plan that constitutes a "repricing" within the meaning of the rules of the NASDAQ Stock Market ("NASDAQ").
- (h) No Reload Options. No Option granted under the Plan shall contain any provision entitling the Participant to the automatic grant of additional Options in connection with any exercise of the original Option.
 - (i) No Dividend Equivalents. No option shall provide for the payment or accrual of Dividend Equivalents (as defined below).

6. Stock Appreciation Rights

- (a) <u>General</u>. The Board may grant Awards consisting of stock appreciation rights ("*SARs*") entitling the holder, upon exercise, to receive an amount of Common Stock or cash or a combination thereof (such form to be determined by the Board) determined by reference to appreciation, from and after the date of grant, in the Fair Market Value of a share of Common Stock over the measurement price established pursuant to Section 6(c). The date as of which such appreciation is determined shall be the exercise date.
 - (b) Grants. SARs may be granted in tandem with, or independently of, Options granted under the Plan.
- (1) <u>Tandem Awards.</u> When SARs are expressly granted in tandem with Options, (i) the SAR will be exercisable only at such time or times, and to the extent, that the related Option is exercisable (except to the extent designated by the Board in connection with a Reorganization Event) and will be exercisable in accordance with the procedure required for exercise of the related Option; (ii) the SAR will terminate and no longer be exercisable upon the termination or exercise of the related Option, except to the extent designated by the Board in connection with a Reorganization Event and except that a SAR granted with respect to less than the full number of shares covered by an Option will not be reduced until the number of shares as to which the related Option has been exercised or has terminated exceeds the number of shares not covered by the SAR; (iii) the Option will terminate and no longer be exercisable upon the exercise of the related SAR; and (iv) the SAR will be transferable only with the related Option.
- (2) <u>Independent SARs.</u> A SAR not expressly granted in tandem with an Option will become exercisable at such time or times, and on such conditions, as the Board may specify in the SAR Award.
- (c) <u>Measurement Price</u>. The Board shall establish the measurement price of each SAR and specify it in the applicable SAR agreement. The measurement price shall not be less than 100% of the Fair Market Value on the date the SAR is granted; *provided* that if the Board approves the grant of an SAR effective as of a future date, the measurement price shall be not less than 100% of the Fair Market Value on such future date.

- (d) <u>Duration of SARs</u>. Each SAR shall be exercisable at such times and subject to such terms and conditions as the Board may specify in the applicable SAR agreement; *provided, however*, that no SAR will be granted with a term in excess of 10 years.
- (e) Exercise of SARs. SARs may be exercised by delivery to the Company of a notice of exercise in a form (which may be electronic) approved by the Company, together with any other documents required by the Board.
- (f) <u>Limitation on Repricing</u>. Unless such action is approved by the Company's stockholders, the Company may not (except as provided for under Section 9): (1) amend any outstanding SAR granted under the Plan to provide a measurement price per share that is lower than the then-current measurement price per share of such outstanding SAR, (2) cancel any outstanding SAR (whether or not granted under the Plan) and grant in substitution therefor new Awards under the Plan (other than Awards granted pursuant to Section 4(c)) covering the same or a different number of shares of Common Stock and having an exercise or measurement price per share lower than the then-current measurement price per share of the cancelled SAR, (3) cancel in exchange for a cash payment any outstanding SAR with a measurement price per share above the then-current Fair Market Value, other than pursuant to Section 9, or (4) take any other action under the Plan that constitutes a "repricing" within the meaning of the rules of NASDAQ.
- (g) No Reload Rights. No SAR granted under the Plan shall contain any provision entitling the grantee to the automatic grant of additional SARs in connection with any exercise of the original SAR.
 - (h) No Dividend Equivalents. No SAR shall provide for the payment or accrual of Dividend Equivalents.

7. Restricted Stock; Restricted Stock Units

- (a) <u>General</u>. The Board may grant Awards entitling recipients to acquire shares of Common Stock ("*Restricted Stock*"), subject to the right of the Company to repurchase all or part of such shares at their issue price or other stated or formula price (or to require forfeiture of such shares if issued at no cost) from the recipient in the event that conditions specified by the Board in the applicable Award are not satisfied prior to the end of the applicable restriction period or periods established by the Board for such Award. The Board may also grant Awards entitling the recipient to receive shares of Common Stock or cash to be delivered at the time such Award vests ("*Restricted Stock Units*") (Restricted Stock and Restricted Stock Units are each referred to herein as a "*Restricted Stock Award*").
- (b) <u>Terms and Conditions for All Restricted Stock Awards</u>. The Board shall determine the terms and conditions of a Restricted Stock Award, including the conditions for vesting and repurchase (or forfeiture) and the issue price, if any.
 - (c) Additional Provisions Relating to Restricted Stock.
- (1) <u>Dividends</u>. Unless otherwise provided in the applicable Award agreement, any dividends (whether paid in cash, stock or property) declared and paid by the Company with respect to shares of Restricted Stock ("*Accrued Dividends*") shall be paid to the Participant only if and when such shares become free from the restrictions on transferability and forfeitability that apply to such shares. Each payment of Accrued Dividends will be made no later than the end of the calendar year in which the dividends are paid to stockholders of that class of stock or, if later, the 15th day of the third month following the lapsing of the restrictions on transferability and the forfeitability provisions applicable to the underlying shares of Restricted Stock.
- (2) Stock Certificates. The Company may require that any stock certificates issued in respect of shares of Restricted Stock, as well as dividends or distributions paid on such Restricted Stock, shall be deposited in escrow by the Participant, together with a stock power endorsed in blank, with the Company (or its designee). At the expiration of the applicable restriction periods, the Company (or such designee) shall deliver the certificates

no longer subject to such restrictions to the Participant or if the Participant has died, to his or her Designated Beneficiary. " *Designated Beneficiary*" means (i) the beneficiary designated, in a manner determined by the Board, by a Participant to receive amounts due or exercise rights of the Participant in the event of the Participant's death or (ii) in the absence of an effective designation by a Participant, the Participant's estate.

(d) Additional Provisions Relating to Restricted Stock Units.

- (1) <u>Settlement</u>. Upon the vesting of and/or lapsing of any other restrictions (i.e., settlement) with respect to each Restricted Stock Unit, the Participant shall be entitled to receive from the Company one share of Common Stock or (if so provided in the applicable Award agreement) an amount of cash equal to the Fair Market Value of one share of Common Stock. The Board may, in its discretion, provide that settlement of Restricted Stock Units shall be deferred, on a mandatory basis or at the election of the Participant in a manner that complies with Section 409A of the Code.
 - (2) Voting Rights. A Participant shall have no voting rights with respect to any Restricted Stock Units.
- (3) <u>Dividend Equivalents</u>. The Award agreement for Restricted Stock Units may provide Participants with the right to receive an amount equal to any dividends or other distributions declared and paid on an equal number of outstanding shares of Common Stock (" *Dividend Equivalents*"). Dividend Equivalents will be subject to the same restrictions on transfer and forfeitability as the Restricted Stock Units with respect to which such Dividend Equivalents were granted.

8. Other Stock-Based Awards

- (a) <u>General</u>. Other Awards of shares of Common Stock, and other Awards that are valued in whole or in part by reference to, or are otherwise based on, shares of Common Stock or other property, may be granted hereunder to Participants (" *Other Stock-Based-Awards*"). Such Other Stock-Based Awards shall also be available as a form of payment in the settlement of other Awards granted under the Plan or as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock-Based Awards may be paid in shares of Common Stock or cash, as the Board shall determine.
- (b) <u>Terms and Conditions</u>. Subject to the provisions of the Plan, the Board shall determine the terms and conditions of each Other Stock-Based Award, including any purchase price applicable thereto. Dividend Equivalents will be subject to the same restrictions on transfer and forfeitability as the Other Stock-Based Awards with respect to which such Dividend Equivalents were granted.

9. Adjustments for Changes in Common Stock and Certain Other Events

(a) Changes in Capitalization. In the event of any stock split, reverse stock split, stock dividend, recapitalization, combination of shares, reclassification of shares, spin-off or other similar change in capitalization or event, or any dividend or distribution to holders of Common Stock other than an ordinary cash dividend, (i) the number and class of securities available under the Plan, (ii) the share counting rules and sublimits set forth in Sections 4(a) and 4(b), (iii) the number and class of securities and exercise price per share of each outstanding Option, (iv) the share and per-share provisions and the measurement price of each outstanding SAR, (v) the number of shares subject to and the repurchase price per share subject to each outstanding Restricted Stock Award and (vi) the share and per-share-related provisions and the purchase price, if any, of each outstanding Other Stock-Based Award, shall be equitably adjusted by the Company (or substituted Awards may be made, if applicable) in the manner determined by the Board. Without limiting the generality of the foregoing, in the event the Company effects a split of the Common Stock by means of a stock dividend and the exercise price of and the number of shares subject to an outstanding Option are adjusted as of the date of the distribution of the dividend (rather than as of the record date for such dividend), then an optionee who exercises an Option between the record date and the distribution date for such stock dividend shall be entitled to receive,

on the distribution date, the stock dividend with respect to the shares of Common Stock acquired upon such Option exercise, notwithstanding the fact that such shares were not outstanding as of the close of business on the record date for such stock dividend.

(b) Reorganization Events.

(1) <u>Definition</u>. A "*Reorganization Event*" shall mean: (a) any merger or consolidation of the Company with or into another entity as a result of which all of the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property or is cancelled, (b) any transfer or disposition of all of the Common Stock of the Company for cash, securities or other property pursuant to a share exchange or other transaction or (c) any liquidation or dissolution of the Company.

(2) Consequences of a Reorganization Event on Awards Other than Restricted Stock.

(A) In connection with a Reorganization Event, the Board may take any one or more of the following actions as to all or any (or any portion of) outstanding Awards other than Restricted Stock on such terms as the Board determines (except to the extent specifically provided otherwise in an applicable Award agreement or another agreement between the Company and the Participant): (i) provide that such Awards shall be assumed, or substantially equivalent Awards shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof), (ii) upon written notice to a Participant, provide that all of the Participant's unexercised Awards will terminate immediately prior to the consummation of such Reorganization Event unless exercised by the Participant (to the extent then exercisable) within a specified period following the date of such notice, (iii) provide that outstanding Awards shall become exercisable, realizable, or deliverable, or restrictions applicable to an Award shall lapse, in whole or in part prior to or upon such Reorganization Event, (iv) in the event of a Reorganization Event under the terms of which holders of Common Stock will receive upon consummation thereof a cash payment for each share surrendered in the Reorganization Event (the "Acquisition Price"), make or provide for a cash payment to Participants with respect to each Award held by a Participant equal to (A) the number of shares of Common Stock subject to the vested portion of the Award (after giving effect to any acceleration of vesting that occurs upon or immediately prior to such Reorganization Event) multiplied by (B) the excess, if any, of (I) the Acquisition Price over (II) the exercise, measurement or purchase price of such Award and any applicable tax withholdings, in exchange for the termination of such Award, (v) provide that, in connection with a liquidation or dissolution of the Company, Awards shall convert into the right to receive liquidation proceeds (if applicable, net of the exercise, measurement or purchase p

(B) Notwithstanding the terms of Section 9(b)(2)(A), in the case of outstanding Restricted Stock Units that are subject to Section 409A of the Code: (i) if the applicable Restricted Stock Unit agreement provides that the Restricted Stock Units shall be settled upon a "change in control event" within the meaning of Treasury Regulation Section 1.409A-3(i)(5)(i), and the Reorganization Event constitutes such a "change in control event", then no assumption or substitution shall be permitted pursuant to Section 9(b)(2)(A)(i) and the Restricted Stock Units shall instead be settled in accordance with the terms of the applicable Restricted Stock Unit agreement; and (ii) the Board may only undertake the actions set forth in clauses (iii), (iv) or (v) of Section 9(b)(2)(A) if the Reorganization Event constitutes a "change in control event" as defined under Treasury Regulation Section 1.409A-3(i)(5)(i) and such action is permitted or required by Section 409A of the Code; if the Reorganization Event is not a "change in control event" as so defined or such action is not permitted or required by Section 409A of the Code, and the acquiring or succeeding corporation does not assume or substitute the Restricted Stock Units pursuant to clause (i) of Section 9(b)(2)(A), then the unvested Restricted Stock Units shall terminate immediately prior to the consummation of the Reorganization Event without any payment in exchange therefor.

- (C) For purposes of Section 9(b)(2)(A)(i), an Award (other than Restricted Stock) shall be considered assumed if, following consummation of the Reorganization Event, such Award confers the right to purchase or receive pursuant to the terms of such Award, for each share of Common Stock subject to the Award immediately prior to the consummation of the Reorganization Event, the consideration (whether cash, securities or other property) received as a result of the Reorganization Event by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Reorganization Event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); provided, however, that if the consideration received as a result of the Reorganization Event is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise or settlement of the Award to consist solely of such number of shares of common stock of the acquiring or succeeding corporation (or an affiliate thereof) that the Board determined to be equivalent in value (as of the date of such determination or another date specified by the Board) to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Reorganization Event.
- (3) Consequences of a Reorganization Event on Restricted Stock. Upon the occurrence of a Reorganization Event other than a liquidation or dissolution of the Company, the repurchase and other rights of the Company with respect to outstanding Restricted Stock shall inure to the benefit of the Company's successor and shall, unless the Board determines otherwise, apply to the cash, securities or other property which the Common Stock was converted into or exchanged for pursuant to such Reorganization Event in the same manner and to the same extent as they applied to such Restricted Stock; provided, however, that the Board may provide for termination or deemed satisfaction of such repurchase or other rights under the instrument evidencing any Restricted Stock or any other agreement between a Participant and the Company, either initially or by amendment. Upon the occurrence of a Reorganization Event involving the liquidation or dissolution of the Company, except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock or any other agreement between a Participant and the Company, all restrictions and conditions on all Restricted Stock then outstanding shall automatically be deemed terminated or satisfied.

10. General Provisions Applicable to Awards

- (a) <u>Transferability of Awards</u>. Awards shall not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution or, other than in the case of an Incentive Stock Option, pursuant to a qualified domestic relations order, and, during the life of the Participant, shall be exercisable only by the Participant; *provided, however*, that the Board may permit or provide in an Award for the gratuitous transfer of the Award by the Participant to or for the benefit of any immediate family member, family trust or other entity established for the benefit of the Participant and/or an immediate family member thereof if the Company would be eligible to use a Form S-8 under the Securities Act for the registration of the sale of the Common Stock subject to such Award to such proposed transferee; *provided further*, that the Company shall not be required to recognize any such permitted transfer until such time as such permitted transferee shall, as a condition to such transfer, deliver to the Company a written instrument in form and substance satisfactory to the Company confirming that such transferee shall be bound by all of the terms and conditions of the Award. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees. For the avoidance of doubt, nothing contained in this Section 10(a) shall be deemed to restrict a transfer to the Company.
- (b) <u>Documentation</u>. Each Award shall be evidenced in such form (written, electronic or otherwise) as the Board shall determine. Each Award may contain terms and conditions in addition to those set forth in the Plan.
- (c) <u>Board Discretion</u>. Except as otherwise provided by the Plan, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award need not be identical, and the Board need not treat Participants uniformly.

- (d) <u>Termination of Status</u>. The Board shall determine the effect on an Award of the disability, death, retirement, termination or other cessation of employment, authorized leave of absence or other change in the employment or other status of a Participant and the extent to which, and the period during which, the Participant, or the Participant's legal representative, conservator, guardian or Designated Beneficiary, may exercise rights under the Award.
- (e) Withholding. The Participant must satisfy all applicable federal, state, and local or other income and employment tax withholding obligations before the Company will deliver stock certificates or otherwise recognize ownership of Common Stock under an Award. The Company may decide to satisfy the withholding obligations through additional withholding on salary or wages. If the Company elects not to or cannot withhold from other compensation, the Participant must pay the Company the full amount, if any, required for withholding or have a broker tender to the Company cash equal to the withholding obligations. Payment of withholding obligations is due before the Company will issue any shares on exercise, vesting or release from forfeiture of an Award or at the same time as payment of the exercise or purchase price, unless the Company determines otherwise. If provided for in an Award or approved by the Board in its sole discretion, a Participant may satisfy such tax obligations in whole or in part by delivery (either by actual delivery or attestation) of shares of Common Stock, including shares retained from the Award creating the tax obligation, valued at their Fair Market Value; provided, however, except as otherwise provided by the Board, that the total tax withholding where stock is being used to satisfy such tax obligations cannot exceed the Company's minimum statutory withholding obligations (based on minimum statutory withholding requirements cannot be subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements.
- (f) Amendment of Award. Except as otherwise provided in Section 5(g) with respect to repricings, Section 10(i) with respect to Performance Awards or Section 11(d) with respect to actions requiring stockholder approval, the Board may amend, modify or terminate any outstanding Award, including but not limited to, substituting therefor another Award of the same or a different type, changing the date of exercise or realization, and converting an Incentive Stock Option to a Nonstatutory Stock Option. The Participant's consent to such action shall be required unless (i) the Board determines that the action, taking into account any related action, does not materially and adversely affect the Participant's rights under the Plan or (ii) the change is permitted under Section 9.
- (g) Conditions on Delivery of Stock. The Company will not be obligated to deliver any shares of Common Stock pursuant to the Plan or to remove restrictions from shares previously issued or delivered under the Plan until (i) all conditions of the Award have been met or removed to the satisfaction of the Company, (ii) in the opinion of the Company's counsel, all other legal matters in connection with the issuance and delivery of such shares have been satisfied, including any applicable securities laws and regulations and any applicable stock exchange or stock market rules and regulations, and (iii) the Participant has executed and delivered to the Company such representations or agreements as the Company may consider appropriate to satisfy the requirements of any applicable laws, rules or regulations.
- (h) <u>Acceleration</u>. The Board may at any time provide that any Award shall become immediately exercisable in whole or in part, free of some or all restrictions or conditions, or otherwise realizable in whole or in part, as the case may be.

(i) Performance Awards.

(1) <u>Grants</u>. Restricted Stock Awards and Other Stock-Based Awards under the Plan may be made subject to the achievement of performance goals pursuant to this Section 10(i) ("*Performance Awards*"). Performance Awards can also provide for cash payments of up to \$1,500,000 per fiscal year per individual.

- (2) <u>Committee</u>. Grants of Performance Awards to any Covered Employee (as defined below) intended to qualify as "performance-based compensation" under Section 162(m) ("*Performance-Based Compensation*") shall be made only by a Committee (or a subcommittee of a Committee) comprised solely of two or more directors eligible to serve on a committee making Awards qualifying as "performance-based compensation" under Section 162(m). In the case of such Awards granted to Covered Employees, references to the Board or to a Committee shall be treated as referring to such Committee (or subcommittee). "*Covered Employee*" shall mean any person who is, or whom the Committee, in its discretion, determines may be, a "covered employee" under Section 162(m)(3) of the Code.
- (3) Performance Measures. For any Award that is intended to qualify as Performance-Based Compensation, the Committee shall specify that the degree of granting, vesting and/or payout shall be subject to the achievement of one or more objective performance measures established by the Committee, which shall be based on the relative or absolute attainment of specified levels of one or any combination of the following, which may be determined pursuant to generally accepted accounting principles ("GAAP") or on a non-GAAP basis, as determined by the Committee: (a) earnings per share, (b) return on average equity or average assets with respect to a pre-determined peer group, (c) earnings, (d) earnings growth, (e) revenues, (f) expenses, (g) stock price, (h) market share, (i) return on sales, assets, equity or investment, (j) regulatory compliance, (k) achievement of balance sheet or income statement objectives, (l) total shareholder return, (m) net operating profit after tax, (n) pre-tax or after tax income, (o) cash flow, (p) achievement of research, development, clinical or regulatory milestones, (q) product sales, (r) business development activities, (s) the entry into an arrangement or agreement with a third party for the development, commercialization, marketing or distribution of products, services or technologies, or for conducting a research program to discover and develop a product, service or technology, and/or the achievement of milestones under such arrangement or agreement, including events that trigger an obligation or payment right, (t) achievement of domestic and international regulatory milestones, including the submission of filings required to advance products, services and technologies in clinical development and the achievement of approvals by regulatory authorities relating to the commercialization of products, services and technologies, (u) the achievement of discovery, preclinical and clinical stage scientific objectives, discoveries or inventions for products, services and technologies under research and development, (v) the entry into or completion of a phase of clinical development for any product, service or technology, such as the entry into or completion of phase 1, 2 and/or 3 clinical trials, (w) the consummation of debt or equity financing transactions, or acquisitions of business, technologies and assets, (x) new product or service releases, (y) specified levels of product sales, net income, earnings before or after discontinued operations, interest, taxes, depreciation and/or amortization, operating profit before or after discontinued operations and/or taxes, sales, sales growth, earnings growth, cash flow or cash position, gross margins, stock price, market share, return on sales, assets, equity or investment and (z) improvement of financial ratings. Such goals may reflect absolute entity or business unit performance or a relative comparison to the performance of a peer group of entities or other external measure of the selected performance criteria and may be absolute in their terms or measured against or in relationship to other companies comparably, similarly or otherwise situated. The Committee may specify that such performance measures shall be adjusted to exclude any one or more of (i) extraordinary items, (ii) gains or losses on the dispositions of discontinued operations, (iii) the cumulative effects of changes in accounting principles, (iv) the writedown of any asset, (v) fluctuation in foreign currency exchange rates, and (vi) charges for restructuring and rationalization programs. Such performance measures: (i) may vary by Participant and may be different for different Awards; (ii) may be particular to a Participant or the department, branch, line of business, subsidiary or other unit in which the Participant works and may cover such period as may be specified by the Committee; and (iii) shall be set by the Committee within the time period prescribed by, and shall otherwise comply with the requirements of, Section 162(m). Awards that are not intended to qualify as Performance-Based Compensation may be based on these or such other performance measures as the Board may determine.

(4) Adjustments. Notwithstanding any provision of the Plan, with respect to any Performance Award that is intended to qualify as Performance-Based Compensation, the Committee may adjust downwards, but not upwards, the cash or number of shares payable pursuant to such Award, and the Committee may not waive the

achievement of the applicable performance measures except in the case of the death or disability of the Participant or a change in control of the Company.

(5) Other. The Committee shall have the power to impose such other restrictions on Performance Awards as it may deem necessary or appropriate to ensure that such Awards satisfy all requirements for Performance-Based Compensation. Dividend Equivalents will be subject to the same restrictions on transfer and forfeitability as the Performance Awards with respect to which such Dividend Equivalents were granted.

11. Miscellaneous

- (a) No Right To Employment or Other Status. No person shall have any claim or right to be granted an Award by virtue of the adoption of the Plan, and the grant of an Award shall not be construed as giving a Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan, except as expressly provided in the applicable Award.
- (b) No Rights As Stockholder. Subject to the provisions of the applicable Award, no Participant or Designated Beneficiary shall have any rights as a stockholder with respect to any shares of Common Stock to be distributed with respect to an Award until becoming the record holder of such shares.
- (c) Effective Date and Term of Plan. The Plan shall become effective on the date the Plan is approved by the Company's stockholders (the "Effective Date"). No Awards shall be granted under the Plan after the expiration of 10 years from the Effective Date, but Awards previously granted may extend beyond that date.
- (d) Amendment of Plan. The Board may amend, suspend or terminate the Plan or any portion thereof at any time provided that (i) to the extent required by Section 162(m), no Award granted to a Participant that is intended to comply with Section 162(m) after the date of such amendment shall become exercisable, realizable or vested, as applicable to such Award, unless and until the Company's stockholders approve such amendment in the manner required by Section 162(m); (ii) no amendment that would require stockholder approval under the rules of NASDAQ may be made effective unless and until the Company's stockholders approve such amendment; and (iii) if the NASDAQ amends its corporate governance rules so that such rules no longer require stockholder approval of NASDAQ "material amendments" to equity compensation plans, then, from and after the effective date of such amendment to the NASDAQ rules, no amendment to the Plan (A) materially increasing the number of shares authorized under the Plan (other than pursuant to Section 4(c) or 9), (B) expanding the types of Awards that may be granted under the Plan, or (C) materially expanding the class of participants eligible to participate in the Plan shall be effective unless and until the Company's stockholders approve such amendment. In addition, if at any time the approval of the Company's stockholders is required as to any other modification or amendment under Section 422 of the Code or any successor provision with respect to Incentive Stock Options, the Board may not effect such modification or amendment without such approval. Unless otherwise specified in the amendment, any amendment to the Plan adopted in accordance with this Section 11(d) shall apply to, and be binding on the holders of, all Awards outstanding under the Plan at the time the amendment is adopted, provided the Board determines that such amendment, taking into account any related action, does not materially and adversely affect the rights of Participants under the Plan.
- (e) <u>Authorization of Sub-Plans (including for Grants to non-U.S. Employees)</u>. The Board may from time to time establish one or more sub-plans under the Plan for purposes of satisfying applicable securities, tax or other laws of various jurisdictions. The Board shall establish such sub-plans by adopting supplements to the Plan containing (i) such limitations on the Board's discretion under the Plan as the Board deems necessary or desirable or (ii) such additional terms and conditions not otherwise inconsistent with the Plan as the Board shall deem necessary or desirable. All supplements adopted by the Board shall be deemed to be part of the Plan, but each supplement shall apply only to Participants within the affected jurisdiction and the Company shall not be required to provide copies of any supplement to Participants in any jurisdiction which is not the subject of such supplement.

(f) Compliance with Section 409A of the Code. Except as provided in individual Award agreements initially or by amendment, if and to the extent (i) any portion of any payment, compensation or other benefit provided to a Participant pursuant to the Plan in connection with his or her employment termination constitutes "nonqualified deferred compensation" within the meaning of Section 409A of the Code and (ii) the Participant is a specified employee as defined in Section 409A(a)(2)(B)(i) of the Code, in each case as determined by the Company in accordance with its procedures, by which determinations the Participant (through accepting the Award) agrees that he or she is bound, such portion of the payment, compensation or other benefit shall not be paid before the day that is six months plus one day after the date of "separation from service" (as determined under Section 409A of the Code) (the "New Payment Date"), except as Section 409A of the Code may then permit. The aggregate of any payments that otherwise would have been paid to the Participant during the period between the date of separation from service and the New Payment Date shall be paid to the Participant in a lump sum on such New Payment Date, and any remaining payments will be paid on their original schedule.

The Company makes no representations or warranty and shall have no liability to the Participant or any other person if any provisions of or payments, compensation or other benefits under the Plan are determined to constitute nonqualified deferred compensation subject to Section 409A of the Code but do not to satisfy the conditions of that section.

- (g) <u>Limitations on Liability</u>. Notwithstanding any other provisions of the Plan, no individual acting as a director, officer, employee or agent of the Company will be liable to any Participant, former Participant, spouse, beneficiary, or any other person for any claim, loss, liability, or expense incurred in connection with the Plan, nor will such individual be personally liable with respect to the Plan because of any contract or other instrument he or she executes in his or her capacity as a director, officer, employee or agent of the Company. The Company will indemnify and hold harmless each director, officer, employee or agent of the Company to whom any duty or power relating to the administration or interpretation of the Plan has been or will be delegated, against any cost or expense (including attorneys' fees) or liability (including any sum paid in settlement of a claim with the Board's approval) arising out of any act or omission to act concerning the Plan unless arising out of such person's own fraud or bad faith.
- (h) Governing Law. The provisions of the Plan and all Awards made hereunder shall be governed by and interpreted in accordance with the laws of the State of Delaware, excluding choice-of-law principles of the law of such state that would require the application of the laws of a jurisdiction other than the State of Delaware.

APPENDIX E

PART (A)

RESOLVED, that Section 1.1 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

1. "1.1 Series D Preferred Dividends.

1.1.1 Each holder of Series D Preferred Stock shall be entitled to receive, with respect to each share of Series D Preferred Stock then outstanding and held by such holder of Series D Preferred Stock, dividends, commencing from the date of issuance of such share of Series D Preferred Stock, at the rate of seven percent (7%) per annum (on the basis of a 360 day year) of the Series D Original Issue Price (as defined below) (the "Series D Preferred Dividends"). The Series D Preferred Dividends shall be cumulative, whether or not earned or declared, shall be paid quarterly in arrears on the last day of December, March, June and September (a "Quarterly Dividend Payment Date") in each year that Series D Preferred Stock is outstanding, with the first Quarterly Dividend Payment Date being December 31, 2011, and shall be prorated for periods shorter than one quarter. The rights of a holder of Series D Preferred Stock as Series D Preferred Dividends shall rank senior to the rights of the Corporation's Series A Convertible Preferred Stock as to dividends.

1.1.2 The Series D Preferred Dividends shall be paid to each holder of Series D Preferred Stock in cash out of legally available funds or, at the Corporation's election, through the issuance of such number of shares of the Corporation's Common Stock, par value \$0.001 per share (the "Common Stock") (rounded down to the nearest whole share with any fractional shares being issued in cash in an amount equal to the Market Price (as defined in Section 4.2 below) of such fractional share of Common Stock) determined by dividing the amount of the total accrued but unpaid dividends then outstanding on such holder's shares of Series D Preferred Stock by the Market Price then in effect (which for this purpose may not be less than \$1.46 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock); provided, however, that (i) the Corporation may not pay such dividends in shares of Common Stock on or prior to December 31October 1, 20142013, (ii) the Corporation may not issue shares of Common Stock in excess of that number of shares of Common Stock which, upon giving effect to such issuance, would cause (a) the aggregate number of shares of Common Stock beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), to exceed 19.99% of the total number of issued and outstanding shares of Common Stock of the Corporation following such issuance, or (b) the combined voting power of the securities of the Corporation beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act to exceed 19.99% of the combined voting power of all of the securities of the Corporation then outstanding following such issuance, unless and until, in either case, the Corporation obtains the requisite stockholder approval under NASDAQ Marketplace Rule 5635(b) (the "Issuance Limitation" of clause (a) and clause (b) of this Section 1.1.2, the stockholders of the Corporation approve the Nasdaq Proposal (as defined by and in accordance with Section 5.11(B) of that certain Convertible Preferred Stock and Warrant Purchase Agreement, dated November 9, 2012, between the Corporation and the Purchasers named therein), in which case, the Issuance Limitation 19.99% limitation under this clause (ii) shall no longer apply to the payment of dividends hereunder a) and (b) of this Section 1.1.2 shall be increased, with respect to any holder of Series D Preferred Stock, to 35% for purposes of both clause (a) and clause (b) of this Section 1.1.2, and (iii) if clause (ii) shall in fact limit the issuance of any shares of Common Stock in payment of a given dividend, then the Corporation's election to pay such dividend in shares of Common Stock shall be ineffective to the extent of such limitation and such dividend shall instead thereupon be paid, at the Corporation's election, (x) in cash by the Corporation out of legally available funds or (y) through the issuance of a number of shares of the Corporation's Series F Convertible Preferred Stock, par value \$0.01 per share (the "Series F

Preferred Stock") equal to one-twentieth (1/20\(\text{\text{\text{\text{\text{Preferred Stock}}}}\) of the number of shares of Common Stock that the Corporation could have issued pursuant to this Section 1.1.2 with respect to such Series D Preferred Dividends but for the limitations set forth in clause (a) and clause (b) of this Section 1.1.2.

1.1.3 Any election by the Corporation to pay Series D Preferred Dividends in cash or in shares of Common Stock or Series F Preferred Stock shall be made uniformly with respect to all outstanding shares of Series D Preferred Stock for a given dividend period.

1.1.4 For purposes of this Section 1.1 the aggregate number of shares of Common Stock or voting securities beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act, shall include the shares of Common Stock to be issued as part of such dividend payment, but shall exclude the number of shares of Common Stock which would be issuable upon exercise or conversion of the unexercised, non-converted or non-cancelled portion of any other securities of the Corporation that do not have voting power (including without limitation any securities of the Corporation which would entitle the holder thereof to acquire at any time Common Stock, including without limitation any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock), subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the holder or any of its affiliates and other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act."

RESOLVED, that Section 1.3 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"1.3 The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock and, dividends on the Series A Convertible Preferred Stock in accordance with Section 2(a) of the Certificate of Designations for the Series A Convertible Preferred Stock) and dividends on the Series E Preferred Stock in accordance with Section 1.1 of the Certificate of Designations for the Series E Convertible Preferred Stock unless the holders of the Series D Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series D Preferred Stock in an amount at least equal to the sum of (i) the amount of the aggregate dividends then accrued on such share of Series D Preferred Stock and not previously paid and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series D Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of Series D Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series D Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (2) multiplying such fraction by an amount equal to the Series D Original Issue Price; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series D Preferred Stock pursuant to this Section 1.3 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest Series D Preferred Stock dividend."

RESOLVED, that Section 2.1 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"2.1 Payments to Holders of Series D Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the holders of shares of Series D Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Common Stock, Series A Convertible Preferred Stock or any other class of capital stock of the Corporation ranking junior to the Series D Preferred Stock as to liquidation, by reason of their ownership thereof, an amount per share equal to the greater of (i) the Series D Original Issue Price, plus any dividends accrued or declared but unpaid thereon, or (ii)—such amount per share as would have been payable with respect to such share had all shares of Series D Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution or winding up disregarding for these purposes the limitations on conversion due to beneficial ownership set forth in Subsection 4.1.1. If upon any such liquidation, dissolution or winding up of the Corporation, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series D Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1, the holders of shares of Series D Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full."

RESOLVED, that Section 4.1.1 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"4.1.1 Conversion Ratio. Each share of Series D Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Series D Original Issue Price by the Series D Conversion Price (as defined below) in effect at the time of conversion. The "Series D Conversion Price" shall initially be equal to \$1.6275. Such initial Series D Conversion Price, and the rate at which shares of Series D Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below. Notwithstanding the foregoing, the Corporation shall not effect any conversion of such holder's Series D Preferred Stock and such holder shall not be entitled to convert its shares of Series D Preferred Stock for a number of shares of Common Stock in excess of that number of shares of Common Stock which, upon giving effect to such conversion, would cause (a) the aggregate number of shares of Common Stock beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act to exceed 19.99% of the total number of issued and outstanding shares of Common Stock of the Corporation (including for such purpose the shares of Common Stock issuable upon conversion of the Series D Preferred Stock) following such conversion, or (b) the combined voting power of the securities of the Corporation beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act to exceed 19.99% of the combined voting power of all of the securities of the Corporation then outstanding following such conversion, unless, in either case, the Corporation obtains the requisite stockholder approval under NASDAQ Marketplace Rule 5635(b) unless stockholders of the Corporation obtains the requisite stockholder approval under NASDAQ Marketplace Rule 5635(b) approve the Nasdaq Proposal, in which case, this the 19.99% limitation under clause (a) and clause (b) of this Section 4.1.1 shall no longer apply to the holder be increased, with respect to any holder of Series D Preferred Stock, to 35% for purposes of both clause (a) and clause (b) of this Section 4.1.1. For purposes of this Section 4.1.1, the aggregate number of shares of Common Stock or

voting securities beneficially owned by the holder and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act shall include the shares of Common Stock issuable upon the conversion of the Series D Preferred Stock with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon exercise or conversion of the unexercised, non-converted or non-cancelled portion of any other securities of the Corporation that do not have voting power (including without limitation any securities of the Corporation which would entitle the holder thereof to acquire at any time Common Stock, including without limitation any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock), subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the holder or any of its affiliates and other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act."

RESOLVED, that Section 4.1.2 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"4.1.2 <u>Termination of Conversion Rights</u>. In the event of a notice of redemption of any shares of Series D Preferred Stock pursuant to Section 5 or 6, the Conversion Rights of the shares designated for redemption shall terminate at the close of business on the last full day preceding the date fixed for redemption, unless the redemption price is not fully paid on such redemption date, in which case the Conversion Rights for such shares shall continue until such price is paid in full. In the event of a liquidation, dissolution or winding up of the Corporation or a Sale of the Corporation (as defined in Section 6.2 below), the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Series D Preferred Stock."

RESOLVED, that Section 6 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"6. Fundamental Change Redemption Sale of the Corporation.

6.1 In the event of a Sale of the Corporation (as defined below) after payment shall be made to the holders of Series A Convertible Preferred Stock and any other class of capital stock of the Corporation ranking senior to the Series D Preferred Stock upon a Sale of the Corporation, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of the shares of Series D Preferred Stock, Series E Preferred Stock and Common Stock pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of the Certificate of Incorporation immediately prior to such Sale of the Corporation disregarding for these purposes the limitations on conversion due to beneficial ownership set forth in Subsection 4.1.1.

6.2 The term "Sale of the Corporation" shall mean each of the following events: (a) a merger or consolidation in which (i) the Corporation is a constituent party or (ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation (except in the case of clause (i) and (ii), any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, at least a majority, by

voting power, of the capital stock of (y) the surviving or resulting corporation or (z) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; or (b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation. For the purposes of clarity, a Sale of the Corporation shall not be deemed to be a liquidation, dissolution or winding up of the Corporation for the purposes of this Section 6."

6.1 Fundamental Change. Upon the occurrence of a Fundamental Change, each holder of shares of Series D Preferred Stock may, at its sole option, require the Corporation to purchase all or a portion of its shares of Series D Preferred Stock (the "Fundamental Change Redemption") at a price equal to Redemption Price. A "Fundamental Change" shall mean any of the following events:

(a) any "person" or "group" (each term as defined in the Exchange Act) that is not an affiliate of any holder of shares of Series D Preferred-Stock becoming the "beneficial owner" (as defined in the Exchange Act) of voting securities of the Corporation, representing 66 2/3% or more of the-outstanding voting securities of the Corporation (treating all securities convertible or exchangeable into or exercisable for shares of Common Stock as having-been fully converted, exchanged and exercised, without regard to any exercise, conversion or exchange limitations therein) other than in connection with a transaction described in clause (d) below;

(b) the recapitalization or reclassification of the Common Stock of the Corporation;

(c) a sale of all or substantially all of the assets of the Corporation's assets to a person that is not an affiliate of any holder of shares of Series D Preferred Stock; or

(d) a merger, consolidation, business combination or similar transaction the result of which a "person" or "group" (each as defined in the Exchange Act) that is not an affiliate of any holder of shares of Series D Preferred Stock owns voting securities representing 66 2/3% or more of the outstanding voting securities of the surviving entity upon completion of such transaction.

6.2 Exercise of Fundamental Change Redemption Option. The Company shall send a written notice (the "Fundamental Change Notice") to each holder of shares of Series D Preferred Stock of (i) the occurrence of a Fundamental Change described in Subsection 6.1(a) above, within 10 days of the Corporation's becoming aware of the occurrence of such Fundamental Change, and (ii) a Fundamental Change described in Subsection 6.1(b)-(d) above, in accordance with Section 4.10. The Fundamental Change Notice shall describe the Fundamental Change and state that each holder of shares of Series D-Preferred Stock has the right to require a Fundamental Change Redemption. In order to require a Fundamental Change Redemption, a holder of Series D-Preferred Stock must deliver written notice to the Corporation requesting the Fundamental Change Redemption within five days after the date of the Fundamental Change Notice and stating the number of shares of Series D-Preferred Stock to be redeemed. Unless prohibited by Delaware law governing distributions to stockholders, the Corporation shall redeem the shares of Series D-Preferred Stock requested to be redeemed at a price equal to the Redemption Price and on a date to be fixed by the Corporation which shall not be more than 30 days from the date of the last timely delivered Fundamental Change Redemption request. If, on the date of the Fundamental Change Redemption, Delaware law governing distributions to stockholders prevents the Corporation from redeeming all shares of Series D-Preferred Stock to be redeemed, the Corporation shall ratably redeem the maximum number of shares that it may redeem consistent with such law, and shall redeem the remaining shares as soon as it may lawfully do so under such law.

6.3 Redemption Notice. Following receipt of a timely request for a Fundamental Change Redemption by a holder of Series D Preferred Stock, the Corporation shall send written notice of the mandatory redemption to the holder stating:

(a) the date fixed for the Fundamental Redemption (the "Fundamental Redemption Date") and the Redemption Price;

(b) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Subsection 4.1); and

(c) that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Series D Preferred Stock to be redeemed.

6.4 Surrender of Certificates; Payment. On or before the Fundamental Redemption Date, each holder of shares of Series D Preferred Stock to beredeemed on such Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall surrender thecertificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate
affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on
account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the notice from the
Corporation, and thereupon the Redemption Price for such shares shall be payable to the order of the person whose name appears on such certificate or
certificates as the owner thereof. In the event less than all of the shares of Series D Preferred Stock represented by a certificate are redeemed, a new certificate
representing the unredeemed shares of Series D Preferred Stock shall promptly be issued to such holder.

6.5 Rights Subsequent to Redemption. If on the Fundamental Redemption Date the Redemption Price payable upon redemption of the shares of the Series D Preferred Stock to be redeemed on such Redemption Date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that the certificates evidencing any of the shares of Series D Preferred Stock so called for redemption shall not have been surrendered, dividends with respect to such shares of Series D Preferred Stock shall cease to accrue after such Redemption—Date and all rights with respect to such shares shall forthwith after the Fundamental Redemption Date terminate, except only the right to the holders to receive—the Redemption Price without interest upon surrender of their certificates therefor.

6.6 Fundamental Change and Dividends. Upon the occurrence of a Fundamental Change as described in Subsection 6.1(e)-(d), the Company's obligation to pay Series D Preferred Dividends shall terminate."

APPENDIX E

PART (B)

RESOLVED, that Section 1.1 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

1. "1.1 Series D Preferred Dividends.

1.1.1 Each holder of Series D Preferred Stock shall be entitled to receive, with respect to each share of Series D Preferred Stock then outstanding and held by such holder of Series D Preferred Stock, dividends, commencing from the date of issuance of such share of Series D Preferred Stock, at the rate of seven percent (7%) per annum (on the basis of a 360 day year) of the Series D Original Issue Price (as defined below) (the "Series D Preferred Dividends"). The Series D Preferred Dividends shall be cumulative, whether or not earned or declared, shall be paid quarterly in arrears on the last day of December, March, June and September (a "Quarterly Dividend Payment Date") in each year that Series D Preferred Stock is outstanding, with the first Quarterly Dividend Payment Date being December 31, 2011, and shall be prorated for periods shorter than one quarter. The rights of a holder of Series D Preferred Stock as Series D Preferred Dividends shall rank senior to the rights of the Corporation's Series A Convertible Preferred Stock as to dividends.

1.1.2 The Series D Preferred Dividends shall be paid to each holder of Series D Preferred Stock in cash out of legally available funds or, at the Corporation's election, through the issuance of such number of shares of the Corporation's Common Stock, par value \$0.001 per share (the "Common Stock") (rounded down to the nearest whole share with any fractional shares being issued in cash in an amount equal to the Market Price (as defined in Section 4.2 below) of such fractional share of Common Stock) determined by dividing the amount of the total accrued but unpaid dividends then outstanding on such holder's shares of Series D Preferred Stock by the Market Price then in effect (which for this purpose may not be less than \$1.46 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock); provided, however, that (i) the Corporation may not pay such dividends in shares of Common Stock on or prior to December 31, 2014, (ii) the Corporation may not issue shares of Common Stock in excess of that number of shares of Common Stock which, upon giving effect to such issuance, would cause (a) the aggregate number of shares of Common Stock beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), to exceed 19.99% of the total number of issued and outstanding shares of Common Stock of the Corporation following such issuance, or (b) the combined voting power of the securities of the Corporation beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act to exceed 19.99% of the combined voting power of all of the securities of the Corporation then outstanding following such issuance, unless and until, in either case, the Corporation obtains the requisite stockholder approval under NASDAQ Marketplace Rule 5635(b) (the "Issuance Limitation" of clause (a) and clause (b) of this Section 1.1.2, the stockholders of the Corporation approve the Nasdaq Proposal (as defined by and in accordance with Section 5.11(B) of that certain Convertible Preferred Stock and Warrant Purchase Agreement, dated November 9, 2012, between the Corporation and the Purchasers named therein), in which case, the Issuance Limitation 19.99% limitation under this clause (ii) shall no longer apply to the payment of dividends hereunder a) and (b) of this Section 1.1.2 shall be increased, with respect to any holder of Series D Preferred Stock, to 35% for purposes of both clause (a) and clause (b) of this Section 1.1.2, and (iii) if clause (ii) shall in fact limit the issuance of any shares of Common Stock in payment of a given dividend, then the Corporation's election to pay such dividend in shares of Common Stock shall be ineffective to the extent of such limitation and such dividend shall instead thereupon be paid in cash by the Corporation out of legally available funds.

1.1.3 Any election by the Corporation to pay Series D Preferred Dividends in cash or shares of Common Stock shall be made uniformly with respect to all outstanding shares of Series D Preferred Stock for a given dividend period.

1.1.4 For purposes of this Section 1.1 the aggregate number of shares of Common Stock or voting securities beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act, shall include the shares of Common Stock to be issued as part of such dividend payment, but shall exclude the number of shares of Common Stock which would be issuable upon exercise or conversion of the unexercised, non-converted or non-cancelled portion of any other securities of the Corporation that do not have voting power (including without limitation any securities of the Corporation which would entitle the holder thereof to acquire at any time Common Stock, including without limitation any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock), subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the holder or any of its affiliates and other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act."

RESOLVED, that Section 4.1.1 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"4.1.1 Conversion Ratio. Each share of Series D Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Series D Original Issue Price by the Series D Conversion Price (as defined below) in effect at the time of conversion. The "Series D Conversion Price" shall initially be equal to \$1.6275. Such initial Series D Conversion Price, and the rate at which shares of Series D Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below. Notwithstanding the foregoing, the Corporation shall not effect any conversion of such holder's Series D Preferred Stock and such holder shall not be entitled to convert its shares of Series D Preferred Stock for a number of shares of Common Stock in excess of that number of shares of Common Stock which, upon giving effect to such conversion, would cause (a) the aggregate number of shares of Common Stock beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act to exceed 19.99% of the total number of issued and outstanding shares of Common Stock of the Corporation (including for such purpose the shares of Common Stock issuable upon conversion of the Series D Preferred Stock) following such conversion, or (b) the combined voting power of the securities of the Corporation beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act to exceed 19.99% of the combined voting power of all of the securities of the Corporation then outstanding following such conversion, unless, in either case, the Corporation obtains the requisite stockholder approval under NASDAQ Marketplace Rule 5635(b) unless stockholders of the Corporation obtains the requisite stockholder approval under NASDAQ Marketplace Rule 5635(b) approve the Nasdaq Proposal, in which case, this the 19.99% limitation under clause (a) and clause (b) of this Section 4.1.1 shall no longer apply to the holder be increased, with respect to any holder of Series D Preferred Stock, to 35% for purposes of both clause (a) and clause (b) of this Section 4.1.1. For purposes of this Section 4.1.1, the aggregate number of shares of Common Stock or voting securities beneficially owned by the holder and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act shall include the shares of Common Stock issuable upon the conversion of the Series D Preferred Stock with respect to which such determination is being made, but shall

exclude the number of shares of Common Stock which would be issuable upon exercise or conversion of the unexercised, non-converted or non-cancelled portion of any other securities of the Corporation that do not have voting power (including without limitation any securities of the Corporation which would entitle the holder thereof to acquire at any time Common Stock, including without limitation any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock), subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the holder or any of its affiliates and other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act."

APPENDIX E

PART (C)

RESOLVED, that Section 1.3 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"1.3 The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock and, dividends on the Series A Convertible Preferred Stock in accordance with Section 2(a) of the Certificate of Designations for the Series A Convertible Preferred Stock) and dividends on the Series E Preferred Stock in accordance with Section 1.1 of the Certificate of Designations for the Series E Convertible Preferred Stock unless the holders of the Series D Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series D Preferred Stock in an amount at least equal to the sum of (i) the amount of the aggregate dividends then accrued on such share of Series D Preferred Stock and not previously paid and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series D Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of Series D Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series D Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (2) multiplying such fraction by an amount equal to the Series D Original Issue Price; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series D Preferred Stock pursuant to this Section 1.3 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest Series D Preferred Stock dividend."

APPENDIX E

PART (D)

RESOLVED, that Section 1.1 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

1. "1.1 Series D Preferred Dividends.

1.1.1 Each holder of Series D Preferred Stock shall be entitled to receive, with respect to each share of Series D Preferred Stock then outstanding and held by such holder of Series D Preferred Stock, dividends, commencing from the date of issuance of such share of Series D Preferred Stock, at the rate of seven percent (7%) per annum (on the basis of a 360 day year) of the Series D Original Issue Price (as defined below) (the "Series D Preferred Dividends"). The Series D Preferred Dividends shall be cumulative, whether or not earned or declared, shall be paid quarterly in arrears on the last day of December, March, June and September (a "Quarterly Dividend Payment Date") in each year that Series D Preferred Stock is outstanding, with the first Quarterly Dividend Payment Date being December 31, 2011, and shall be prorated for periods shorter than one quarter. The rights of a holder of Series D Preferred Stock as Series D Preferred Dividends shall rank senior to the rights of the Corporation's Series A Convertible Preferred Stock as to dividends.

1.1.2 The Series D Preferred Dividends shall be paid to each holder of Series D Preferred Stock in cash out of legally available funds or, at the Corporation's election, through the issuance of such number of shares of the Corporation's Common Stock, par value \$0.001 per share (the "Common Stock") (rounded down to the nearest whole share with any fractional shares being issued in cash in an amount equal to the Market Price (as defined in Section 4.2 below) of such fractional share of Common Stock) determined by dividing the amount of the total accrued but unpaid dividends then outstanding on such holder's shares of Series D Preferred Stock by the Market Price then in effect (which for this purpose may not be less than \$1.46 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock); provided, however, that (i) the Corporation may not pay such dividends in shares of Common Stock on or prior to December 31October 1, 20142013, (ii) the Corporation may not issue shares of Common Stock in excess of that number of shares of Common Stock which, upon giving effect to such issuance, would cause (a) the aggregate number of shares of Common Stock beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), to exceed 19.99% of the total number of issued and outstanding shares of Common Stock of the Corporation following such issuance, or (b) the combined voting power of the securities of the Corporation beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act to exceed 19.99% of the combined voting power of all of the securities of the Corporation then outstanding following such issuance, unless, in either case, the Corporation obtains the requisite stockholder approval under NASDAQ Marketplace Rule 5635(b) (the "Issuance Limitation"), in which case, the Issuance Limitation under this clause (ii) shall no longer apply to the payment of dividends hereunder and (iii) if clause (ii) shall in fact limit the issuance of any shares of Common Stock in payment of a given dividend, then the Corporation's election to pay such dividend in shares of Common Stock shall be ineffective to the extent of such limitation and such dividend shall instead thereupon be paid, at the Corporation's election, (x) in cash by the Corporation out of legally available funds or (y) through the issuance of a number of shares of the Corporation's Series F Convertible Preferred Stock, par value \$0.01 per share (the "Series F Preferred Stock") equal to one-twentieth (1/20\pm) of the number of shares of Common Stock that the Corporation could have issued pursuant to this Section 1.1.2 with respect to such Series D Preferred Dividends but for the limitations set forth in clause (a) and clause (b) of this Section 1.1.2.

1.1.3 Any election by the Corporation to pay Series D Preferred Dividends in cash or <u>in</u> shares of Common <u>Stock or Series F Preferred</u> Stock shall be made uniformly with respect to all outstanding shares of Series D Preferred Stock for a given dividend period.

1.1.4 For purposes of this Section 1.1 the aggregate number of shares of Common Stock or voting securities beneficially owned by a holder of Series D Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act, shall include the shares of Common Stock to be issued as part of such dividend payment, but shall exclude the number of shares of Common Stock which would be issuable upon exercise or conversion of the unexercised, non-converted or non-cancelled portion of any other securities of the Corporation that do not have voting power (including without limitation any securities of the Corporation which would entitle the holder thereof to acquire at any time Common Stock, including without limitation any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock), subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the holder or any of its affiliates and other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act."

APPENDIX E

PART (E)

RESOLVED, that Section 2.1 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"2.1 Payments to Holders of Series D Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the holders of shares of Series D Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Common Stock, Series A Convertible Preferred Stock or any other class of capital stock of the Corporation ranking junior to the Series D Preferred Stock as to liquidation, by reason of their ownership thereof, an amount per share equal to the greater of (i) the Series D Original Issue Price, plus any dividends accrued or declared but unpaid thereon, or (ii)—such amount per share as would have been payable with respect to such share had all shares of Series D Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution or winding up, disregarding for these purposes the limitations on conversion due to beneficial ownership set forth in Subsection 4.1.1. If upon any such liquidation, dissolution or winding up of the Corporation, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series D Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1, the holders of shares of Series D Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full."

RESOLVED, that Section 4.1.2 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"4.1.2 <u>Termination of Conversion Rights</u>. In the event of a notice of redemption of any shares of Series D Preferred Stock pursuant to Section 5 -or 6, the Conversion Rights of the shares designated for redemption shall terminate at the close of business on the last full day preceding the date fixed for redemption, unless the redemption price is not fully paid on such redemption date, in which case the Conversion Rights for such shares shall continue until such price is paid in full. In the event of a liquidation, dissolution or winding up of the Corporation or a Sale of the Corporation (as defined in Section 6.2 below), the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Series D Preferred Stock."

RESOLVED, that Section 6 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"6. Fundamental Change Redemption Sale of the Corporation.

6.1 In the event of a Sale of the Corporation (as defined below) after payment shall be made to the holders of Series A Convertible Preferred Stock and any other class of capital stock of the Corporation ranking senior to the Series D Preferred Stock upon a Sale of the Corporation, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of the shares of Series D Preferred Stock, Series E Preferred Stock and Common Stock pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been

converted to Common Stock pursuant to the terms of the Certificate of Incorporation immediately prior to such Sale of the Corporation disregarding for these purposes the limitations on conversion due to beneficial ownership set forth in Subsection 4.1.1.

6.2 The term "Sale of the Corporation" shall mean each of the following events: (a) a merger or consolidation in which (i) the Corporation is a constituent party or (ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation (except in the case of clause (i) and (ii), any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, at least a majority, by voting power, of the capital stock of (y) the surviving or resulting corporation or (z) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; or (b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger or otherwise) of one or more subsidiaries of the Corporation if *substantially all of the assets of the* Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation. For the purposes of clarity, a Sale of the Corporation shall not be deemed to be a liquidation, dissolution or winding up of the Corporation for the purposes of this Section 6."

6.1 Fundamental Change. Upon the occurrence of a Fundamental Change, each holder of shares of Series D Preferred Stock may, at its sole-option, require the Corporation to purchase all or a portion of its shares of Series D Preferred Stock (the "Fundamental Change Redemption") at a price equal to Redemption Price. A "Fundamental Change" shall mean any of the following events:

(a) any "person" or "group" (each term as defined in the Exchange Act) that is not an affiliate of any holder of shares of Series D Preferred-Stock becoming the "beneficial owner" (as defined in the Exchange Act) of voting securities of the Corporation, representing 66 2/3% or more of the-outstanding voting securities of the Corporation (treating all securities convertible or exchangeable into or exercisable for shares of Common Stock as having-been fully converted, exchanged and exercised, without regard to any exercise, conversion or exchange limitations therein) other than in connection with a transaction described in clause (d) below;

(b) the recapitalization or reclassification of the Common Stock of the Corporation;

(e) a sale of all or substantially all of the assets of the Corporation's assets to a person that is not an affiliate of any holder of shares of Series D Preferred Stock; or

(d) a merger, consolidation, business combination or similar transaction the result of which a "person" or "group" (each as defined in the Exchange Act) that is not an affiliate of any holder of shares of Series D Preferred Stock owns voting securities representing 66 2/3% or more of the outstanding voting securities of the surviving entity upon completion of such transaction.

6.2 Exercise of Fundamental Change Redemption Option. The Company shall send a written notice (the "Fundamental Change Notice") to each holder of shares of Series D Preferred Stock of (i) the occurrence of a Fundamental Change described in Subsection 6.1(a) above, within 10 days of the Corporation's becoming aware of the occurrence of such Fundamental Change, and (ii) a Fundamental Change described in Subsection 6.1(b)-(d) above, in accordance with Section 4.10. The Fundamental Change Notice shall describe the Fundamental Change and state that each holder of shares of Series D-Preferred Stock has the right to require a Fundamental Change Redemption. In order to require a Fundamental Change Redemption, a holder of Series D-Preferred

Stock must deliver written notice to the Corporation requesting the Fundamental Change Redemption within five—days after the date of the Fundamental Change Notice and stating the number of shares of Series D Preferred Stock to be redeemed. Unless prohibited by Delaware law governing distributions to—stockholders, the Corporation shall redeem the shares of Series D Preferred Stock requested to be redeemed at a price equal to the Redemption Price and on a date to be fixed by the Corporation which shall not be more than 30 days from the date of the last timely delivered Fundamental Change Redemption request. If, on the date of the Fundamental Change Redemption, Delaware law governing distributions to stockholders prevents the Corporation from redeeming all shares of Series D Preferred Stock to be redeemed, the Corporation shall ratably redeem the maximum number of shares that it may redeem consistent with such law, and shall redeem the remaining shares as soon as it may lawfully do so under such law.

- 6.3 Redemption Notice. Following receipt of a timely request for a Fundamental Change Redemption by a holder of Series D Preferred Stock, the Corporation shall send written notice of the mandatory redemption to the holder stating:
 - (a) the date fixed for the Fundamental Redemption (the "Fundamental Redemption Date") and the Redemption Price;
 - (b) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Subsection 4.1); and
- (e) that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Series D Preferred Stock to be redeemed.
- 6.4 Surrender of Certificates; Payment. On or before the Fundamental Redemption Date, each holder of shares of Series D Preferred Stock to be redeemed on such Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the notice from the Corporation, and thereupon the Redemption Price for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof. In the event less than all of the shares of Series D Preferred Stock represented by a certificate are redeemed, a new certificate representing the unredeemed shares of Series D Preferred Stock shall promptly be issued to such holder.
- 6.5 Rights Subsequent to Redemption. If on the Fundamental Redemption Date the Redemption Price payable upon redemption of the shares of the Series D Preferred Stock to be redeemed on such Redemption Date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that the certificates evidencing any of the shares of Series D Preferred Stock so called for redemption shall not have been surrendered, dividends with respect to such shares of Series D Preferred Stock shall cease to accrue after such Redemption—Date and all rights with respect to such shares shall forthwith after the Fundamental Redemption Date terminate, except only the right to the holders to receive—the Redemption Price without interest upon surrender of their certificates therefor.
- 6.6 Fundamental Change and Dividends. Upon the occurrence of a Fundamental Change as described in Subsection 6.1(e)-(d), the Company's obligation to pay Series D Preferred Dividends shall terminate.

APPENDIX F

PART (A)

RESOLVED, that Section 1.1 of the Certificate of Designations be deleted in its entirety and the following new paragraph be inserted in lieu thereof:

1."1.1 Series E Preferred Dividends.

1.1.1.1 Each holder of Series E Preferred Stock shall be entitled to receive with respect to each share of Series E Preferred Stock then outstanding and held by such holder of Series E Preferred Stock, dividends, commencing from the date of issuance of such share of Series E Preferred Stock, at the Initial Dividend Rate (as defined below) per annum (on the basis of a 360 day year) of the Series E Original Issue Price (as defined below) (the "Series E Preferred Dividends"); provided, however, that subject to and effective upon the filing with the Delaware Secretary of State of the amendment to the Certificate of Designations, Preferences and Rights of Series D Preferred Stock (the "Series D Certificate of Designations," with the amendment thereto being referred to as the "Amendment to Series D Certificate of Designations") as described in Section 5.11(B) of that certain Convertible Preferred Stock and Warrant Purchase Agreement, dated November 9, 2012, between the Corporation and the purchasers of the Series E Preferred Stock therein (the "Series E Purchase Agreement"), the dividend rate provided for in this Section 1.1 shall be increased from the Initial Dividend Rate to the rate of eight percent (8%) per annum (on the basis of a 360 day year) of the Series E Original Issue Price. The Series E Preferred Dividends shall be cumulative, whether or not earned or declared, shall be paid quarterly in arrears on the last day of March, June, September and December (a " Quarterly Dividend Payment Date") in each year that Series E Preferred Stock is outstanding, with the first Quarterly Dividend Payment Date being March 31, 2013, and shall be prorated for periods shorter than one quarter. Notwithstanding the foregoing, if, as of any Quarterly Dividend Payment Date at which the dividend rate is the Initial Dividend Rate, there are no shares of the Corporation's Series D Convertible Preferred Stock outstanding, then the dividend payable on such Quarterly Dividend Payment Date shall be calculated and paid at a rate of eight percent (8%) per annum (on the basis of a 360 day year) of the Series E Original Issue Price. In the event that the Amendment to Series D Certificate of Designations is filed with the Delaware Secretary of State and the dividend rate with respect to the Series E Preferred Dividends is increased pursuant to this Section 1.11.1.1, the Series E Preferred Dividends paid on the first Quarterly Dividend Payment Date after such filing and increase shall be paid at the increased rate. In the event that the Amendment to Series D Certificate of Designations is submitted to the stockholders of the Corporation as contemplated by Section 5.11 of the Series E Purchase Agreement and the Amendment to Series D Certificate of Designations is not approved, then the holders of the Series E Preferred Stock shall no longer be entitled to any Series E Preferred Dividends under this Section 1.1.1.1 and the Corporation shall have no further obligation to pay the Series E Preferred Dividends under this Section 4.11.1.1; provided, however, the Corporation shall not submit the Amendment to the Series D Certificate of Designations to the stockholders if there are no shares of Series D Preferred Stock then outstanding. The rights of a holder of Series E Preferred Stock to Series E Preferred Dividends shall rank senior to the rights of the Corporation's Series A Convertible Preferred Stock and Series D Convertible Preferred Stock as to dividends. The Series E Preferred Dividends shall be paid to each holder of Series E Preferred Stock in eash out of legally available funds. The term "Initial Dividend Rate" shall mean four and six tenths percent (4.6%) or such other percentage approved by the Corporation and by the holders of at least a majority of then outstanding shares of Series E Preferred Stock, with such approval given in writing or by vote at a meeting, consenting or voting (as the case may be) as a separate class.

1.1.2 The Series E Preferred Dividends shall be paid to each holder of Series E Preferred Stock in cash out of legally available funds or, at the Corporation's election, through the issuance of such number of shares of Common Stock (as defined in Section 1.3 below) (rounded down to the nearest whole share with any fractional shares being issued in cash in an amount equal to the Market Price (as defined in Section 4.2 below) of such fractional share of Common Stock) determined by dividing the amount of the total accrued but unpaid dividends

then outstanding on such holder's shares of Series E Preferred Stock by the Market Price then in effect (which for this purpose may not be less than \$0.70 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock); provided, however, that (i) the Corporation may not pay such dividends in shares of Common Stock on or prior to October 1, 2013, (ii) the Corporation may not issue shares of Common Stock in excess of that number of shares of Common Stock which, upon giving effect to such issuance, would cause (a) the aggregate number of shares of Common Stock beneficially owned by a holder of Series E Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act (as defined in Section 4.1.2), to exceed 19.99% of the total number of issued and outstanding shares of Common Stock of the Corporation following such issuance, or (b) the combined voting power of the securities of the Corporation beneficially owned by a holder of Series E Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act to exceed 19.99% of the combined voting power of all of the securities of the Corporation then outstanding following such issuance, unless and until, in either case of clause (a) and clause (b) of this Section 1.1A, the stockholders of the Corporation approve the Nasdaq Proposal (as defined in Section 3.1 below), in which case, the 19.99% limitation under clause (a) and (b) of this Section 1.1A shall be increased, with respect to any holder of Series E Preferred Stock, to 35% for purposes of both clause (a) and clause (b) of this Section 1.1A, and (iii) if clause (ii) shall in fact limit the issuance of any shares of Common Stock in payment of a given dividend, then the Corporation's election to pay such dividend in shares of Common Stock shall be ineffective to the extent of such limitation and such dividend shall instead thereupon be paid, at the Corporation's election, (x) in cash by the Corporation out of legally available funds or (y) through the issuance of a number of shares of the Corporation's Series F Convertible Preferred Stock, par value \$0.01 per share (the "Series F Preferred Stock") equal to one-twentieth (1/20\pm) of the number of shares of Common Stock that the Corporation could have issued pursuant to this Section 1.1.2 with respect to such Series E Preferred Dividends but for the limitations set forth in clause (a) and clause (b) of this Section 1.1.2.

1.1.3 Any election by the Corporation to pay Series E Preferred Dividends in cash or shares of Common Stock and/or Series F Preferred Stock shall be made uniformly with respect to all outstanding shares of Series E Preferred Stock for a given dividend period.

1.1.4 For purposes of this Section 1.1, the aggregate number of shares of Common Stock or voting securities beneficially owned by a holder of Series E Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act, shall include the shares of Common Stock to be issued as part of such dividend payment, but shall exclude the number of shares of Common Stock which would be issuable upon exercise or conversion of the unexercised, non-converted or non-cancelled portion of any other securities of the Corporation that do not have voting power (including without limitation any securities of the Corporation which would entitle the holder thereof to acquire at any time Common Stock, including without limitation any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock), subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the holder or any of its affiliates and other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act.

RESOLVED, that Section 2.1.1 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"2.1.1 In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the holders of shares of Series E Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to

the holders of Common Stock, Series A Convertible Preferred Stock, Series D Convertible Preferred Stock or any other class of capital stock of the Corporation ranking junior to the Series E Preferred Stock as to liquidation, by reason of their ownership thereof, an amount per share equal to the greater of (i) the Series E Original Issue Price, plus any dividends accrued or declared but unpaid thereon, and (ii)—such amount per share as would have been payable with respect to such share had all shares of Series E Preferred Stock been converted into Common Stock pursuant to Subsection 4 immediately prior to such liquidation, dissolution or winding up disregarding for these purposes the limitations on conversion due to beneficial ownership set forth in Subsection 4.1.2."

RESOLVED, that Section 2.3.1 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"2.3.1 In the event of a Sale of the Corporation (as defined below) after payment shall be made to the holders of Series A Convertible Preferred Stock and any other class of capital stock of the Corporation ranking senior to the Series E Preferred Stock upon a Sale of the Corporation, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of the shares of Series E Preferred Stock, Series D Preferred Stock and Common Stock pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of the Certificate of Incorporation immediately prior to such Sale of the Corporation disregarding for these purposes the limitations on conversion due to beneficial ownership set forth in Subsection 4.1.2."

APPENDIX F

PART (B)

RESOLVED, that Section 1.1 of the Certificate of Designations be deleted in its entirety and the following new paragraph be inserted in lieu thereof:

1."1.1 Series E Preferred Dividends.

1.1.1 Each holder of Series E Preferred Stock shall be entitled to receive with respect to each share of Series E Preferred Stock then outstanding and held by such holder of Series E Preferred Stock, dividends, commencing from the date of issuance of such share of Series E Preferred Stock, at the Initial Dividend Rate (as defined below) per annum (on the basis of a 360 day year) of the Series E Original Issue Price (as defined below) (the "Series E Preferred Dividends"); provided, however, that subject to and effective upon the filing with the Delaware Secretary of State of the amendment to the Certificate of Designations, Preferences and Rights of Series D Preferred Stock (the "Series D Certificate of Designations," with the amendment thereto being referred to as the "Amendment to Series D Certificate of Designations") as described in Section 5.11(B) of that certain Convertible Preferred Stock and Warrant Purchase Agreement, dated November 9, 2012, between the Corporation and the purchasers of the Series E Preferred Stock therein (the "Series E Purchase Agreement"), the dividend rate provided for in this Section 1.1 shall be increased from the Initial Dividend Rate to the rate of eight percent (8%) per annum (on the basis of a 360 day year) of the Series E Original Issue Price. The Series E Preferred Dividends shall be cumulative, whether or not earned or declared, shall be paid quarterly in arrears on the last day of March, June, September and December (a "Quarterly Dividend Payment Date") in each year that Series E Preferred Stock is outstanding, with the first Quarterly Dividend Payment Date being March 31, 2013, and shall be prorated for periods shorter than one quarter. Notwithstanding the foregoing, if, as of any Quarterly Dividend Payment Date at which the dividend rate is the Initial Dividend Rate, there are no shares of the Corporation's Series D Convertible Preferred Stock outstanding, then the dividend payable on such Quarterly Dividend Payment Date shall be calculated and paid at a rate of eight percent (8%) per annum (on the basis of a 360 day year) of the Series E Original Issue Price. In the event that the Amendment to Series D Certificate of Designations is filed with the Delaware Secretary of State and the dividend rate with respect to the Series E Preferred Dividends is increased pursuant to this Section 1.1.1.1, the Series E Preferred Dividends paid on the first Quarterly Dividend Payment Date after such filing and increase shall be paid at the increased rate. In the event that the Amendment to Series D Certificate of Designations is submitted to the stockholders of the Corporation as contemplated by Section 5.11 of the Series E Purchase Agreement and the Amendment to Series D Certificate of Designations is not approved, then the holders of the Series E Preferred Stock shall no longer be entitled to any Series E Preferred Dividends under this Section 1.1.1.1 and the Corporation shall have no further obligation to pay the Series E Preferred Dividends under this Section 1.1.1.1; provided, however, the Corporation shall not submit the Amendment to the Series D Certificate of Designations to the stockholders if there are no shares of Series D Preferred Stock then outstanding. The rights of a holder of Series E Preferred Stock to Series E Preferred Dividends shall rank senior to the rights of the Corporation's Series A Convertible Preferred Stock and Series D Convertible Preferred Stock as to dividends. The Series E Preferred Dividends shall be paid to each holder of Series E Preferred Stock in eash out of legally available funds. The term "Initial Dividend Rate" shall mean four and six tenths percent (4.6%) or such other percentage approved by the Corporation and by the holders of at least a majority of then outstanding shares of Series E Preferred Stock, with such approval given in writing or by vote at a meeting, consenting or voting (as the case may be) as a separate class.

1.1.2 The Series E Preferred Dividends shall be paid to each holder of Series E Preferred Stock in cash out of legally available funds or, at the Corporation's election, through the issuance of such number of shares of Common Stock (as defined in Section 1.3 below) (rounded down to the nearest whole share with any fractional

shares being issued in cash in an amount equal to the Market Price (as defined in Section 4.2 below) of such fractional share of Common Stock) determined by dividing the amount of the total accrued but unpaid dividends then outstanding on such holder's shares of Series E Preferred Stock by the Market Price then in effect (which for this purpose may not be less than \$0.70 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock); provided, however, that (i) the Corporation may not pay such dividends in shares of Common Stock on or prior to October 1, 2013, (ii) the Corporation may not issue shares of Common Stock in excess of that number of shares of Common Stock which, upon giving effect to such issuance, would cause (a) the aggregate number of shares of Common Stock beneficially owned by a holder of Series E Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act (as defined in Section 4.1.2), to exceed 19.99% of the total number of issued and outstanding shares of Common Stock of the Corporation following such issuance, or (b) the combined voting power of the securities of the Corporation beneficially owned by a holder of Series E Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act to exceed 19.99% of the combined voting power of all of the securities of the Corporation then outstanding following such issuance, unless and until, in either case of clause (a) and clause (b) of this Section 1.1A, the stockholders of the Corporation approve the Nasdaq Proposal (as defined in Section 3.1 below), in which case, the 19.99% limitation under clause (a) and (b) of this Section 1.1A shall be increased, with respect to any holder of Series E Preferred Stock, to 35% for purposes of both clause (a) and clause (b) of this Section 1.1A, and (iii) if clause (ii) shall in fact limit the issuance of any shares of Common Stock in payment of a given dividend, then the Corporation's election to pay such dividend in shares of Common Stock shall be ineffective to the extent of such limitation and such dividend shall instead thereupon be paid, at the Corporation's election, (x) in cash by the Corporation out of legally available funds or (y) through the issuance of a number of shares of the Corporation's Series F Convertible Preferred Stock, par value \$0.01 per share (the "Series F Preferred Stock") equal to one-twentieth (1/20\pm) of the number of shares of Common Stock that the Corporation could have issued pursuant to this Section 1.1.2 with respect to such Series E Preferred Dividends but for the limitations set forth in clause (a) and clause (b) of this Section 1.1.2.

1.1.3 Any election by the Corporation to pay Series E Preferred Dividends in cash or shares of Common Stock and/or Series F Preferred Stock shall be made uniformly with respect to all outstanding shares of Series E Preferred Stock for a given dividend period.

1.1.4 For purposes of this Section 1.1, the aggregate number of shares of Common Stock or voting securities beneficially owned by a holder of Series E Preferred Stock and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act, shall include the shares of Common Stock to be issued as part of such dividend payment, but shall exclude the number of shares of Common Stock which would be issuable upon exercise or conversion of the unexercised, non-converted or non-cancelled portion of any other securities of the Corporation that do not have voting power (including without limitation any securities of the Corporation which would entitle the holder thereof to acquire at any time Common Stock, including without limitation any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock), subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the holder or any of its affiliates and other persons whose beneficial ownership of Common Stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act.

APPENDIX F

PART (C)

RESOLVED, that Section 2.1.1 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu

thereof:

"2.1.1 In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the holders of shares of Series E Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Common Stock, Series A Convertible Preferred Stock, Series D Convertible Preferred Stock or any other class of capital stock of the Corporation ranking junior to the Series E Preferred Stock as to liquidation, by reason of their ownership thereof, an amount per share equal to the greater of (i) the Series E Original Issue Price, plus any dividends accrued or declared but unpaid thereon, and (ii)—such amount per share as would have been payable with respect to such share had all shares of Series E Preferred Stock been converted into Common Stock pursuant to Subsection 4 immediately prior to such liquidation, dissolution or winding up disregarding for these purposes the limitations on conversion due to beneficial ownership set forth in Subsection 4.1.2."

RESOLVED, that Section 2.3.1 of the Certificate of Designations be deleted in its entirety and that the following paragraph be inserted in lieu thereof:

"2.3.1 In the event of a Sale of the Corporation (as defined below) after payment shall be made to the holders of Series A Convertible Preferred Stock, Series D-Convertible Preferred Stock and any other class of capital stock of the Corporation ranking senior to the Series E Preferred Stock upon a Sale of the Corporation, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of the shares of Series E Preferred Stock, Series D Preferred Stock and Common Stock pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of the Certificate of Incorporation immediately prior to such Sale of the Corporation disregarding for these purposes the limitations on conversion due to beneficial ownership set forth in Subsection 4.1.2."

For

All

For

01.

7.

Withhold

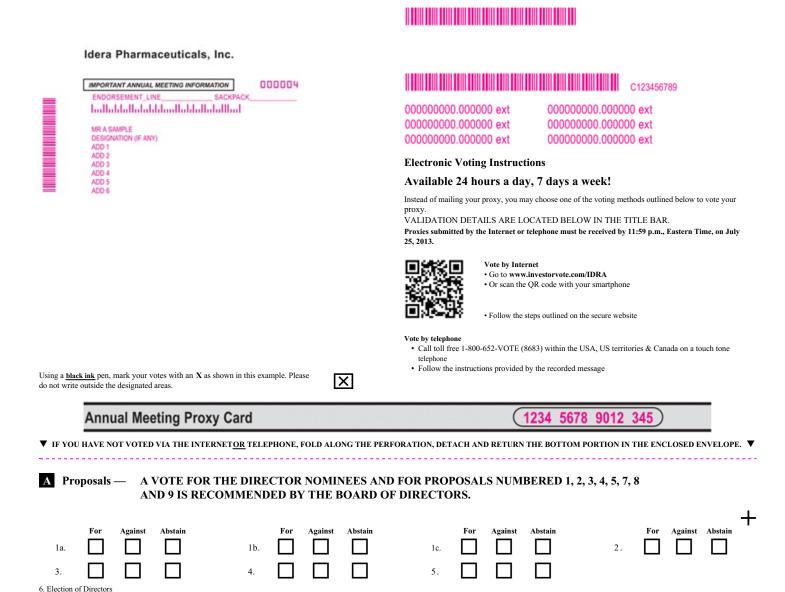
All

Against

For All

Except

Abstain



B Authorized Signatures — This section must be completed for your vote to be counted. — Date and Sign Below

Withhold

All

INSTRUCTIONS: To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the name of the nominee(s) on the line below

Against

For All

Except

Abstain

For

All

For

03.

Withhold

All

Against

For All

Except

Abstain

Against Abstain

For

All

For

8a.

Please sign this proxy exactly as your name appears hereon. Joint Owners should each sign personally. Trustees and other fiduciaries should indicate the capacity in which they sign. If a corporation or partnership, this signature should be that of an authorized officer who should state his or her title.

Date (mm/dd/yyyy) — Please print date below.	Signature 1 — Please	e keep signature within the box. Signa	nature 2 — Please keep signature within the box.	
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IF VOTING BY MAIL, YOU $\underline{\text{MUST}}$ COMPLETE SECTIONS A - C ON BOTH SIDES OF THIS CARD.

C 1234567890 JNT MR A SAMPLE (THIS AREA IS SET UP TO ACCOMMODATE 140 CHARACTERS) MR A SAMPLE AND MR A SAMPLE AND

Proposals

- Approval of an amendment to our Restated Certificate of Incorporation to declassify our board of directors
- 1b. Approval of an amendment to our Restated Certificate of Incorporation to provide that our stockholders may remove directors with or without cause following declassification of our board of directors
- 1c. Approval of an amendment to our Restated Certificate of Incorporation to eliminate the supermajority voting requirement for amending or repealing Article ELEVENTH of our Restated Certificate of Incorporation
- Approval of an amendment to our Restated Certificate of Incorporation to increase the number of authorized shares of our common stock from 140,000,000 shares to 280,000,000 shares
- 3. Approval, by non-binding vote, of executive compensation
- 4. Approval of the Idera Pharmaceuticals, Inc. 2013 Stock Incentive Plan
- Ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2013
- Election of Directors

Nominees:

01 Dr. Agrawal

02 Dr. Slater

03 Mr. El Zein

- 7. Approval of issuances and sales by us to certain affiliates of Pillar Invest Corporation (including our prior issuances and sales of our securities to such affiliates in November 2011 and November 2012) of a number of shares of our common stock (including securities convertible into or exercisable for shares of our common stock) that is greater than 19.99% of the total number of issued and outstanding shares of common stock and of the outstanding voting power of our securities after such issuance and sale in accordance with Nasdaq Listing Rule 5635(b);
- 8a. Approval of amendments to our Restated Certificate of Incorporation amending the Certificate of Designations, Preferences and Rights of Series D Preferred Stock to increase the beneficial ownership limitation applicable to our Series D preferred stock from 19.99% to 35%, as described in Proposal 8(a)
- 8b. Approval of amendments to our Restated Certificate of Incorporation amending the Certificate of Designations, Preferences and Rights of Series D Preferred Stock to modify the dividend provisions of the Series D Certificate of Designations so that dividends on the Series E preferred stock are not required to be paid to the holders of our Series D preferred stock, as described in Proposal 8(b)

- 8c. Approval of amendments to our Restated Certificate of Incorporation amending the Certificate of Designations, Preferences and Rights of Series D Preferred Stock to modify the dividend provisions of our Series D preferred stock, as described in Proposal 8(c)
- 8d. Approval of amendments to our Restated Certificate of Incorporation amending the Certificate of Designations, Preferences and Rights of Series D Preferred Stock to modify the provisions relating to redemption, liquidation and rights to distributions in the event of a sale of our company, as described in Proposal 8(d)
- 9a. Approval of amendments to our Restated Certificate of Incorporation amending the Certificate of Designations, Preferences and Rights of Series E Preferred Stock to modify the dividend provisions of our Series E preferred stock, as described in Proposal 9(a)
- 9b. Approval of amendments to our Restated Certificate of Incorporation amending the Certificate of Designations, Preferences and Rights of Series E Preferred Stock to modify the liquidation provisions of the Series E preferred stock, as described in Proposal 9(b)
 In their discretion, the proxies are authorized to vote upon such other business as may properly come before the 2013 annual meeting or any adjournment thereof.

▼ IF YOU HAVE NOT VOTED VIA THE INTERNET OR TELEPHONE, FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE. ▼

Proxy — IDERA PHARMACEUTICALS, INC.



PROXY SOLICITED BY THE BOARD OF DIRECTORS

Annual Meeting of Stockholders - July 26, 2013

Those signing on the reverse side, revoking all prior proxies, hereby appoint(s) Dr. Sudhir Agrawal and Mr. Louis J. Arcudi, III or each or any of them with full power of substitution, as proxies for those signing on the reverse side to act and vote all shares of stock of Idera Pharmaceuticals, Inc. which the undersigned would be entitled to vote if personally present at the 2013 Annual Meeting of Stockholders of Idera Pharmaceuticals, Inc. and at any adjournments thereof as indicated upon all matters referred to on the reverse side and described in the Proxy Statement for the Meeting, and, in their discretion, upon any other matters which may properly come before the Meeting. Attendance of the undersigned at the Meeting or at any adjournment thereof will not be deemed to revoke this proxy unless those signing on the reverse side shall revoke this proxy in writing.

THIS PROXY WHEN PROPERLY EXECUTED WILL BE VOTED IN THE MANNER DIRECTED BY THE UNDERSIGNED STOCKHOLDER(S). IF NO INDICATION IS MADE, THE PROXIES SHALL VOTE "FOR" THE DIRECTOR NOMINEES AND "FOR" PROPOSALS NUMBERED 1, 2, 3, 4, 5, 7, 8 AND 9.

PLEASE VOTE, DATE AND SIGN ON OTHER SIDE AND RETURN PROMPTLY IN ENCLOSED ENVELOPE.

YOUR VOTE IS IMPORTANT. PLEASE VOTE TODAY.

C Non-Voting Items	
Change of Address — Please print new address below. Comment	s — Please print your comments below.

IF VOTING BY MAIL, YOU MUST COMPLETE SECTIONS A - C ON BOTH SIDES OF THIS CARD.