

GOLDMAN SACHS GROUP INC
Form 424B2
March 27, 2019

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Registration Statement No. 333-219206

The information in this preliminary pricing supplement is not complete and may be changed. This preliminary pricing supplement is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion. Dated March 26, 2019.

GS Finance Corp.

\$

Index-Linked Notes due

guaranteed by

The Goldman Sachs Group, Inc.

The notes will not bear interest. The amount that you will be paid on your notes on the stated maturity date (expected to be April 30, 2024) is based on the lesser performing of the S&P 500[®] Index and the Russell 2000[®] Index as measured from the trade date (expected to be April 25, 2019) to and including the determination date (expected to be April 25, 2024).

If the index return (the percentage change in the final level of the index on the determination date from the initial level of the index on the trade date) of each index is positive or zero, you will receive the threshold settlement amount of \$1,320.

If the index return of any index is negative and the final level of each index is equal to or greater than 60% of its initial level, the return on your notes will be the absolute value of the lesser performing index return (e.g., if the lesser performing index return is -10%, the return on your notes will be +10%).

If the index return of any index is negative and the final level of any index is less than 60% of its initial level, the return on your notes will be the lesser performing index return. In such case, the return on your notes will be negative.

For example, if the lesser performing index return is -40%, you will receive a positive return of 40% on your notes; however, if the lesser performing index return is -41%, you will lose 41% of the value of your notes (a very significant negative change in the return on your notes based on a small negative change in the lesser performing index return). You could receive significantly less than the face amount of your notes at maturity.

The amount that you will be paid on your notes at maturity is based on the performance of the index with the lowest index return. At maturity, for each \$1,000 face amount of your notes, you will receive an amount in cash equal to:

- if the index return of each index is greater than or equal to 0% (the final level of each index is greater than or equal to its initial level), the threshold settlement amount;
- if the index return of any index is less than 0%, but the index return of each index is greater than or equal to -40% (the final level of any index is less than its initial level but the final level of each index is greater than or equal to 60% of its initial level), the sum of (i) \$1,000 plus (ii) the product of (a) \$1,000 times (b) the absolute value of the lesser performing index return; or
- if the index return of any index is less than -40% (the final level of any index is less than 60% of its initial level), the sum of (i) \$1,000 plus (ii) the product of (a) the lesser performing index return times (b) \$1,000. You will receive less than the face amount of your notes.

You should read the disclosure herein to better understand the terms and risks of your investment, including the credit risk of GS Finance Corp. and The Goldman Sachs Group, Inc. See page PS-10.

The estimated value of your notes at the time the terms of your notes are set on the trade date is expected to be between \$910 and \$960 per \$1,000 face amount. For a discussion of the estimated value and the price at which Goldman Sachs & Co. LLC would initially buy or sell your notes, if it makes a market in the notes, see the following page.

Original issue date: expected to be April 30, 2019 Original issue price: 100% of the face amount*

Underwriting discount: % of the face amount* Net proceeds to the issuer: % of the face amount

*The original issue price will be % for certain investors; see “Supplemental Plan of Distribution; Conflicts of Interest” on page PS-23.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense. The notes are not bank deposits and are not insured by the Federal Deposit Insurance Corporation or any other governmental agency, nor are they obligations of, or guaranteed by, a bank.

Goldman Sachs & Co. LLC

Pricing Supplement No. dated , 2019.

The issue price, underwriting discount and net proceeds listed above relate to the notes we sell initially. We may decide to sell additional notes after the date of this pricing supplement, at issue prices and with underwriting discounts and net proceeds that differ from the amounts set forth above. The return (whether positive or negative) on your investment in notes will depend in part on the issue price you pay for such notes.

GS Finance Corp. may use this prospectus in the initial sale of the notes. In addition, Goldman Sachs & Co. LLC or any other affiliate of GS Finance Corp., may use this prospectus in a market-making transaction in a note after its initial sale. Unless GS Finance Corp. or its agent informs the purchaser otherwise in the confirmation of sale, this prospectus is being used in a market-making transaction.

Estimated Value of Your Notes

The estimated value of your notes at the time the terms of your notes are set on the trade date (as determined by reference to pricing models used by Goldman Sachs & Co. LLC (GS&Co.) and taking into account our credit spreads) is expected to be between \$910 and \$960 per \$1,000 face amount, which is less than the original issue price. The value of your notes at any time will reflect many factors and cannot be predicted; however, the price (not including GS&Co.'s customary bid and ask spreads) at which GS&Co. would initially buy or sell notes (if it makes a market, which it is not obligated to do) and the value that GS&Co. will initially use for account statements and otherwise is equal to approximately the estimated value of your notes at the time of pricing, plus an additional amount (initially equal to \$ per \$1,000 face amount).

Prior to , the price (not including GS&Co.'s customary bid and ask spreads) at which GS&Co. would buy or sell your notes (if it makes a market, which it is not obligated to do) will equal approximately the sum of (a) the then-current estimated value of your notes (as determined by reference to GS&Co.'s pricing models) plus (b) any remaining additional amount (the additional amount will decline to zero on a straight-line basis from the time of pricing through). On and after , the price (not including GS&Co.'s customary bid and ask spreads) at which GS&Co. would buy or sell your notes (if it makes a market) will equal approximately the then-current estimated value of your notes determined by reference to such pricing models.

About Your Prospectus

The notes are part of the Medium-Term Notes, Series E program of GS Finance Corp. and are fully and unconditionally guaranteed by The Goldman Sachs Group, Inc. This prospectus includes this pricing supplement and the accompanying documents listed below. This pricing supplement constitutes a supplement to the documents listed below, does not set forth all of the terms of your notes and therefore should be read in conjunction with such documents:

•General terms supplement no. 1,734 dated July 10, 2017

•Prospectus supplement dated July 10, 2017

•Prospectus dated July 10, 2017

The information in this pricing supplement supersedes any conflicting information in the documents listed above. In addition, some of the terms or features described in the listed documents may not apply to your notes.

We refer to the notes we are offering by this pricing supplement as the “offered notes” or the “notes”. Each of the offered notes has the terms described below. Please note that in this pricing supplement, references to “GS Finance Corp.”, “we”, “our” and “us” mean only GS Finance Corp. and do not include its subsidiaries or affiliates, references to “The Goldman Sachs Group, Inc.”, our parent company, mean only The Goldman Sachs Group, Inc. and do not include its subsidiaries or affiliates and references to “Goldman Sachs” mean The Goldman Sachs Group, Inc. together with its consolidated subsidiaries and affiliates, including us. The notes will be issued under the senior debt indenture, dated as of October 10, 2008, as supplemented by the First Supplemental Indenture, dated as of February 20, 2015, each among us, as issuer, The Goldman Sachs Group, Inc., as guarantor, and The Bank of New York Mellon, as trustee. This indenture, as so supplemented and as further supplemented thereafter, is referred to as the “GSFC 2008 indenture” in the accompanying prospectus supplement. The notes will be issued in book-entry form and represented by a master global note.

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Terms AND CONDITIONS

(Terms From Pricing Supplement No. Incorporated Into Master Note No. 2)

These terms and conditions relate to pricing supplement no. dated , 2019 of GS Finance Corp. and The Goldman Sachs Group, Inc. with respect to the issuance by GS Finance Corp. of its Index-Linked Notes due and the guarantee thereof by The Goldman Sachs Group, Inc.

The provisions below are hereby incorporated into master note no. 2, dated August 22, 2018. References herein to “this note” shall be deemed to refer to “this security” in such master note no. 2, dated August 22, 2018. Certain defined terms may not be capitalized in these terms and conditions even if they are capitalized in master note no. 2, dated August 22, 2018. Defined terms that are not defined in these terms and conditions shall have the meanings indicated in such master note no. 2, dated August 22, 2018, unless the context otherwise requires

CUSIP / ISIN: 40056F5X9 / US40056F5X91

Company (Issuer): GS Finance Corp.

Guarantor: The Goldman Sachs Group, Inc.

Underliers (each individually, an underlier): the Russell 2000[®] Index (current Bloomberg symbol: “RTY Index”), or any successor underlier, and the S&P 500[®] Index (current Bloomberg symbol: “SPX Index”), or any successor underlier, as each may be modified, replaced or adjusted from time to time as provided herein

Face amount: \$ in the aggregate on the original issue date; the aggregate face amount may be increased if the company, at its sole option, decides to sell an additional amount on a date subsequent to the trade date

Authorized denominations: \$1,000 or any integral multiple of \$1,000 in excess thereof

Principal amount: On the stated maturity date, the company will pay, for each \$1,000 of the outstanding face amount, an amount, if any, in cash equal to the cash settlement amount.

Cash settlement amount:

- if the final underlier level of each underlier is greater than or equal to its initial underlier level, the threshold settlement amount;
- if the final underlier level of any underlier is less than its initial underlier level but the final underlier level of each underlier is greater than or equal to its trigger buffer level, the sum of (i) \$1,000 plus (ii) the product of (a) \$1,000 times (b) the absolute lesser performing underlier return; or
- if the final underlier level of any underlier is less than its trigger buffer level, the sum of (i) \$1,000 plus (ii) the product of (a) \$1,000 times (b) the lesser performing underlier return

Initial underlier level (set on the trade date): with respect to an underlier, the closing level of such underlier on the trade date

Final underlier level: with respect to an underlier, the closing level of such underlier on the determination date, subject to adjustment as provided in “— Consequences of a market disruption event or non-trading day” and “— Discontinuance or modification of an underlier” below

Underlier return: with respect to an underlier on the determination date, the quotient of (i) its final underlier level minus its initial underlier level divided by (ii) its initial underlier level, expressed as a positive or negative percentage

Lesser performing underlier return: the underlier return of the lesser performing underlier

Lesser performing underlier: the underlier with the lowest underlier return

Trigger buffer level: for each underlier, 60% of its initial underlier level

Absolute lesser performing underlier return: the absolute value of the lesser performing underlier return, expressed as a percentage (e.g., a -10% lesser performing underlier return will equal a 10% absolute lesser performing underlier return)

Threshold settlement amount: \$1,320

Trade date: expected to be April 25, 2019

Original issue date (set on the trade date): expected to be April 30, 2019

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Determination date (set on the trade date): expected to be April 25, 2024, unless the calculation agent determines that, with respect to any underlier, a market disruption event occurs or is continuing on that day or that day is not otherwise a trading day. In the event the originally scheduled determination date is a non-trading day with respect to any underlier, the determination date will be the first day thereafter that is a trading day for all underliers (the “first qualified trading day”) provided that no market disruption event occurs or is continuing with respect to an underlier on that day. If a market disruption event with respect to an underlier occurs or is continuing on the originally scheduled determination date or the first qualified trading day, the determination date will be the first following trading day on which the calculation agent determines that each underlier has had at least one trading day (from and including the originally scheduled determination date or the first qualified trading day, as applicable) on which no market disruption event has occurred or is continuing and the closing level of each underlier will be determined on or prior to the postponed determination date as set forth under “— Consequences of a market disruption event or a non-trading day” below. (In such case, the determination date may differ from the date on which the level of an underlier is determined for the purpose of the calculations to be performed on the determination date.) In no event, however, will the determination date be postponed to a date later than the originally scheduled stated maturity date or, if the originally scheduled stated maturity date is not a business day, later than the first business day after the originally scheduled stated maturity date, either due to the occurrence of serial non-trading days or due to the occurrence of one or more market disruption events. On such last possible determination date, if a market disruption event occurs or is continuing with respect to an underlier that has not yet had such a trading day on which no market disruption event has occurred or is continuing or if such last possible day is not a trading day with respect to such underlier, that day will nevertheless be the determination date.

Stated maturity date (set on the trade date): expected to be April 30, 2024, unless that day is not a business day, in which case the stated maturity date will be postponed to the next following business day. The stated maturity date will also be postponed if the determination date is postponed as described under “— Determination date” above. In such a case, the stated maturity date will be postponed by the same number of business day(s) from but excluding the originally scheduled determination date to and including the actual determination date.

Closing level: on any trading day, (i) with respect to the S&P 500[®] Index the official closing level of such underlier or any successor underlier published by the underlier sponsor on such trading day for such underlier and (ii) with respect to the Russell 2000[®] Index, the closing level of such underlier or any successor underlier reported by Bloomberg Financial Services, or any successor reporting service the company may select, on such trading day for that underlier (as of the trade date, whereas the underlier sponsor publishes the official closing level of the Russell 2000[®] Index to six decimal places, Bloomberg Financial Services reports the closing level to fewer decimal places)

Trading day: with respect to an underlier, a day on which the respective principal securities markets for all of its underlier stocks are open for trading, the underlier sponsor is open for business and such underlier is calculated and published by the underlier sponsor

Successor underlier: with respect to an underlier, any substitute underlier approved by the calculation agent as a successor as provided under “— Discontinuance or modification of an underlier” below

Underlier sponsor: with respect to an underlier, at any time, the person or entity, including any successor sponsor, that determines and publishes such underlier as then in effect. The notes are not sponsored, endorsed, sold or promoted by any underlier sponsor or any affiliate thereof and no underlier sponsor or affiliate thereof makes any representation regarding the advisability of investing in the notes.

Underlier stocks: with respect to an underlier, at any time, the stocks that comprise such underlier as then in effect, after giving effect to any additions, deletions or substitutions

Market disruption event: With respect to any given trading day, any of the following will be a market disruption event with respect to an underlier:

a suspension, absence or material limitation of trading in underlier stocks constituting 20% or more, by weight, of the underlier on their respective primary markets, in each case for more than two consecutive hours of trading or during the one-half hour before the close of trading in that market, as determined by the calculation agent in its sole discretion,

a suspension, absence or material limitation of trading in option or futures contracts relating to the underlier or to underlier stocks constituting 20% or more, by weight, of such underlier in the respective primary markets for those contracts, in each case for more than two consecutive hours of trading or during the one-half hour before the close of trading in that market, as determined by the calculation agent in its sole discretion, or

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underlier stocks constituting 20% or more, by weight, of the underlier, or option or futures contracts, if available, relating to an underlier or to underlier stocks constituting 20% or more, by weight, of the underlier do not trade on what were the respective primary markets for those underlier stocks or contracts, as determined by the calculation agent in its sole discretion, and, in the case of any of these events, the calculation agent determines in its sole discretion that such event could materially interfere with the ability of the company or any of its affiliates or a similarly situated person to unwind all or a material portion of a hedge that could be effected with respect to this note.

The following events will not be market disruption events:

a limitation on the hours or numbers of days of trading, but only if the limitation results from an announced change in the regular business hours of the relevant market, and
a decision to permanently discontinue trading in option or futures contracts relating to an underlier or to any underlier stock.

For this purpose, an “absence of trading” in the primary securities market on which an underlier stock is traded, or on which option or futures contracts relating to an underlier or an underlier stock are traded, will not include any time when that market is itself closed for trading under ordinary circumstances. In contrast, a suspension or limitation of trading in an underlier stock or in option or futures contracts, if available, relating to an underlier or an underlier stock in the primary market for that stock or those contracts, by reason of:

a price change exceeding limits set by that market,
an imbalance of orders relating to that underlier stock or those contracts, or
a disparity in bid and ask quotes relating to that underlier stock or those contracts,
will constitute a suspension or material limitation of trading in that stock or those contracts in that market.

A market disruption event with respect to one underlier will not, by itself, constitute a market disruption event for the other unaffected underlier.

As is the case throughout this pricing supplement, references to the underlier in this description of market disruption events includes any successor underlier as it may be modified, replaced or adjusted from time to time.

Consequences of a market disruption event or a non-trading day: With respect to any underlier, if a market disruption event occurs or is continuing on a day that would otherwise be the determination date, or such day is not a trading day, then the determination date will be postponed as described under “— Determination date” above. If the determination date is postponed to the last possible date due to the occurrence of serial non-trading days, the level of each underlier will be the calculation agent’s assessment of such level, in its sole discretion, on such last possible postponed determination date. If the determination date is postponed due to a market disruption event with respect to any underlier, the final underlier level with respect to the determination date will be calculated based on (i) for any underlier that is not affected by a market disruption event on the originally scheduled determination date or the first qualified trading day thereafter (if applicable), the closing level of the underlier on that date, (ii) for any underlier that is affected by a market disruption event on the originally scheduled determination date or the first qualified trading day thereafter (if applicable), the closing level of the underlier on the first following trading day on which no market disruption event exists for such underlier and (iii) the calculation agent’s assessment, in its sole discretion, of the level of any underlier on the last possible postponed determination date with respect to such underlier as to which a market disruption event continues through the last possible postponed determination date. As a result, this could result in the final underlier level on the determination date of each underlier being determined on different calendar dates. For the avoidance of doubt, once the closing level for an underlier is determined for the determination date, the occurrence of a later market disruption event or non-trading day will not alter such calculation.

Discontinuance or modification of an underlier: If an underlier sponsor discontinues publication of an underlier and such underlier sponsor or anyone else publishes a substitute underlier that the calculation agent determines is comparable to such underlier and approves as a successor underlier, or if the calculation agent designates a substitute underlier, then the calculation agent will determine the cash settlement amount on the stated maturity date by reference to such successor underlier.

If the calculation agent determines that the publication of an underlier is discontinued and there is no successor underlier, the calculation agent will determine the cash settlement amount on the stated maturity date by a computation methodology that the calculation agent determines will as closely as reasonably possible replicate such underlier.

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If the calculation agent determines that an underlier, the underlier stocks comprising that underlier or the method of calculating that underlier is changed at any time in any respect — including any split or reverse-split and any addition, deletion or substitution and any reweighting or rebalancing of the underlier or of the underlier stocks and whether the change is made by the underlier sponsor under its existing policies or following a modification of those policies, is due to the publication of a successor underlier, is due to events affecting one or more of the underlier stocks or their issuers or is due to any other reason — and is not otherwise reflected in the level of the underlier by the underlier sponsor pursuant to the then-current underlier methodology of the underlier, then the calculation agent will be permitted (but not required) to make such adjustments in such underlier or the method of its calculation as it believes are appropriate to ensure that the levels of such underlier used to determine the cash settlement amount on the stated maturity date is equitable.

All determinations and adjustments to be made by the calculation agent with respect to an underlier may be made by the calculation agent in its sole discretion. The calculation agent is not obligated to make any such adjustments.

Calculation agent: Goldman Sachs & Co. LLC (“GS&Co.”)

Tax characterization: The holder, on behalf of itself and any other person having a beneficial interest in this note, hereby agrees with the company (in the absence of a change in law, an administrative determination or a judicial ruling to the contrary) to characterize this note for all U.S. federal income tax purposes as a pre-paid derivative contract in respect of the underliers.

Overdue principal rate: the effective Federal Funds rate

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HYPOTHETICAL EXAMPLES

The following examples are provided for purposes of illustration only. They should not be taken as an indication or prediction of future investment results and are intended merely to illustrate the impact that various hypothetical closing levels of the underliers on the determination date could have on the cash settlement amount at maturity assuming all other variables remain constant.

The examples below are based on a range of underlier levels that are entirely hypothetical; no one can predict what the closing level of any underlier will be on any day throughout the life of your notes and what the final underlier level of the lesser performing underlier will be on the determination date. The underliers have been highly volatile in the past — meaning that the underlier levels have changed substantially in relatively short periods — and their performance cannot be predicted for any future period.

The information in the following examples reflects hypothetical rates of return on the offered notes assuming that they are purchased on the original issue date at the face amount and held to the stated maturity date. If you sell your notes in a secondary market prior to the stated maturity date, your return will depend upon the market value of your notes at the time of sale, which may be affected by a number of factors that are not reflected in the examples below, such as interest rates, the volatility of the underliers, the creditworthiness of GS Finance Corp., as issuer, and the creditworthiness of The Goldman Sachs Group, Inc., as guarantor. In addition, the estimated value of your notes at the time the terms of your notes are set on the trade date (as determined by reference to pricing models used by GS&Co.) is less than the original issue price of your notes. For more information on the estimated value of your notes, see “Additional Risk Factors Specific to Your Notes — The Estimated Value of Your Notes At the Time the Terms of Your Notes Are Set On the Trade Date (as Determined By Reference to Pricing Models Used By GS&Co.) Is Less Than the Original Issue Price Of Your Notes” on page PS-10 of this pricing supplement. The information in the examples also reflects the key terms and assumptions in the box below.

Key Terms and Assumptions

Face amount \$1,000

Threshold settlement amount \$1,320

Trigger buffer level with respect to each underlier, 60% of its initial underlier level

Neither a market disruption event nor a non-trading day occurs on the originally scheduled determination date

No change in or affecting any of the underlier stocks or the method by which the applicable underlier sponsor calculates any underlier

Notes purchased on original issue date at the face amount and held to the stated maturity date

Moreover, we have not yet set the initial underlier levels that will serve as the baseline for determining the amount that we will pay on your notes, if any, at maturity. We will not do so until the trade date. As a result, the actual initial underlier levels may differ substantially from the underlier levels prior to the trade date. They may also differ substantially from the underlier levels at the time you purchase your notes.

For these reasons, the actual performance of the underliers over the life of your notes, as well as the amount payable at maturity, if any, may bear little relation to the hypothetical examples shown below or to the historical underlier levels shown elsewhere in this pricing supplement. For information about the underlier levels during recent periods, see “The Underliers — Historical Closing Levels of the Underliers” on page PS-14. Before investing in the notes, you should consult publicly available information to determine the underlier levels between the date of this pricing supplement and the date of your purchase of the notes.

Also, the hypothetical examples shown below do not take into account the effects of applicable taxes. Because of the U.S. tax treatment applicable to your notes, tax liabilities could affect the after-tax rate of return on your notes to a comparatively greater extent than the after-tax return on the underlier stocks.

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The levels in the left column of the table below represent hypothetical final underlier levels of the lesser performing underlier and are expressed as percentages of the initial underlier level of the lesser performing underlier. The amounts in the right column represent the hypothetical cash settlement amounts, based on the corresponding hypothetical final underlier level of the lesser performing underlier (expressed as a percentage of the initial underlier level of the lesser performing underlier), and are expressed as percentages of the face amount of a note (rounded to the nearest one-thousandth of a percent). Thus, a hypothetical cash settlement amount of 100.000% means that the value of the cash payment that we would deliver for each \$1,000 of the outstanding face amount of the offered notes on the stated maturity date would equal 100.000% of the face amount of a note, based on the corresponding hypothetical final underlier level of the lesser performing underlier (expressed as a percentage of the initial underlier level of the lesser performing underlier) and the assumptions noted above.

Hypothetical Final Underlier Level of the Lesser Performing Underlier (as Percentage of Initial Underlier Level)	Hypothetical Cash Settlement Amount at Maturity (as Percentage of Face Amount)
150.000%	132.000%
148.000%	132.000%
132.000%	132.000%
120.000%	132.000%
115.000%	132.000%
110.000%	132.000%
100.000%	132.000%
90.000%	110.000%
80.000%	120.000%
70.000%	130.000%
60.000%	140.000%
59.999%	59.999%
50.000%	50.000%
25.000%	25.000%
0.000%	0.000%

If, for example, the final underlier level of the lesser performing underlier were determined to be 25.000% of its initial underlier level, the cash settlement amount that we would deliver on your notes at maturity would be 25.000% of the face amount of your notes, as shown in the table above. As a result, if you purchased your notes on the original issue date at the face amount and held them to the stated maturity date, you would lose 75.000% of your investment (if you purchased your notes at a premium to face amount you would lose a correspondingly higher percentage of your investment). In addition, if the final underlier level of the lesser performing underlier were determined to be 150.000% of its initial underlier level, the cash settlement amount that we would deliver on your notes at maturity would be capped at the threshold settlement amount, or 132.000% of each \$1,000 face amount of your notes, as shown in the table above. As a result, if you held your notes to the stated maturity date, you would not benefit from any increase in

the final underlier level of the lesser performing underlier over 100.000% of its initial underlier level.

If, however, the final underlier level of the lesser performing underlier were determined to be 90.000% of its initial underlier level, the absolute lesser performing underlier return would be 10.000% and the cash settlement amount that we would deliver on your notes at maturity would be 110.000% of the face amount of your notes, as shown in the table above.

The cash settlement amounts shown above are entirely hypothetical; they are based on market prices for the underlier stocks that may not be achieved on the determination date and on assumptions that may prove to be erroneous. The actual market value of your notes on the stated maturity date or at any other time, including any time you may wish to sell your notes, may bear little relation to the hypothetical cash settlement amounts shown above, and these amounts should not be viewed as an indication of the financial return on an investment in the offered notes. The hypothetical cash settlement amounts on notes held to the stated maturity date in the examples above assume you purchased your notes at their face amount and have not been adjusted to reflect the actual issue price you pay for your notes. The return on your investment (whether positive or negative) in your notes will be affected by the amount you pay for your notes. If you purchase your notes for a price other than the face amount, the return on your investment will differ from, and may be significantly lower than, the hypothetical returns suggested by the above examples. Please read

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“Additional Risk Factors Specific to the Notes — The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors” on page S-3 of the accompanying general terms supplement no. 1,734.

Payments on the notes are economically equivalent to the amounts that would be paid on a combination of other instruments. For example, payments on the notes are economically equivalent to a combination of an interest-bearing bond bought by the holder and one or more options entered into between the holder and us (with one or more implicit option premiums paid over time). The discussion in this paragraph does not modify or affect the terms of the notes or the U.S. federal income tax treatment of the notes, as described elsewhere in this pricing supplement.

We cannot predict the actual final underlier levels or what the market value of your notes will be on any particular trading day, nor can we predict the relationship between the closing levels of the underliers and the market value of your notes at any time prior to the stated maturity date. The actual amount that you will receive, if any, at maturity and the rate of return on the offered notes will depend on the actual initial underlier levels, which we will set on the trade date, and the actual final underlier levels determined by the calculation agent as described above. Moreover, the assumptions on which the hypothetical returns are based may turn out to be inaccurate. Consequently, the amount of cash to be paid in respect of your notes, if any, on the stated maturity date may be very different from the information reflected in the examples above.

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Additional Risk Factors Specific to Your Notes

An investment in your notes is subject to the risks described below, as well as the risks and considerations described in the accompanying prospectus, in the accompanying prospectus supplement and under “Additional Risk Factors Specific to the Notes” in the accompanying general terms supplement no. 1,734. You should carefully review these risks and considerations as well as the terms of the notes described herein and in the accompanying prospectus, the accompanying prospectus supplement and the accompanying general terms supplement no. 1,734. Your notes are a riskier investment than ordinary debt securities. Also, your notes are not equivalent to investing directly in the underlier stocks, i.e., with respect to an underlier to which your notes are linked, the stocks comprising such underlier. You should carefully consider whether the offered notes are suited to your particular circumstances.

The Estimated Value of Your Notes At the Time the Terms of Your Notes Are Set On the Trade Date (as Determined By Reference to Pricing Models Used By GS&Co.) Is Less Than the Original Issue Price Of Your Notes

The original issue price for your notes exceeds the estimated value of your notes as of the time the terms of your notes are set on the trade date, as determined by reference to GS&Co.’s pricing models and taking into account our credit spreads. Such estimated value on the trade date is set forth above under “Estimated Value of Your Notes”; after the trade date, the estimated value as determined by reference to these models will be affected by changes in market conditions, the creditworthiness of GS Finance Corp., as issuer, the creditworthiness of The Goldman Sachs Group, Inc., as guarantor, and other relevant factors. The price at which GS&Co. would initially buy or sell your notes (if GS&Co. makes a market, which it is not obligated to do), and the value that GS&Co. will initially use for account statements and otherwise, also exceeds the estimated value of your notes as determined by reference to these models. As agreed by GS&Co. and the distribution participants, this excess (i.e., the additional amount described under “Estimated Value of Your Notes”) will decline to zero on a straight line basis over the period from the date hereof through the applicable date set forth above under “Estimated Value of Your Notes”. Thereafter, if GS&Co. buys or sells your notes it will do so at prices that reflect the estimated value determined by reference to such pricing models at that time. The price at which GS&Co. will buy or sell your notes at any time also will reflect its then current bid and ask spread for similar sized trades of structured notes.

In estimating the value of your notes as of the time the terms of your notes are set on the trade date, as disclosed above under “Estimated Value of Your Notes”, GS&Co.’s pricing models consider certain variables, including principally our credit spreads, interest rates (forecasted, current and historical rates), volatility, price-sensitivity analysis and the time to maturity of the notes. These pricing models are proprietary and rely in part on certain assumptions about future events, which may prove to be incorrect. As a result, the actual value you would receive if you sold your notes in the secondary market, if any, to others may differ, perhaps materially, from the estimated value of your notes determined by reference to our models due to, among other things, any differences in pricing models or assumptions used by others. See “Additional Risk Factors Specific to the Notes — The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors” on page S-3 of the accompanying general terms supplement no. 1,734.

The difference between the estimated value of your notes as of the time the terms of your notes are set on the trade date and the original issue price is a result of certain factors, including principally the underwriting discount and commissions, the expenses incurred in creating, documenting and marketing the notes, and an estimate of the difference between the amounts we pay to GS&Co. and the amounts GS&Co. pays to us in connection with your notes. We pay to GS&Co. amounts based on what we would pay to holders of a non-structured note with a similar maturity. In return for such payment, GS&Co. pays to us the amounts we owe under your notes.

In addition to the factors discussed above, the value and quoted price of your notes at any time will reflect many factors and cannot be predicted. If GS&Co. makes a market in the notes, the price quoted by GS&Co. would reflect any changes in market conditions and other relevant factors, including any

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deterioration in our creditworthiness or perceived creditworthiness or the creditworthiness or perceived creditworthiness of The Goldman Sachs Group, Inc. These changes may adversely affect the value of your notes, including the price you may receive for your notes in any market making transaction. To the extent that GS&Co. makes a market in the notes, the quoted price will reflect the estimated value determined by reference to GS&Co.'s pricing models at that time, plus or minus its then current bid and ask spread for similar sized trades of structured notes (and subject to the declining excess amount described above).

Furthermore, if you sell your notes, you will likely be charged a commission for secondary market transactions, or the price will likely reflect a dealer discount. This commission or discount will further reduce the proceeds you would receive for your notes in a secondary market sale.

There is no assurance that GS&Co. or any other party will be willing to purchase your notes at any price and, in this regard, GS&Co. is not obligated to make a market in the notes. See "Additional Risk Factors Specific to the Notes—Your Notes May Not Have an Active Trading Market" on page S-7 of the accompanying general terms supplement no. 1,734.

The Notes Are Subject to the Credit Risk of the Issuer and the Guarantor

Although the return on the notes will be based on the performance of each underlier, the payment of any amount due on the notes is subject to the credit risk of GS Finance Corp., as issuer of the notes, and the credit risk of The Goldman Sachs Group, Inc. as guarantor of the notes. The notes are our unsecured obligations. Investors are dependent on our ability to pay all amounts due on the notes, and therefore investors are subject to our credit risk and to changes in the market's view of our creditworthiness. Similarly, investors are dependent on the ability of The Goldman Sachs Group, Inc., as guarantor of the notes, to pay all amounts due on the notes, and therefore are also subject to its credit risk and to changes in the market's view of its creditworthiness. See "Description of the Notes We May Offer — Information About Our Medium-Term Notes, Series E Program — How the Notes Rank Against Other Debt" on page S-4 of the accompanying prospectus supplement and "Description of Debt Securities We May Offer — Guarantee by The Goldman Sachs Group, Inc." on page 42 of the accompanying prospectus.

You May Lose Your Entire Investment in the Notes

You can lose your entire investment in the notes. The cash settlement amount on your notes, if any, on the stated maturity date will be based on the performance of the lesser performing of the underliers as measured from their initial underlier levels set on the trade date to their closing levels on the determination date. If the final underlier level of any underlier is less than its trigger buffer level, you will have a loss for each \$1,000 of the face amount of your notes equal to the product of (i) \$1,000 times (ii) the lesser performing underlier return. Thus, you may lose your entire investment in the notes, which would include any premium to face amount you paid when you purchased the notes.

Also, the market price of your notes prior to the stated maturity date may be significantly lower than the purchase price you pay for your notes. Consequently, if you sell your notes before the stated maturity date, you may receive far less than the amount of your investment in the notes.

The Amount Payable on Your Notes Is Not Linked to the Levels of the Underliers at Any Time Other than the Determination Date

The final underlier level of each underlier will be based on the closing level of such underlier on the determination date (subject to adjustment as described elsewhere in this pricing supplement). Therefore, if the closing level of one underlier dropped precipitously on the determination date, the cash settlement amount for your notes may be significantly less than it would have been had the cash settlement amount been linked to the closing level of the

underlier prior to such drop. Although the actual closing levels of the underliers on the stated maturity date or at other times during the life of your notes may be higher than the closing levels of the underliers on the determination date, you will not benefit from the closing levels of the underliers at any time other than on the determination date.

The Cash Settlement Amount Will Be Based Solely on the Lesser Performing Underlier

The cash settlement amount will be based on the lesser performing underlier without regard to the performance of the other underlier. As a result, you will lose some or all of your initial investment if the final underlier level of the lesser performing underlier is less than its trigger buffer level, even if there is an

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increase in the level of the other underlier. This could be the case even if the other underlier increased by an amount greater than the decrease in the lesser performing underlier.

The Return on Your Notes May Change Significantly Despite Only a Small Change in the Level of the Lesser Performing Underlier

If the final underlier level of the lesser performing underlier is less than its trigger buffer level, you will receive less than the face amount of your notes and you could lose all or a substantial portion of your investment in the notes. This means that while a decrease in the final underlier level of the lesser performing underlier to its trigger buffer level will not result in a loss of principal on the notes, a decrease in the final underlier level of the lesser performing underlier to less than its trigger buffer level will result in a loss of a significant portion of the face amount of the notes despite only a small change in the level of the lesser performing underlier.

The Potential for the Value of Your Notes to Increase Will Be Limited

Your ability to participate in any change in the value of any underlier over the life of your notes will be limited because of the threshold settlement amount. The threshold settlement amount will limit the cash settlement amount you may receive for each of your notes at maturity, no matter how much the level of any underlier may rise beyond its initial underlier level over the life of your notes. Accordingly, the amount payable for each of your notes may be significantly less than it would have been had you invested directly in the underliers.

Your Notes Will Not Bear Interest

You will not receive any interest payments on your notes. As a result, even if the cash settlement amount payable for your notes on the stated maturity date exceeds the face amount of your notes, the overall return you earn on your notes may be less than you would have earned by investing in a non-indexed debt security of comparable maturity that bears interest at a prevailing market rate.

If You Purchase Your Notes at a Premium to Face Amount, the Return on Your Investment Will Be Lower Than the Return on Notes Purchased at Face Amount and the Impact of Certain Key Terms of the Notes Will Be Negatively Affected

The cash settlement amount will not be adjusted based on the issue price you pay for the notes. If you purchase notes at a price that differs from the face amount of the notes, then the return on your investment in such notes held to the stated maturity date will differ from, and may be substantially less than, the return on notes purchased at face amount. If you purchase your notes at a premium to face amount and hold them to the stated maturity date, the return on your investment in the notes will be lower than it would have been had you purchased the notes at face amount or a discount to face amount. In addition, the impact of the threshold settlement amount on the return on your investment will depend upon the price you pay for your notes relative to face amount. For example, if you purchase your notes at a premium to face amount, the threshold settlement amount will permit a lower positive return on your investment in the notes than would have been the case for notes purchased at face amount or a discount to face amount.

You Have No Shareholder Rights or Rights to Receive Any Underlier Stock

Investing in your notes will not make you a holder of any of the underlier stocks. Neither you nor any other holder or owner of your notes will have any rights with respect to the underlier stocks, including any voting rights, any right to receive dividends or other distributions, any rights to make a claim against the underlier stocks or any other rights of a holder of the underlier stocks. Your notes will be paid in cash and you will have no right to receive delivery of any underlier stocks.

We May Sell an Additional Aggregate Face Amount of the Notes at a Different Issue Price

At our sole option, we may decide to sell an additional aggregate face amount of the notes subsequent to the date of this pricing supplement. The issue price of the notes in the subsequent sale may differ substantially (higher or lower) from the issue price you paid as provided on the cover of this pricing supplement.

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The Tax Consequences of an Investment in Your Notes Are Uncertain

The tax consequences of an investment in your notes are uncertain, both as to the timing and character of any inclusion in income in respect of your notes.

The Internal Revenue Service announced on December 7, 2007 that it is considering issuing guidance regarding the tax treatment of an instrument such as your notes, and any such guidance could adversely affect the value and the tax treatment of your notes. Among other things, the Internal Revenue Service may decide to require the holders to accrue ordinary income on a current basis and recognize ordinary income on payment at maturity, and could subject non-U.S. investors to withholding tax. Furthermore, in 2007, legislation was introduced in Congress that, if enacted, would have required holders that acquired instruments such as your notes after the bill was enacted to accrue interest income over the term of such instruments even though there will be no interest payments over the term of such instruments. It is not possible to predict whether a similar or identical bill will be enacted in the future, or whether any such bill would affect the tax treatment of your notes. We describe these developments in more detail under “Supplemental Discussion of U.S. Federal Income Tax Consequences – United States Holders – Possible Change in Law” below. You should consult your tax advisor about this matter. Except to the extent otherwise provided by law, GS Finance Corp. intends to continue treating the notes for U.S. federal income tax purposes in accordance with the treatment described under “Supplemental Discussion of U.S. Federal Income Tax Consequences” on page PS-19 below unless and until such time as Congress, the Treasury Department or the Internal Revenue Service determine that some other treatment is more appropriate. Please also consult your tax advisor concerning the U.S. federal income tax and any other applicable tax consequences to you of owning your notes in your particular circumstances.

Foreign Account Tax Compliance Act (FATCA) Withholding May Apply to Payments on Your Notes, Including as a Result of the Failure of the Bank or Broker Through Which You Hold the Notes to Provide Information to Tax Authorities

Please see the discussion under “United States Taxation — Taxation of Debt Securities — Foreign Account Tax Compliance Act (FATCA) Withholding” in the accompanying prospectus for a description of the applicability of FATCA to payments made on your notes. The discussion in that section is hereby modified to reflect regulations proposed by the Treasury Department indicating its intent to eliminate the requirements under FATCA of withholding on gross proceeds from the sale, exchange, maturity or other disposition of relevant financial instruments. The Treasury Department has indicated that taxpayers may rely on these proposed regulations pending their finalization.

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The Underliers
The S&P 500[®] Index

The S&P 500[®] Index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The S&P 500[®] Index is calculated, maintained and published by S&P Dow Jones Indices LLC (“S&P”).

As of July 31, 2017, companies with multiple share class lines are no longer eligible for inclusion in the S&P 500[®] Index. Constituents of the S&P 500[®] Index prior to July 31, 2017 with multiple share class lines will be grandfathered in and continue to be included in the S&P 500[®] Index. If an S&P 500[®] Index constituent reorganizes into a multiple share class line structure, that company will be reviewed for continued inclusion in the S&P 500[®] Index at the discretion of the S&P Index Committee. Also as of July 31, 2017, the criteria employed by S&P for purposes of making additions to the S&P 500[®] Index were changed as follows:

with respect to the “U.S. company” criterion, (i) the IEX was added as an “eligible exchange” for the primary listing of the relevant company’s common stock and (ii) the former “corporate governance structure consistent with U.S. practice” requirement was removed; and

with respect to constituents of the S&P MidCap 400[®] Index and the S&P SmallCap 600[®] Index that are being considered for addition to the S&P 500[®] Index, the financial viability, public float and/or liquidity eligibility criteria no longer need to be met if the S&P Index Committee decides that such an addition will enhance the representativeness of the S&P 500[®] Index as a market benchmark.

Effective February 20, 2019, company additions to the S&P 500[®] Index should have an unadjusted company market capitalization of \$8.2 billion or more (an increase from the previous requirement of an unadjusted company market capitalization of \$6.1 billion or more).

As of March 19, 2019, the 500 companies included in the S&P 500[®] Index were divided into eleven Global Industry Classification Sectors. The Global Industry Classification Sectors include (with the approximate percentage currently included in such sectors indicated in parentheses): Communication Services (9.95%), Consumer Discretionary (10.00%), Consumer Staples (7.17%), Energy (5.43%), Financials (13.15%), Health Care (14.73%), Industrials (9.39%), Information Technology (21.02%), Materials (2.64%), Real Estate (3.01%) and Utilities (3.28%). (Sector designations are determined by the underlier sponsor using criteria it has selected or developed. Index sponsors may use very different standards for determining sector designations. In addition, many companies operate in a number of sectors, but are listed in only one sector and the basis on which that sector is selected may also differ. As a result, sector comparisons between indices with different index sponsors may reflect differences in methodology as well as actual differences in the sector composition of the indices.) As of the close of business on September 21, 2018, S&P and MSCI, Inc. updated the Global Industry Classification Sector structure. Among other things, the update broadened the Telecommunications Services sector and renamed it the Communication Services sector. The renamed sector includes the previously existing Telecommunication Services Industry group, as well as the Media Industry group, which was moved from the Consumer Discretionary sector and renamed the Media & Entertainment Industry group. The Media & Entertainment Industry group contains three industries: Media, Entertainment and Interactive Media & Services. The Media industry continues to consist of the Advertising, Broadcasting, Cable & Satellite and Publishing sub-industries. The Entertainment industry contains the Movies & Entertainment sub-industry (which includes online entertainment streaming companies in addition to companies previously classified in such industry prior to September 21, 2018) and the Interactive Home Entertainment sub-industry (which includes companies previously classified in the Home Entertainment Software sub-industry prior to September 21, 2018 (when the Home Entertainment Software sub-industry was a sub-industry in the Information Technology sector)), as well as producers of interactive gaming products, including mobile gaming applications). The Interactive Media & Services industry and sub-industry includes companies engaged in content and information creation or distribution through proprietary platforms, where revenues

are derived primarily through pay-per-click advertisements, and includes search engines, social media and networking platforms, online classifieds and online review companies. The Global Industry Classification Sector structure changes are effective for the S&P 500[®] Index as of the open of business on September 24, 2018 to coincide with the September 2018 quarterly rebalancing.

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The above information supplements the description of the S&P 500[®] Index found in the accompanying general terms supplement no. 1,734. This information was derived from information prepared by the underlier sponsor, however, the percentages we have listed above are approximate and may not match the information available on the underlier sponsor's website due to subsequent corporate actions or other activity relating to a particular stock. For more details about the S&P 500[®] Index, the underlier sponsor and license agreement between the underlier sponsor and the issuer, see "The Underliers — S&P 500 Index" on page S-40 of the accompanying general terms supplement no. 1,734.

The S&P 500[®] Index is a product of S&P Dow Jones Indices LLC, and has been licensed for use by GS Finance Corp. ("Goldman"). Standard & Poor[®] and S&P[®] are registered trademarks of Standard & Poor's Financial Services LLC; Dow Jones[®] is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones") and these trademarks have been licensed for use by S&P Dow Jones Indices LLC and sublicensed for certain purposes by Goldman. Goldman's notes are not sponsored, endorsed, sold or promoted by S&P Dow Jones Indices LLC, Dow Jones, Standard & Poor's Financial Services LLC or any of their respective affiliates and neither S&P Dow Jones Indices LLC, Dow Jones, Standard & Poor's Financial Services LLC or any of their respective affiliates make any representation regarding the advisability of investing in such notes.

The Russell 2000[®] Index

The Russell 2000[®] Index measures the composite price performance of stocks of 2,000 companies incorporated in the U.S., its territories and certain "benefit-driven incorporation countries."

As of March 12, 2019, the 2,000 companies included in the Russell 2000[®] Index were divided into nine Russell Global Sectors. The Russell Global Sectors include (with the approximate percentage currently included in such sectors indicated in parentheses): Consumer Discretionary (15.16%), Consumer Staples (2.35%), Financial Services (25.30%), Health Care (15.38%), Materials & Processing (6.25%), Other Energy (3.54%), Producer Durables (13.40%), Technology (14.00%) and Utilities (4.62%). (Sector designations are determined by the underlier sponsor using criteria it has selected or developed. Index sponsors may use very different standards for determining sector designations. In addition, many companies operate in a number of sectors, but are listed in only one sector and the basis on which that sector is selected may also differ. As a result, sector comparisons between indices with different index sponsors may reflect differences in methodology as well as actual differences in the sector composition of the indices.)

In addition to the exclusions discussed under "Exclusions from the Russell 2000[®] Index" on page S-62 of the accompanying general terms supplement no. 1,734, a company with 5% or less of its voting rights in the hands of unrestricted shareholders is no longer eligible for inclusion in the Russell 2000[®] Index. Existing constituents of the Russell 2000[®] Index that do not currently have more than 5% of the company's voting rights in the hands of unrestricted shareholders have until the September 2022 review to meet this requirement.

The above information supplements the description of the Russell 2000[®] Index found in the accompanying general terms supplement no. 1,734. This information was derived from information prepared by the underlier sponsor, however, the percentages we have listed above are approximate and may not match the information available on the underlier sponsor's website due to subsequent corporate actions or other activity relating to a particular stock. For more details about the Russell 2000[®] Index, the underlier sponsor and license agreement between the underlier sponsor and the issuer, see "The Underliers — Russell 2000 Index" on page S-61 of the accompanying general terms supplement no. 1,734.

The Russell 2000[®] Index is a trademark of FTSE Russell (“Russell”) and has been licensed for use by GS Finance Corp. The notes are not sponsored, endorsed, sold or promoted by Russell, and Russell makes no representation regarding the advisability of investing in the notes.

Historical Closing Levels of the Underliers

The closing levels of the underliers have fluctuated in the past and may, in the future, experience significant fluctuations. Any historical upward or downward trend in the closing level of any underlier

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during the period shown below is not an indication that such underlier is more or less likely to increase or decrease at any time during the life of your notes.

You should not take the historical closing levels of an underlier as an indication of the future performance of an underlier. We cannot give you any assurance that the future performance of any underlier or the underlier stocks will result in you receiving the outstanding face amount of your notes on the stated maturity date.

Neither we nor any of our affiliates make any representation to you as to the performance of the underliers. Before investing in the offered notes, you should consult publicly available information to determine the relevant underlier levels between the date of this pricing supplement and the date of your purchase of the offered notes. The actual performance of an underlier over the life of the offered notes, as well as the cash settlement amount at maturity may bear little relation to the historical levels shown below.

The graphs below show the daily historical closing levels of each underlier from March 22, 2009 through March 22, 2019. We obtained the levels in the graphs below from Bloomberg Financial Services, without independent verification. Although the official closing levels of the Russell 2000[®] Index are published to six decimal places by the underlier sponsor, Bloomberg Financial Services reports the levels of the Russell 2000[®] Index to fewer decimal places.

Historical Performance of the S&P 500® Index

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Historical Performance of the Russell 2000® Index

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Supplemental Discussion of u.s. Federal Income Tax Consequences

The following section supplements the discussion of U.S. federal income taxation in the accompanying prospectus supplement.

The following section is the opinion of Sidley Austin llp, counsel to GS Finance Corp. and The Goldman Sachs Group, Inc. In addition, it is the opinion of Sidley Austin llp that the characterization of the notes for U.S. federal income tax purposes that will be required under the terms of the notes, as discussed below, is a reasonable interpretation of current law.

This section does not apply to you if you are a member of a class of holders subject to special rules, such as:

- a dealer in securities or currencies;
- a trader in securities that elects to use a mark-to-market method of accounting for your securities holdings;
- a bank;
- a life insurance company;
- a tax exempt organization;
- a partnership;
- a regulated investment company;
- an accrual method taxpayer subject to special tax accounting rules as a result of its use of financial statements;
- a person that owns a note as a hedge or that is hedged against interest rate risks;
- a person that owns a note as part of a straddle or conversion transaction for tax purposes; or
- a United States holder (as defined below) whose functional currency for tax purposes is not the U.S. dollar.

Although this section is based on the U.S. Internal Revenue Code of 1986, as amended, its legislative history, existing and proposed regulations under the Internal Revenue Code, published rulings and court decisions, all as currently in effect, no statutory, judicial or administrative authority directly addresses how your notes should be treated for U.S. federal income tax purposes, and as a result, the U.S. federal income tax consequences of your investment in your notes are uncertain. Moreover, these laws are subject to change, possibly on a retroactive basis.

You should consult your tax advisor concerning the U.S. federal income tax and any other applicable tax consequences of your investments in the notes, including the application of state, local or other tax laws and the possible effects of changes in federal or other tax laws.

United States Holders

This section applies to you only if you are a United States holder that holds your notes as a capital asset for tax purposes. You are a United States holder if you are a beneficial owner of each of your notes and you are:

- a citizen or resident of the United States;
- a domestic corporation;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust if a United States court can exercise primary supervision over the trust's administration and one or more United States persons are authorized to control all substantial decisions of the trust.

Tax Treatment. You will be obligated pursuant to the terms of the notes — in the absence of a change in law, an administrative determination or a judicial ruling to the contrary — to characterize your notes for all tax purposes as pre-paid derivative contracts in respect of the underliers. Except as otherwise stated below, the discussion herein assumes that the notes will be so treated.

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Upon the sale, exchange or maturity of your notes, you should recognize capital gain or loss equal to the difference, if any, between the amount of cash you receive at such time and your tax basis in your notes. Your tax basis in the notes will generally be equal to the amount that you paid for the notes. If you hold your notes for more than one year, the gain or loss generally will be long-term capital gain or loss. If you hold your notes for one year or less, the gain or loss generally will be short-term capital gain or loss. Short-term capital gains are generally subject to tax at the marginal tax rates applicable to ordinary income.

No statutory, judicial or administrative authority directly discusses how your notes should be treated for U.S. federal income tax purposes. As a result, the U.S. federal income tax consequences of your investment in the notes are uncertain and alternative characterizations are possible. Accordingly, we urge you to consult your tax advisor in determining the tax consequences of an investment in your notes in your particular circumstances, including the application of state, local or other tax laws and the possible effects of changes in federal or other tax laws.

Alternative Treatments. There is no judicial or administrative authority discussing how your notes should be treated for U.S. federal income tax purposes. Therefore, the Internal Revenue Service might assert that a treatment other than that described above is more appropriate. For example, the Internal Revenue Service could treat your notes as a single debt instrument subject to special rules governing contingent payment debt instruments. Under those rules, the amount of interest you are required to take into account for each accrual period would be determined by constructing a projected payment schedule for the notes and applying rules similar to those for accruing original issue discount on a hypothetical noncontingent debt instrument with that projected payment schedule. This method is applied by first determining the comparable yield – i.e., the yield at which we would issue a noncontingent fixed rate debt instrument with terms and conditions similar to your notes – and then determining a payment schedule as of the issue date that would produce the comparable yield. These rules may have the effect of requiring you to include interest in income in respect of your notes prior to your receipt of cash attributable to that income.

If the rules governing contingent payment debt instruments apply, any gain you recognize upon the sale, exchange or maturity of your notes would be treated as ordinary interest income. Any loss you recognize at that time would be ordinary loss to the extent of interest you included as income in the current or previous taxable years in respect of your notes, and, thereafter, capital loss.

If the rules governing contingent payment debt instruments apply, special rules would apply to a person who purchases notes at a price other than the adjusted issue price as determined for tax purposes.

It is also possible that your notes could be treated in the manner described above, except that any gain or loss that you recognize at maturity would be treated as ordinary gain or loss. You should consult your tax advisor as to the tax consequences of such characterization and any possible alternative characterizations of your notes for U.S. federal income tax purposes.

It is possible that the Internal Revenue Service could seek to characterize your notes in a manner that results in tax consequences to you that are different from those described above. You should consult your tax advisor as to the tax consequences of any possible alternative characterizations of your notes for U.S. federal income tax purposes.

Possible Change in Law

On December 7, 2007, the Internal Revenue Service released a notice stating that the Internal Revenue Service and the Treasury Department are actively considering issuing guidance regarding the proper U.S. federal income tax treatment of an instrument such as the offered notes, including whether holders should be required to accrue ordinary income on a current basis and whether gain or loss should be ordinary or capital. It is not possible to determine what guidance they will ultimately issue, if any. It is possible, however, that under such guidance, holders of the notes will ultimately

be required to accrue income currently and this could be applied on a retroactive basis. The Internal Revenue Service and the Treasury Department are also considering other relevant issues, including whether foreign holders of such instruments should be subject to withholding tax on any deemed income accruals and whether the special “constructive ownership rules” of Section 1260 of the Internal Revenue Code might be applied to such instruments. Except to the extent otherwise provided by law, we intend to continue treating the notes for U.S. federal income tax purposes in accordance with the treatment described above under “Tax Treatment” unless and until such time as Congress, the Treasury Department or the Internal Revenue Service determine that some other treatment is more appropriate.

Furthermore, in 2007, legislation was introduced in Congress that, if enacted, would have required holders that acquired instruments such as your notes after the bill was enacted to accrue interest income over the term of such instruments even though there will be no interest payments over the term of such instruments. It is not possible to

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predict whether a similar or identical bill will be enacted in the future, or whether any such bill would affect the tax treatment of your notes.

It is impossible to predict what any such legislation or administrative or regulatory guidance might provide, and whether the effective date of any legislation or guidance will affect notes that were issued before the date that such legislation or guidance is issued. You are urged to consult your tax advisor as to the possibility that any legislative or administrative action may adversely affect the tax treatment of your notes.

Backup Withholding and Information Reporting

Please see the discussion under “United States Taxation — Taxation of Debt Securities — Backup Withholding and Information Reporting—United States Holders” in the accompanying prospectus for a description of the applicability of the backup withholding and information reporting rules to payments made on your notes.

United States Alien Holders

This section applies to you only if you are a United States alien holder. You are a United States alien holder if you are the beneficial owner of notes and are, for U.S. federal income tax purposes:

- a nonresident alien individual;
- a foreign corporation; or
- an estate or trust that in either case is not subject to U.S. federal income tax on a net income basis on income or gain from the notes.

You will be subject to generally applicable information reporting and backup withholding requirements as discussed in the accompanying prospectus under “United States Taxation — Taxation of Debt Securities — Backup Withholding and Information Reporting — United States Alien Holders” with respect to payments on your notes at maturity and, notwithstanding that we do not intend to treat the notes as debt for tax purposes, we intend to backup withhold on such payments with respect to your notes unless you comply with the requirements necessary to avoid backup withholding on debt instruments (in which case you will not be subject to such backup withholding) as set forth under “United States Taxation — Taxation of Debt Securities — United States Alien Holders” in the accompanying prospectus.

As discussed above, alternative characterizations of the notes for U.S. federal income tax purposes are possible. Should an alternative characterization of the notes, by reason of a change or clarification of the law, by regulation or otherwise, cause payments at maturity with respect to the notes to become subject to withholding tax, we will withhold tax at the applicable statutory rate and we will not make payments of any additional amounts. Prospective United States alien holders of the notes should consult their tax advisors in this regard.

Furthermore, on December 7, 2007, the Internal Revenue Service released Notice 2008-2 soliciting comments from the public on various issues, including whether instruments such as your notes should be subject to withholding. It is therefore possible that rules will be issued in the future, possibly with retroactive effect, that would cause payments on your notes at maturity to be subject to withholding, even if you comply with certification requirements as to your foreign status.

In addition, the Treasury Department has issued regulations under which amounts paid or deemed paid on certain financial instruments (“871(m) financial instruments”) that are treated as attributable to U.S.-source dividends could be treated, in whole or in part depending on the circumstances, as a “dividend equivalent” payment that is subject to tax at a rate of 30% (or a lower rate under an applicable treaty), which in the case of any amounts you receive upon the sale, exchange or maturity of your notes, could be collected via withholding. If these regulations were to apply to the notes, we may be required to withhold such taxes if any U.S.-source dividends are paid on the stocks included in the

underliers during the term of the notes. We could also require you to make certifications (e.g., an applicable Internal Revenue Service Form W-8) prior to the maturity of the notes in order to avoid or minimize withholding obligations, and we could withhold accordingly (subject to your potential right to claim a refund from the Internal Revenue Service) if such certifications were not received or were not satisfactory. If withholding was required, we would not be required to pay any additional amounts with respect to amounts so withheld. These regulations generally will apply to 871(m) financial instruments (or a combination of financial instruments treated as having been entered into in connection with each other) issued (or significantly modified and treated as retired and reissued) on or after January 1, 2021, but will also apply to certain 871(m) financial instruments (or a combination of financial instruments treated as having been entered into in connection with each other) that have a delta (as defined in the applicable Treasury regulations) of one and are issued (or significantly modified and treated as retired and reissued) on or after January 1, 2017. In addition, these regulations will not apply to financial instruments that reference a “qualified index” (as defined in the regulations). We have determined that, as of the issue date of your notes, your notes will not be subject to withholding under these rules. In certain

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limited circumstances, however, you should be aware that it is possible for United States alien holders to be liable for tax under these rules with respect to a combination of transactions treated as having been entered into in connection with each other even when no withholding is required. You should consult your tax advisor concerning these regulations, subsequent official guidance and regarding any other possible alternative characterizations of your notes for U.S. federal income tax purposes.

Foreign Account Tax Compliance Act (FATCA) Withholding

Pursuant to Treasury regulations, Foreign Account Tax Compliance Act (FATCA) withholding (as described in “United States Taxation—Taxation of Debt Securities—Foreign Account Tax Compliance Act (FATCA) Withholding” in the accompanying prospectus) will generally apply to obligations that are issued on or after July 1, 2014; therefore, the notes will generally be subject to the FATCA withholding rules. Pursuant to recently proposed regulations, the Treasury Department has indicated its intent to eliminate the requirements under FATCA of withholding on gross proceeds from the sale, exchange, maturity or other disposition of relevant financial instruments. The Treasury Department has indicated that taxpayers may rely on these proposed regulations pending their finalization.

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Supplemental plan of distribution; conflicts of interest

See “Supplemental Plan of Distribution” on page S-96 of the accompanying general terms supplement no. 1,734 and “Plan of Distribution — Conflicts of Interest” on page 94 of the accompanying prospectus. GS Finance Corp. estimates that its share of the total offering expenses, excluding underwriting discounts and commissions, will be approximately \$.

GS Finance Corp. expects to agree to sell to GS&Co., and GS&Co. expects to agree to purchase from GS Finance Corp., the aggregate face amount of the offered notes specified on the front cover of this pricing supplement. GS&Co. proposes initially to offer the notes to the public at the original issue price set forth on the cover page of this pricing supplement, and to certain securities dealers at such price less a concession not in excess of % of the face amount. The original issue price for notes purchased by certain retirement accounts and certain fee-based advisory accounts will be % of the face amount of the notes, which will reduce the underwriting discount specified on the cover of this pricing supplement with respect to such notes to %. GS&Co. is an affiliate of GS Finance Corp. and The Goldman Sachs Group, Inc. and, as such, will have a “conflict of interest” in this offering of notes within the meaning of Financial Industry Regulatory Authority, Inc. (FINRA) Rule 5121. Consequently, this offering of notes will be conducted in compliance with the provisions of FINRA Rule 5121. GS&Co. will not be permitted to sell notes in this offering to an account over which it exercises discretionary authority without the prior specific written approval of the account holder. GS&Co. will also pay a fee in connection with the distribution of the notes to SIMON Markets LLC, a broker-dealer affiliated with GS Finance Corp.

We expect to deliver the notes against payment therefor in New York, New York on April 30, 2019. Under Rule 15c6-1 of the Securities Exchange Act of 1934, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade notes on any date prior to two business days before delivery will be required to specify alternative settlement arrangements to prevent a failed settlement.

We have been advised by GS&Co. that it intends to make a market in the notes. However, neither GS&Co. nor any of our other affiliates that makes a market is obligated to do so and any of them may stop doing so at any time without notice. No assurance can be given as to the liquidity or trading market for the notes.

The notes will not be listed on any securities exchange or interdealer quotation system.

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We have not authorized anyone to provide any information or to make any representations other than those contained or incorporated by reference in this pricing supplement, the accompanying general terms supplement no. 1,734, the accompanying prospectus supplement or the accompanying prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This pricing supplement, the accompanying general terms supplement no. 1,734, the accompanying prospectus supplement and the accompanying prospectus is an offer to sell only the notes offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this pricing supplement, the accompanying general terms supplement no. 1,734, the accompanying prospectus supplement and the accompanying prospectus is current only as of the respective dates of such documents.

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GS Finance Corp.

Index-Linked Notes due

guaranteed by

The Goldman Sachs Group, Inc.

Goldman Sachs & Co. LLC

(14) Consists of shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 15, 2015.

- (15) Includes 146,417 shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 15, 2015.
- (16) Consists of shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 15, 2015.
- (17) Includes 5,792,282 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 April 15, 2015, shares reported in clauses (i) through (viii) of the first sentence of footnote 2 to this table above, shares reported in clauses (i) through (iv) of the first sentence of footnote 3 to this table above and shares reported in the first sentence of footnote 12 to this table above.

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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 named executive officers include Vincent J. Milano, our President and Chief Executive Officer, Sudhir Agrawal, D. Phil., our President of Research and former President and Chief Executive Officer, and Louis J. Arcudi, III, our Chief Financial Officer. Our named executive officers also include Louis Brenner, M.D., who served as our Senior Vice President and Chief Medical Officer from January 2014 to April 2015, John Peter Wolf, III, who served as our Senior Vice President, General Counsel from December 2014 to March 2015, and Robert D. Arbeit, M.D., who served as our Vice President, Clinical Development from August 2009 to January 2015. 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 are designed to 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 use our programs to reward our executive officers for corporate and individual performance. We also may decline to increase salaries, make bonus awards or issue equity compensation in the event that corporate or individual performance falls below expectations.

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 compensation 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.

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During 2013 and 2014, our compensation committee engaged Radford to provide advice and recommendations regarding the amount and form of executive compensation, equity incentive programs and compensation generally. During 2014, our compensation committee also engaged Radford to provide advice and recommendations regarding our director compensation program, which is discussed above under "Proposal One Election of Directors Director Compensation." Radford did not provide any services to our company during 2013 or 2014 other than pursuant to its engagement by the compensation committee. Our compensation committee considered the relationship that Radford has with us, the members of our compensation committee and our executive officers, as well as the policies that Radford has in place to maintain its independence and objectivity. Based on the compensation committee's evaluation, as well as the consideration by our executive officers of the policies that Radford has in place to maintain its independence and objectivity, the compensation committee has determined that Radford's work for the compensation committee has not raised any conflicts of interest. In reaching these conclusions, the compensation committee considered the factors set forth in Exchange Act Rule 10C-1.

As part of its engagement in 2013, Radford collected data on executive compensation from a peer group of publicly traded companies developed by the compensation committee with Radford in July 2013. The compensation committee selected these companies at that time in the belief that these companies had business life cycles, 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 2013 peer group, the compensation committee and Radford generally targeted companies ranging from approximately one-third to three times Idera's size in terms of number of employees and market capitalization, with lead drug candidates in Phase 2 or Phase 3 clinical development. In its assessment of companies with comparable market capitalization, the compensation committee assumed that all outstanding preferred stock and warrants to purchase common stock were converted into or exercised for shares of our common stock. The companies included in the 2013 peer group were:

Alimera Sciences, Inc.	Athersys, Inc.	BioCryst Pharmaceuticals, Inc.
Biodel Inc.	Cempra, Inc.	Chelsea Therapeutics International, Ltd.
Corcept Therapeutics Incorporated	Durata Therapeutics, Inc.	Heron Therapeutics, Inc. (formerly known as A.P. Pharma, Inc.)
ImmunoCellular Therapeutics, Ltd.	Inovio Pharmaceuticals, Inc.	KaloBios Pharmaceuticals, Inc.
NeoStem, Inc.	Neuralstem, Inc.	OncoGenex Pharmaceuticals, Inc.
Oncothyreon Inc.	Pozen Inc.	StemCells, Inc.
Targacept, Inc.	Zalicus Inc.	

In connection with the compensation committee's annual performance and compensation review in November 2013 and December 2013, Radford provided the compensation committee with a blend of the data from the 2013 peer group and compensation survey data from the Radford 2013 Global Life Science Survey, a survey of U.S. biotech companies. We refer to this blended data as the 2013 market compensation data. The compensation committee considered this 2013 market compensation data in making its compensation determinations in December 2013, including its determinations with respect to base salaries for 2014. The compensation committee also used this data in setting Dr. Brenner's compensation arrangements in January 2014.

As part of its engagement in February 2014, in connection with its review of our director compensation program, Radford worked with the compensation committee to select a revised peer group. In working with

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Radford to develop the revised peer group, the compensation committee and Radford generally targeted mid- to late-development stage companies conducting Phase 2 or Phase 3 clinical trials, with approximately 15 to 60 employees and valuations ranging from one-half to one and one-half times Idera's size in terms of market capitalization. In its assessment of companies with comparable market capitalizations, the compensation committee assumed that all outstanding preferred stock and warrants to purchase common stock were converted into or exercised for shares of our common stock. The companies included in the 2014 peer group were:

AcelRx Pharmaceuticals Inc.*	Achillion Pharmaceuticals, Inc.*	BioCryst Pharmaceuticals, Inc.
bluebird bio Inc.*	Cempra, Inc.	Chelsea Therapeutics International, Ltd.
Chimerix, Inc.*	Corcept Therapeutics Incorporated	CytRx Corporation*
Durata Therapeutics, Inc.	Enanta Pharmaceuticals, Inc.*	Endocyte Inc.*
Inovio Pharmaceuticals, Inc.	Insmed Incorporated*	Intra-Cellular Therapies, Inc.*
Neuralstem, Inc.	Orexigen Therapeutics, Inc.*	Repros Therapeutics Inc.*
Verastem, Inc.*		

* Represents companies included in this peer group and not included in the 2013 peer group. The following 13 companies were eliminated from the 2014 peer group by the compensation committee as described above: Alimera Sciences, Inc., Athersys, Inc., Biondi Inc., Heron Therapeutics, Inc. (formerly known as A.P. Pharma, Inc.), ImmunoCellular Therapeutics, Ltd., Inc., KaloBios Pharmaceuticals, Inc., NeoStem, Inc., OncoGenex Pharmaceuticals, Inc., Oncothyreon Inc., Pozen Inc., StemCells, Inc., Targacept, Inc. and Zalicus Inc.

In connection with the compensation committee's annual performance and compensation review in November 2014 and December 2014, Radford provided the compensation committee with a blend of the data from the 2014 peer group and compensation survey data from the Radford 2014 Global Life Sciences Survey, a survey of U.S. biotech companies. We refer to this blended data as the 2014 market compensation data. Our compensation committee considered this 2014 market compensation data in making its compensation determinations in December 2014, including its determination with respect to bonuses for 2014 and option awards. The compensation committee also considered this 2014 market compensation data in setting Mr. Milano's and Mr. Wolf's compensation arrangements.

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 presented by Radford. 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;

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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 and the compensation committee. 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 compensation 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, for the other executives, 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 generally 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.

Elements of Executive Compensation

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

base salary;

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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 or 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 are, or were, party to employment agreements and employment offer letters with each of our named executive officers. Other than our employment agreement with Dr. Agrawal, none of these employment agreements and employment offer letters include provisions providing for tax gross-ups and our compensation committee does not intend to include such provisions in employment related agreements in the future. Employment agreements and employment offer letters with our named executive officers 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 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 compensation committee's decision as to whether the executive officer's performance was generally consistent with our expectations.

In December 2013, in connection with its annual performance and compensation review, the compensation committee approved new annual base salaries for our executive officers, effective as of January 1, 2014. In setting these salaries, the compensation committee reviewed the 2013 market compensation data presented by Radford. After reviewing such data and taking into consideration the items described in the preceding paragraph and the fact that the base salaries of Dr. Agrawal, Mr. Arcudi and Dr. Arbeit had not been increased since 2011, the compensation committee increased annual base salaries for each of the three named executive officers for 2014 by 4.0%.

The compensation committee also relied on the 2013 market compensation data in setting the terms of Dr. Brenner's compensation arrangements at the time of his hiring in January 2014. Specifically, with respect to

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Dr. Brenner's base salary, the compensation committee considered the 2013 market compensation data and the base salaries of our other executive officers and determined that an annual base salary of \$350,000 was consistent with the 50th percentile of the 2013 market compensation data.

As part of our December 2014 annual performance and compensation review, the compensation committee approved new annual base salaries for our executive officers for 2015. In setting these annual base salaries, the compensation committee reviewed the 2014 market compensation data presented by Radford. After reviewing such data, the compensation committee approved increases in the annual base salaries of each of our named executive officers by 3.0%, yielding the following new annual base salaries for our named executive officers, other than Messrs. Milano and Wolf, effective as of January 1, 2015: Dr. Agrawal \$588,100; Dr. Brenner \$360,500; Mr. Arcudi \$337,400; and Dr. Arbeit \$321,400.

The compensation committee also relied on the 2014 market compensation data in setting the terms of Messrs. Milano's and Wolf's compensation arrangements at the time of their hiring in December 2014. Specifically, with respect to Messrs. Milano's and Wolf's base salaries, the compensation committee determined that an annual base salary of \$600,000 and \$360,000, respectively, was consistent with the 50th percentile of the 2014 market compensation data and the scale of base salaries of our other executive officers.

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 bonuses, 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 compensation committee's determination of annual cash bonuses, and no weighting was assigned to the corporate goals when they were originally adopted by the compensation committee.

In determining bonuses for 2014 as part of its annual performance and compensation review in December 2014, the compensation committee considered the target percentages to be used by the compensation committee for each of our named executive officers and our overall performance for purposes of the 2014 bonus awards. In determining the target bonus percentages to be used, the compensation committee concluded that the target bonus percentages should be consistent with the 50th percentile of the 2014 market compensation data and that there be no difference in the target bonus percentages of our executive officers, other than Dr. Agrawal and Dr. Brenner. Based on these factors, the compensation committee determined to use a 30% target bonus percentage for each of our executive officers, other than Dr. Agrawal and Dr. Brenner, and a 50% target bonus percentage for Dr. Agrawal and a 35% target bonus percentage for Dr. Brenner, in each case in accordance with their employment agreements with us.

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In assessing the company's performance against its 2014 corporate goals, the compensation committee considered the goals that were achieved, the goals that were not achieved and the reasons for those goals not being achieved. In addition, the compensation committee considered the company's additional accomplishments in 2014, including the establishment of and progress in the company's Duchenne muscular dystrophy and immuno-oncology programs. Recognizing the achievements of the company in 2014, that the company's goals had changed over the course of 2014, that progress in the key clinical programs was paramount and that the company should be rewarded for its flexibility and responsiveness to the changes in the company's strategy, the compensation committee determined to use a performance rating of 100% for the 2014 bonuses. As a result, the compensation committee awarded Dr. Agrawal a bonus equal to 100% of his 50% bonus target. For the other named executive officers, the compensation committee awarded bonuses at 100% of their respective bonus targets, specifically 30% in the case of Mr. Arcudi, 35% in the case of Dr. Brenner and 30% in the case of Dr. Arbeit.

In connection with negotiating the compensation arrangements for Messrs. Milano and Wolf in December 2014, the compensation committee agreed that their bonus targets would be 50% and 35% of base salary, respectively. Mr. Milano and Mr. Wolf, who joined our company in December 2014, did not receive 2014 bonus awards.

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 interests 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 plans, 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. In December 2014, the compensation committee agreed that initial option grants would vest with respect to 25% of the shares subject to the option on the first anniversary of commencement of employment and with respect to the balance of the shares subject to the option in 12 equal quarterly installments over the three year period thereafter. Equity awards to our named executive officers after the initial grants 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 annual option awards vest over four years in 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.

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In December 2013, the compensation committee granted Dr. Brenner a stock option to purchase 600,000 shares of our common stock, effective upon his commencement of employment with us. In determining the size of this initial stock option award, the compensation committee considered the 2013 market data presented by Radford and the equity holdings of our other executive officers. As part of the negotiation of Dr. Brenner's compensation arrangements, the committee agreed that this stock option award would vest with respect to 25% of the shares subject to the option on the first anniversary of commencement of employment and with respect to the balance of the shares subject to the option in 12 equal quarterly installments over the three year period thereafter, subject to Dr. Brenner's continued employment with us on each vesting date.

In December 2014, as part of its annual compensation and performance review, the compensation committee reviewed the 2014 market compensation data regarding annual option grants. In determining the size of these annual option awards, the compensation committee determined to target awards at the 50th percentile of the 2014 market compensation data provided by Radford. The compensation committee considered the Company's performance in 2014, the value of options then held by executive officers and Dr. Agrawal's recommendations with respect to the awards to be made to the other executive officers. In addition, in comparing the percentage ownership in our company that an option grant would represent to the market compensation data that had been provided by Radford, the compensation committee also considered the impact of outstanding warrants to purchase shares of our common stock. The compensation committee also determined to level the size of the option grants among the company's executive officers based on their roles with us. On this basis, the compensation committee granted Dr. Agrawal an option to purchase 850,000 shares of our common stock, Mr. Arcudi an option to purchase 200,000 shares of our common stock, Dr. Brenner an option to purchase 350,000 shares of our common stock and Dr. Arbeit an option to purchase 200,000 shares of our common stock. These option awards vest in equal quarterly installments over four years from the date of grant, subject to continued employment with us on each vesting date.

The compensation committee relied on the 2014 market compensation data in its determination of the initial stock option grants to each of Messrs. Milano and Wolf, which became effective at the times of their hiring in December 2014. Specifically, with respect to the size of the initial stock option grants to Messrs. Milano and Wolf, the compensation committee determined that options to purchase 2,000,000 and 600,000 shares of our common stock, respectively, were consistent with the 50th percentile of the 2014 market compensation data with respect to equity grants. These stock options vest with respect to 25% of the shares subject to the option on the first anniversary of each of Messrs. Milano's and Wolf's commencement of employment with us and with respect to the balance of the shares subject to the option in 12 equal quarterly installments over the three year period thereafter, subject to their respective continued employment with us on each vesting date.

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 2014, 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, other than Messrs. Milano and Wolf, 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

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the period during which the employee may exercise the options will be extended to the expiration of the term of the option under the applicable option agreement.

Our board adopted this policy for our employees in recognition of the importance of stock options to the compensation of employees and in order to provide each of our employees with the opportunity to get the full benefit of the options held by the employee in the event of his or her retirement 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.

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. None of our named executive officers participated in the employee stock purchase plan during 2014.

Severance and Change in Control Benefits

Under our employment agreements and employment offer letters with our named executive officers, we have agreed to provide severance and other 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.

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 Radford, 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 paid to each of our chief executive officer and our three other most highly compensated officers (other than the chief financial officer). 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 awarded to our executive officers 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.

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Vincent J. Milano

We are a party to an employment offer letter with Mr. Milano, our President and Chief Executive Officer. Under the employment offer letter, Mr. Milano is entitled to receive an annual base salary of \$600,000 or such higher amount as our compensation committee or our board of directors may determine. In addition, under the employment offer letter, Mr. Milano is eligible to receive an annual bonus of up to 50% of his base salary based on the achievement of both individual and company performance objectives as developed and determined by our board of directors.

Under the employment offer letter, if we terminate Mr. Milano's employment without cause, prior to a change-in-control, as such terms are defined in the agreement, he will be entitled to 24 months' severance and benefits continuation for the shorter of 24 months or the date his COBRA continuation coverage expires and to receive any bonus that he earned and that our board of directors approved prior to the termination to the extent not then paid. If we terminate Mr. Milano's employment without cause or Mr. Milano terminates his employment with us for good reason, as such terms are defined in the agreement, upon or within one year after a change in control, he will be entitled to 24 months' severance and benefits continuation for the shorter of 24 months or the date his COBRA continuation coverage expires and to receive any bonus that he earned and that our board of directors approved prior to the termination to the extent not then paid and the inducement option award that he received upon his commencement of employment with us will vest in full and become immediately exercisable. Our obligation to provide severance and benefits continuation to Mr. Milano following termination of his employment is subject to Mr. Milano's entering into a separation and release agreement.

Sudhir Agrawal, D. Phil.

We are a party to an employment agreement, as amended, with Dr. Agrawal, our President of Research and former 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, 2014, the term was extended from October 19, 2016 to October 19, 2017.

Under the agreement, Dr. Agrawal is currently entitled to receive an annual base salary of \$588,100 or such higher amount as our compensation committee or our board of directors may determine. In addition, under the agreement, as modified in December 2014, Dr. Agrawal is eligible to receive an annual bonus in an amount equal to 50% 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

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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, as such terms are defined in the agreement, 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.

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.

In connection with his transition to his new role of President of Research in December 2014, we and Dr. Agrawal agreed that his employment would continue to be subject to and on the terms and conditions set forth in his employment agreement but for the change in position and the modification of Dr. Agrawal's target bonus to be a fixed at 50% of base salary rather than the 20% to 70% of base salary range set forth in the employment agreement. In addition, Dr. Agrawal acknowledged and agreed that, notwithstanding anything to the contrary set forth in his employment agreement, the transition of his employment from President and Chief Executive Officer to President of Research, and the changes in his authority, duties, responsibilities and reporting structure associated with such event, would not constitute good reason, as defined in the employment agreement, and that he would not and could not terminate his employment for good reason on the basis of such event and changes.

In consideration of the foregoing agreements, we agreed that the vesting of any and all stock options then held by Dr. Agrawal would be accelerated such that, as of that date, such options would be deemed vested to the extent such options would have been vested had Dr. Agrawal continued to be employed by us on October 19, 2017, and any portion of such options that remained unvested after giving effect to such acceleration would continue to vest in accordance with their respective terms. This acceleration did not apply to the options granted to Dr. Agrawal in December 2014.

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. Under the employment letter, Mr. Arcudi is entitled to receive an annual base salary of \$337,400, which amount is subject to adjustment from time to time in accordance with

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normal business practices. In addition, under the employment letter, Mr. Arcudi is entitled to receive an annual bonus in an amount approved by our board or the compensation committee based on the achievement of both individual and company performance objectives as developed and determined by our board of directors.

Under the employment letter, 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 12 months following such termination payable in accordance with our then current payroll practices; and

continue to provide Mr. Arcudi with health and dental benefits for 12 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.

Louis Brenner

We were a party to an employment offer letter with Dr. Brenner, who served as our Senior Vice President and Chief Medical Officer from January 2014 to April 2015. Under the terms of the employment offer letter, Dr. Brenner was entitled to receive an annual base salary of \$360,500 or such higher amount as our compensation committee or our board of directors determined. In addition, under the employment offer letter, Dr. Brenner was eligible to receive an annual bonus of up to 35% of his base salary based on the achievement of both individual and company performance objectives as established by our board of directors. Dr. Brenner's bonus for 2014 was guaranteed to be at least \$122,500 for 2014 if he remained employed by us through December 31, 2014. The employment offer letter also provided severance and other benefits in the event of the termination of his employment under specified circumstances. No severance or other benefits were owed in connection with his resignation of employment with us in April 2015.

John Peter Wolf, III

We were a party to an employment offer letter with Mr. Wolf, who served as our Senior Vice President, General Counsel from December 2014 to March 2015. Under the terms of the employment offer letter, Mr. Wolf was entitled to receive an annual base salary of \$360,000 or such higher amount as our compensation committee or our board of directors determined. In addition, under the employment offer letter, Mr. Wolf was eligible to receive an annual bonus of up to 35% of his base salary based on the achievement of both individual and company performance objectives as established by our board of directors. The employment offer letter also provided severance and other benefits in the event of the termination of his employment under specified circumstances. No severance or other benefits were owed in connection with his resignation of employment with us in March 2015.

Robert D. Arbeit

Dr. Arbeit served as our Vice President, Clinical Development from August 2009 to January 2015. In connection with his transition into a consulting role with us, in January 2015, we entered into a consulting agreement with Dr. Arbeit. Pursuant to the consulting agreement, Dr. Arbeit has agreed to provide consulting services to us through July 31, 2015, unless terminated by either Dr. Arbeit or us at an earlier date, and we have agreed to pay Dr. Arbeit a consulting fee of \$175 per hour, not to exceed \$1,400 per day and \$14,000 per month. These fees are payable pursuant to the consulting agreement based upon services actually performed. We and Dr. Arbeit may each terminate the consultation period upon 30 days' prior written notice.

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Formal Clawback Policy

In April 2015, ahead of any such requirement in the Dodd-Frank Wall Street Reform and Consumer Protection Act, our compensation committee adopted a formal clawback policy, which will apply in the event we are required to prepare an accounting restatement after the adoption of the clawback policy due to any material noncompliance with any financial reporting requirement under the U.S. federal securities laws. This policy requires us to use reasonable efforts to recover from any of our current or former executive officers who receive incentive-based compensation (including stock options awarded as compensation) during the three-year period preceding the date on which we are required to prepare an accounting restatement based on erroneous data, the excess of what would have been paid to such executive officer under the accounting restatement.

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

Kelvin Neu

Eve E. Slater

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The table below summarizes compensation paid to or earned by our named executive officers for 2014, 2013 and 2012.

Summary Compensation Table for Fiscal Year 2014

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Option Awards \$(1)	All Other Compensation \$(2)	Total (\$)
Vincent J. Milano(3) President and Chief Executive Officer	2014	50,000		3,977,400	2,138	4,029,538
Sudhir Agrawal, D. Phil.(4) Former President and Chief Executive Officer and Current President of Research	2014	570,960	285,480	2,153,475	32,681	3,042,596
	2013	549,000	274,500	1,875,425	31,589	2,730,514
	2012	549,000		24,019	75,447	648,466
Louis J. Arcudi, III Senior Vice President of Operations, Chief Financial Officer, Treasurer and Secretary	2014	327,600	98,300	506,700	29,690	962,290
	2013	315,000	94,500	581,957	31,033	1,022,490
	2012	315,000			43,523	358,523
Louis Brenner, M.D.(5) Former Senior Vice President and Chief Medical Officer	2014	346,023	150,500	2,836,965	13,136	3,346,624
John Peter Wolf, III(6) Former Senior Vice President and General Counsel	2014	20,455		1,520,100	1,720	1,542,275
Robert D. Arbeit, M.D.(7) Former Vice President, Clinical Development	2014	312,000	93,600	506,700	12,071	924,371
	2013	300,000	90,000	382,819	11,801	784,620
	2012	300,000			11,968	311,968

(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, 2014 regarding assumptions we made in determining the fair value of option awards.

(2) All Other Compensation for 2014 for each of the named executive officers includes the following:

	Premiums paid by us for all insurance plans (\$)	Company match on 401(k) (\$)
Mr. Milano	2,138	
Dr. Agrawal	24,881	7,800
Mr. Arcudi	21,890	7,800
Dr. Brenner	5,336	7,800
Mr. Wolf	1,720	
Dr. Arbeit	4,271	7,800

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- (3) Mr. Milano joined our company and became our President and Chief Executive Officer effective as of December 1, 2014.
- (4) Dr. Agrawal transitioned from the role of President and Chief Executive Officer to the role of President of Research effective as of December 1, 2014.
- (5) Dr. Brenner served as our Senior Vice President and Chief Medical Officer from January 2014 until his resignation, effective as of April 3, 2015.
- (6) Mr. Wolf served as our Senior Vice President and General Counsel from December 2014 until his resignation, effective as of March 27, 2015.

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(7) Dr. Arbeit ceased serving as an executive officer of our company effective as of June 10, 2014, but remained an employee until his resignation, effective as of January 30, 2015. Since his resignation, he has served as a consultant to us. Compensation reported includes compensation received by Dr. Arbeit as an employee of the company.

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 our named executive officers during 2014.

Grants of Plan-Based Awards for Fiscal Year 2014

Name	Grant Date	Date of Approval of Grant if Different from Grant Date	All Other Option Awards: Number of Securities Underlying Options (#)(1)	Exercise or Base Price of Option Awards (\$/Sh)	Grant Date Fair Value of Option Awards (\$)(2)
Vincent J. Milano	12/1/2014(3)	11/24/2014	2,000,000	3.12	3,977,400
Sudhir Agrawal, D. Phil.	12/10/2014(4)		850,000	3.97	2,153,475
Louis J. Arcudi, III	12/10/2014(4)		200,000	3.97	506,700
Louis Brenner, M.D.	1/6/2014(4)	12/30/2013	600,000	5.04	1,950,240
	12/10/2014(4)		350,000	3.97	886,725
John Peter Wolf, III	12/10/2014(3)		600,000	3.97	1,520,100
Robert D. Arbeit, M.D.	12/10/2014(4)		200,000	3.97	506,700

- (1) The term of these options is ten years. The vesting of these stock options is time-based. 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 options in the event of the termination of employment and/or a change of control.
- (2) Represents the aggregate grant date fair value of option awards made to the named executive officers in 2014 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 2014. See Note 2(j) to the financial statements in our annual report on Form 10-K for the year ended December 31, 2014 regarding assumptions we made in determining the fair value of option awards.
- (3) Granted as an inducement grant pursuant to Nasdaq Listing Rule 5635(c)(4).
- (4) Granted pursuant to our 2013 Stock Incentive Plan.

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The following table sets forth information regarding the outstanding stock options held by our named executive officers as of December 31, 2014. None of our named executive officers held shares of unvested restricted stock as of December 31, 2014.

Outstanding Equity Awards at Fiscal Year-End for 2014

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date
Vincent J. Milano		2,000,000(1)	3.12	12/1/2024
Sudhir Agrawal, D. Phil.(2)	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
	300,000		5.24	12/23/2019
	231,000		2.74	12/27/2020
	365,000		1.157	11/28/2021
	25,551		1.16	11/28/2021
	500,000		0.69	5/22/2023
	500,000		1.50	8/16/2023
	796,875(3)	53,125(3)	2.56	12/10/2023
		850,000(4)	3.97	12/10/2024
Louis J. Arcudi, III	80,000		12.25	12/3/2017
	40,000		8.70	12/16/2018
	110,000		5.24	12/23/2019
	95,000		2.74	12/27/2020
	122,000(5)	24,000(5)	1.157	11/28/2021
	139,333(6)	209,000(6)	0.69	5/22/2023
	75,000(3)	225,000(3)	2.56	12/10/2023
		200,000(4)	3.97	12/10/2024
Louis Brenner, M.D.		600,000(7)	5.04	1/6/2024
		350,000(4)	3.97	12/10/2024
John Peter Wolf, III		600,000(8)	3.97	12/10/2024
Robert D. Arbeit, M.D.	40,000		6.43	8/3/2019
	17,000		5.24	12/23/2019
	72,500		2.74	12/27/2020
	91,499(5)	18,001(5)	1.157	11/28/2021
	87,100(6)	130,650(6)	0.69	5/22/2023
	50,000(3)	150,000(3)	2.56	12/10/2023
		200,000(4)	3.97	12/10/2024

(1) The shares subject to this option vest as follows:

25% of the shares subject to the option vest on the first anniversary of the date of grant; and

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6.25% of the shares subject to the option vest quarterly from the first anniversary of the date of grant until December 1, 2018 when all shares will be vested.

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- (2) Pursuant to our December 2014 letter agreement with Dr. Agrawal, the vesting of all stock options held by Dr. Agrawal as of the letter date was accelerated to the extent that such options would have been vested had Dr. Agrawal continued to be employed by us on October 19, 2017. Stock options that remained unvested after giving effect to this acceleration continue to vest in accordance with the terms of the underlying stock option agreement. 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. 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 10, 2017 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) 6.25% of the shares subject to this option vest quarterly from the date of grant until December 10, 2018 when all shares will be vested.
- (5) The shares subject to this option vest as follows:

25% of the shares subject to the option vest over four years in 16 equal quarterly installments with the first installment vesting February 28, 2012;

25% of the shares subject to the option vested on November 28, 2012;

50% of the shares subject to the option were scheduled to 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.

The period for performance of the specified performance milestones expired in June 2013. As of such expiration 46% of the shares subject to performance based vesting had begun vesting as a result of the achievement of specified performance milestones, and the remaining 54% of the shares subject to performance based vesting had expired. The total number of shares subject to the option equals the sum of the figures in the exercisable and unexercisable columns.

- (6) The shares subject to this option vest as follows:

40% of the shares subject to the option vest on the first anniversary of the date of grant; and

20% of the shares subject to the option vest on each of the second, third and fourth anniversaries of the date of grant. The total number of shares subject to the option equals the sum of the figures in the exercisable and unexercisable columns.

- (7) The shares subject to this option vest as follows:

25% of the shares subject to the option vest on the first anniversary of the date of grant; and

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6.25% of the shares subject to the option vest quarterly from the first anniversary of the date of grant until January 6, 2018 when all shares will be vested.

(8) The shares subject to this option vest as follows:

25% of the shares subject to the option vest on the first anniversary of the date of grant; and

6.25% of the shares subject to the option vest quarterly from the first anniversary of the date of grant until December 10, 2018 when all shares will be vested.

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Table of Contents**Option Exercises and Stock Vested**

None of our named executive officers exercised any options during the year ended December 31, 2014.

Potential Payments Upon Termination or Change in Control

Under our employment agreement and employment offer letters with our executive officers, we have agreed to provide severance and other benefits in the event of the termination of their employment under specified circumstances. These agreements are described above under the caption *Agreements with our Named Executive Officers*. None of Dr. Arbeit, Dr. Brenner or Mr. Wolf was entitled to any severance benefits following the termination of their employment with our company. Certain of our named executive officers are 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, 2014. 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 a Change in Control

Name	Severance Payments (\$)	Bonus Amount (\$)	Value of Accelerated Vesting of Stock Options (\$)(1)	Value of Continuation of Benefits (\$)	Total (\$)
Vincent J. Milano(2)	1,200,000			33,539(3)	1,233,539
Sudhir Agrawal, D. Phil.(4)	1,141,920	274,500	247,980	51,323(5)	1,715,723
Louis J. Arcudi, III(6)	327,600			16,126(3)	343,726
Louis Brenner, M.D.(7)	350,000	120,500		2,054(3)	472,554
John Peter Wolf, III(8)	360,000			22,360(3)	382,360
Robert D. Arbeit, M.D.					

- (1) Calculated by multiplying the number of shares subject to in-the-money options for which vesting would be accelerated by the excess of \$4.41, the closing price of our common stock on December 31, 2014, over the per share exercise prices for such options.
- (2) Following the termination of Mr. Milano's employment without cause, Mr. Milano will be entitled to 24 months' severance and benefits continuation for the shorter of 24 months or the date his COBRA continuation coverage expires and to receive any bonus that he earned and that our board of directors approved prior to the termination to the extent not then paid. See *Agreements with our Named Executive Officers* for further information about acceleration of vesting and severance payments.
- (3) This amount represents the estimated cost to us of continuing the named executive officer's healthcare and dental insurance benefits for the shorter of the severance period applicable to such named executive officer or the date his COBRA continuation coverage expires, in each case based on our costs for such benefits at December 31, 2014.
- (4) 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

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- 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.
- (5) 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, 2014.
- (6) 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.
- (7) Following the termination of Dr. Brenner's employment without cause, Dr. Brenner would have been entitled to 12 months' severance and benefits continuation and to receive any bonus that he earned and that our board of directors approved prior to the termination to the extent not then paid. Dr. Brenner's employment with us terminated in April 2015 and no severance or other benefits were owed in connection therewith. See *Agreements with our Named Executive Officers* for further information about acceleration of vesting and severance payments.
- (8) Following the termination of Mr. Wolf's employment without cause, Mr. Wolf would have been entitled to 12 months' severance and benefits continuation and to receive any bonus that he earned and that our board of directors approved prior to the termination to the extent not then paid. Mr. Wolf's employment with us terminated in March 2015 and no severance or other benefits were owed in connection therewith. See *Agreements with our Named Executive Officers* for further information about acceleration of vesting and severance payments.

Termination of Employment 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 in connection with or following a change in control of our company if the change of control occurred on December 31, 2014 and the named executive officer's employment was immediately terminated and an estimate regarding any gross-up payments for certain taxes in the event that any payments made in connection with a change in control of our company would be subject to excise tax imposed by Section 4999 of the Code. 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 a Change in Control

Name	Severance Payments (\$)	Bonus Amount (\$)	Value of Accelerated Vesting of Stock Options (\$)(1)	Value of Continuation of Benefits (\$)(2)	Tax Gross-Up Payments (\$)	Total (\$)
Vincent J. Milano(2)	1,200,000		2,580,000	33,539(3)		3,813,539
Sudhir Agrawal, D. Phil.(4)	1,141,920	274,500	460,560	51,323(5)	1,105,184	3,033,487
Louis J. Arcudi, III(6)	327,600		78,072	16,126(3)		421,798
Louis Brenner, M.D.(7)	350,000	120,500		2,054(3)		472,554
John Peter Wolf, III(8)	360,000		264,000	22,360(3)		646,360
Robert D. Arbeit, M.D.			58,557			58,557

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- (1) Calculated by multiplying the number of shares subject to in-the-money options for which vesting would be accelerated by the excess of \$4.41, the closing price of our common stock on December 31, 2014, and the per share exercise prices for such options.
- (2) Following the termination of Mr. Milano's employment without cause or if Mr. Milano terminates his employment with us for good reason, upon or within one year after a change in control, he will be entitled to 24 months' severance and benefits continuation for the shorter of 24 months or the date his COBRA continuation coverage expires and to receive any bonus that he earned and that our board of directors approved prior to the termination to the extent not then paid and the inducement option award that he received upon his commencement of employment with us will vest in full and become immediately exercisable. See Agreements with our Named Executive Officers for further information about acceleration of vesting and severance payments.
- (3) Represents the estimated cost to us of continuing the named executive officers' healthcare and dental insurance benefits for the shorter of the severance period applicable to such named executive officer or the date his COBRA continuation coverage expires, in each case based on our costs for such benefits at December 31, 2014.
- (4) 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.
- (5) 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, 2014.
- (6) 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.
- (7) Following the termination of Dr. Brenner's employment without cause or if Dr. Brenner terminated his employment with us for good reason, upon or within one year after a change in control, he would have been entitled to 12 months' severance and benefits continuation and to receive any bonus that he earned and that our board of directors approved prior to the termination to the extent not then paid and the option award that he received upon his commencement of employment with us would have vested in full and become immediately exercisable. Dr. Brenner's employment with us terminated in April 2015 and no severance or other benefits were owed in connection therewith. See Agreements with our Named Executive Officers for further information about acceleration of vesting and severance payments.
- (8) Following the termination of Mr. Wolf's employment without cause or if Mr. Wolf terminated his employment with us for good reason, upon or within one year after a change in control, he would have been entitled to 12 months' severance and benefits continuation and to receive any bonus that he earned and that our board of directors approved prior to the termination to the extent not then paid and the inducement option award that he received upon his commencement of employment with us would have vested in full and become immediately exercisable. Mr. Wolf's employment with us terminated in March 2015 and no severance or other benefits were owed in connection therewith. See Agreements with our Named Executive Officers for further information about acceleration of vesting and severance payments.

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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, 2014. In addition, from time to time, we grant inducement grants pursuant to Nasdaq Listing Rule 5635(c)(4).

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options and Warrants (a)	Weighted-Average Exercise Price of Outstanding Options and Warrants (b)	Number of Securities Remaining Available For Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a)) (c)
Equity compensation plans approved by stockholders(1)	14,356,482	\$ 3.60	2,799,451
Equity compensation plans not approved by stockholders(2)	2,600,000	\$ 3.32	
Total	16,956,482	\$ 3.56	2,799,451

(1) Consists of our:

1995 Employee Stock Purchase Plan;

1995 Director Stock Option Plan;

1997 Stock Incentive Plan;

2005 Stock Incentive Plan;

2008 Stock Incentive Plan; and

2013 Stock Incentive Plan.

Shares are available for future issuance only under our 1995 Employee Stock Purchase Plan and our 2013 Stock Incentive Plan.

(2) Consists of stock options issued as inducement grants as of December 31, 2014. These stock options are generally subject to the same terms and conditions as those awarded pursuant to the plans approved by our stockholders.

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PROPOSAL TWO

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. Consistent with the preference expressed by our stockholders at our 2011 annual meeting of stockholders, we have determined to hold an advisory vote on executive compensation annually.

The compensation committee of our board of directors 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 the 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, 2014.

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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.

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As an advisory vote, this proposal is not binding. The outcome of this advisory vote will not overrule any decision by us 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

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

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PROPOSAL THREE

AMENDMENT OF 2013 STOCK INCENTIVE PLAN

Our 2013 Stock Incentive Plan was adopted by our board of directors in May 2013 and was approved by our stockholders in July 2013. In April 2014 our board of directors adopted and in June 2014 our stockholders approved an amendment to increase the number of shares authorized to be issued pursuant to awards granted under the 2013 Stock Incentive Plan by 6,000,000 shares. In April 2015 our board of directors adopted an amendment, or the Amendment, to the 2013 Stock Incentive Plan, subject to stockholder approval, to:

increase the number of shares of common stock authorized for issuance under the 2013 Stock Incentive Plan by 5,000,000 shares, plus such additional number of shares (up to 1,226,438) as is equal to the number of shares of common stock subject to awards granted under our 2005 Stock Incentive Plan which awards expire, terminate or are otherwise surrendered, cancelled, forfeited or repurchased by us at their original issue price pursuant to a contractual repurchase right;

provide that no new award granted under our 2013 Stock Incentive Plan may vest earlier than the first anniversary of its date of grant; provided, however, that this minimum vesting requirement will not apply to an aggregate of up to 5% of the maximum number of shares of our common stock authorized for issuance under the 2013 Stock Incentive Plan; and

provide that no new award granted under our 2013 Stock Incentive Plan may be amended to make such award immediately exercisable in full or in part, free from some or all of the restrictions or conditions applicable to the award, except upon the death or disability of the award holder or in connection with an acquisition of our company or if required under any contractual obligation or policy of the Company in effect as of April 13, 2015.

A copy of the Amendment is attached as Appendix A to this Proxy Statement and is incorporated herein by reference. All other provisions of the 2013 Stock Incentive Plan will remain in full force and effect. A copy of the 2013 Stock Incentive Plan, as amended by the Amendment, is attached as Appendix B to this Proxy Statement.

If the Amendment is approved, the total number of shares of common stock authorized for issuance under the 2013 Stock Incentive Plan would be 15,224,460 shares, plus such additional number of shares of common stock (up to 6,946,978) shares) as is equal to the number of shares of common stock subject to awards granted under our 2005 Stock Incentive Plan or 2008 Stock Incentive Plan which awards expire, terminate or are otherwise surrendered, cancelled, forfeited or repurchased by us at their original issuance price pursuant to a contractual repurchase right.

As of April 13, 2015, options to purchase 7,450,858 shares of common stock were outstanding under the 2013 Stock Incentive Plan, 44,929 shares had been issued to non-employee directors in lieu of the payment of cash board fees and an additional 2,970,657 shares were available for issuance pursuant to future awards under the 2013 Stock Incentive Plan (plus such additional number of shares of common stock as is equal to 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, forfeited or repurchased by us at their original issue price pursuant to a contractual repurchase right). In consideration of the limited number of shares remaining available for issuance under the 2013 Stock Incentive Plan and our need for equity compensation to maintain a competitive position in attracting, retaining and motivating key personnel, our board of directors adopted the Amendment. In calculating the size of the increase in the authorized number of shares issuable under the 2013 Stock Incentive Plan, our board of directors considered, among other things, our hiring plans and expected number of employees, our historic share usage under our stock incentive plans, our burn rate, our current overhang in shares issuable upon exercise of outstanding awards granted under our stock incentive plans or as inducement grants, the existing terms of such outstanding awards and assumptions regarding stock option exercise activity and forfeiture rates.

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If stockholders approve the Amendment, we will have 7,970,657 shares of common stock available for issuance pursuant to future awards under the 2013 Stock Incentive Plan (plus such additional number of shares of common stock as is equal to the number of shares of common stock subject to awards granted under our 2005 Stock Incentive Plan or 2008 Stock Incentive Plan which awards expire, terminate or are otherwise surrendered, cancelled, forfeited or repurchased by us at their original issue price pursuant to a contractual repurchase right). We expect that this number of shares available for issuance, given our historical and projected utilization and assuming relative stock price stability, will meet our grant needs until approximately the second half of 2016. This time period assumes that no shares will expire, terminate or otherwise be surrendered, cancelled, forfeited or repurchased by us at their original issue price pursuant to a contractual repurchase right under our 2005 Stock Incentive Plan or 2008 Stock Incentive Plan.

Burn rate provides a measure of the potential dilutive impact of the equity awards we grant. Set forth below is a table that reflects our burn rate for 2012, 2013 and 2014, as well as the average over those years.

Fiscal Year	Equity Awards Granted	Basic Weighted Average Number of Shares of Common Stock Outstanding	Gross Burn Rate (1)
2014	8,232,424	82,827,373	9.94%
2013	5,072,583	43,906,048	11.55%
2012	187,500	27,639,351	0.68%
Three-Year Average			7.39%

(1) Gross Burn Rate is defined as the number of equity awards granted in the year divided by the basic weighted average of shares of common stock outstanding.

Overhang provides a measure of the potential dilutive effect of all outstanding equity awards and shares available for future grant. We calculated overhang as the total number of options outstanding, plus shares available to be granted, divided by the total shares of common stock outstanding. Our overhang at December 31, 2014 was 20.5%, and our overhang at April 13, 2015 was 16.5%. If the 5,000,000 additional shares proposed to be authorized for issuance under our 2013 Stock Incentive Plan are included in the calculations our overhang would have been 25.8% at December 31, 2014 and 20.7% at April 13, 2015. If we add the shares of common stock issuable upon exercise of our pre-funded warrants to our total shares of common stock outstanding, our overhang would have been 16.6% at December 31, 2014 and 13.9% at April 13, 2015.

The only equity compensation plans from which we may issue new awards are our 1995 Employee Stock Purchase Plan and our 2013 Stock Incentive Plan. We may also issue new awards as inducement grants. The following table summarizes information regarding all of our outstanding options under all of our equity compensation plans and shares available for future awards under all of our equity plans as of April 13, 2015.

	April 13, 2015*
Total shares of common stock underlying all outstanding options	13,850,421
Weighted-average exercise price of outstanding options	\$ 3.56
Weighted-average remaining contractual life of outstanding options (in years)	7.39
Total shares available for future awards	2,970,657

* Excludes shares available through our 1995 Employee Stock Purchase Plan and inducement awards granted pursuant to Nasdaq Listing Rule 5835(c)(4).

Recommendation of the Board of Directors

Our board of directors recommends that stockholders vote to approve the amendment to our 2013 Stock Incentive Plan by voting FOR this proposal.

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Summary of the 2013 Stock Incentive Plan, as amended

The following summary of the 2013 Stock Incentive Plan, as amended, is qualified in its entirety by reference to the 2013 Stock Incentive Plan, a copy of which is attached hereto as Appendix B. 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, and assuming the Amendment is approved by our stockholders, Awards may be made under the 2013 Stock Incentive Plan for up to 15,224,460 shares of common stock, plus such additional number of shares of common stock (up to 6,946,978 shares) as is equal to the number of shares of common stock subject to awards granted under our 2005 Stock Incentive Plan or 2008 Stock Incentive Plan which awards expire, terminate or are otherwise surrendered, cancelled, 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 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 from the exercise of an Award shall not increase the number of shares of common stock available for future grant of Awards under the 2013 Stock Incentive Plan.

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 (described below) and 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

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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.

Certain sub-limitations apply to the shares of common stock 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.

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. Only our employees or employees of our subsidiaries, if any, may receive incentive stock options as defined in Section 422 of the Code. An option that is not intended to be an incentive stock option is a nonstatutory stock option. 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, in connection with a cashless exercise through a broker, (ii) to the extent 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 by applicable law and provided for 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

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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 otherwise 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 substitute Awards described above) 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.

Other Stock-Based Awards. Under the 2013 Stock Incentive Plan, our board of directors may grant 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 upon our common stock or other property, having such terms and conditions as the board of

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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;

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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.

Table of Contents*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 April 13, 2015, approximately 51 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 April 28, 2015, the last reported sale price of our common stock on the Nasdaq Capital Market was \$3.01 per share.

Options Granted under the Existing Plan

Since the approval of the 2013 Stock Incentive Plan in 2013 through April 13, 2015, the following number of stock options have been granted to the individuals and groups described in the table. No other options have been granted to any other individuals or groups under the 2013 Stock Incentive Plan.

Name of Beneficial Owner	Number of Shares of Common Stock Underlying Options Granted under the 2013 Stock Incentive Plan
Named Executive Officers	
Vincent J. Milano (President and Chief Executive Officer)(1)	
Sudhir Agrawal, D. Phil. (Former President and Chief Executive Officer and Current President of Research)	2,200,000
Louis J. Arcudi, III (Senior Vice President of Operations, Chief Financial Officer, Treasurer and Secretary)	500,000
Louis Brenner, M.D. (Former Senior Vice President and Chief Medical Officer)	950,000
John Peter Wolf, III (Former Senior Vice President and General Counsel)(1)	
Robert D. Arbeit, M.D. (Former Vice President, Clinical Development)	400,000
All current executive officers as a group(2)	2,700,000
All directors (who are not executive officers) as a group	882,500
Nominees for director	
Julian C. Baker	105,000
James A. Geraghty	92,500
All other employees, including all current officers who are not executive officers, as a group	3,971,924

(1) Received an inducement award granted pursuant to Nasdaq Listing Rule 5835(c)(4).

(2) All current reporting officers under Section 16(a) of the Securities and Exchange Act of 1934, as amended.

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.

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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 or measurement price of Awards, if any;

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.

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.

No Award granted after April 13, 2015 under the 2013 Stock Incentive Plan may vest earlier than the first anniversary of its date of grant. This vesting limitation does not apply to (i) Awards granted on or prior to April 13, 2015 and (ii) Awards granted after April 13, 2015 representing an aggregate of up to 5% of the maximum number of authorized shares available for issuance under the 2013 Stock Incentive Plan. In addition, the 2013 Stock Incentive Plan prohibits our Board from amending any Award granted after April 13, 2015 to make such Award 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 (i) to the extent required under any contractual obligation or other policy of Idera in effect on April 13, 2015, (ii) upon the death or disability of the participant or (iii) upon the merger, consolidation, reorganization, recapitalization or change in control of Idera or as a result of any other circumstance described below under the heading Reorganization Events.

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 and any outstanding awards under the 2013 Stock Incentive Plan and the share counting rules and sub-limits set forth in 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.

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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, the minimum vesting rules and exclusions thereto, the prohibitions on acceleration of vesting and exclusions thereto, or actions requiring stockholder 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 all of 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

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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.

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

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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 became effective on July 26, 2013, the date the plan was 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 at a loss (sales proceeds are less than the exercise price), then the loss will be a capital loss. This capital loss 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

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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.

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PROPOSAL FOUR

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, 2015. Ernst & Young LLP has served as our independent registered public accounting firm 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 2015 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 2015 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

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, 2015.

ACCOUNTING MATTERS

Report of the Audit Committee

The audit committee has reviewed our audited financial statements for the fiscal year ended December 31, 2014 and discussed them with our management and our independent registered public accounting firm.

The audit committee has also received from, and discussed with, our independent registered public accounting firm various communications that our independent registered public accounting firm is required to provide to the audit committee, including the matters required to be discussed by the Auditing Standard No. 16, Communication with Audit Committees, as adopted by the Public Company Accounting Oversight Board.

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, 2014.

By the audit committee of the board of directors,

William S. Reardon, Chairman

James Geraghty

Robert W. Karr

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We paid Ernst & Young LLP a total of \$628,650 for professional services rendered for the year ended December 31, 2014 and \$510,425 for professional services rendered for the year ended December 31, 2013. The following table provides information about these fees.

Fee Category	2014	2013
Audit Fees	\$ 458,000	\$ 305,500
Audit-Related Fees	50,000	183,500
Tax Fees	120,650	21,425
All Other Fees		
Total Fees	\$ 628,650	\$ 510,425

Audit Fees

Audit fees consist of fees for the audit of our financial statements, 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 and assistance with financings.

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 \$22,000 of the total tax fees billed in 2014 and 2013. Tax advice and tax planning services primarily relate to consultations on our net operating loss carry forwards.

All Other Fees

Ernst & Young LLP did not collect fees for any other services for 2014 or 2013.

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 independent registered public accounting firm. This policy generally provides that we will not engage our independent registered public accounting firm to render audit or non-audit services unless the service is specifically approved in advance by the audit committee or the engagement is entered into pursuant to 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 independent 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 Fees](#), [Audit-Related Fees](#), [Tax Fees](#) and [All Other Fees](#) were pre-approved by our audit committee.

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TRANSACTIONS WITH RELATED PERSONS

Since January 1, 2014, except as discussed below regarding transactions with 667, L.P., Baker Brothers Life Sciences, L.P. and 14159, L.P., which we refer to collectively as the Funds, which are affiliated with Mr. Baker and Dr. Neu, who are currently members of our board of directors, 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.

Public Offerings

February 2014 Offering

On February 10, 2014, we consummated an underwritten public offering of (i) 7,867,438 shares of our common stock, and (ii) pre-funded warrants to purchase up to 2,158,750 shares of our common stock at an exercise price of \$0.01 per share, which we refer to as the February 2014 Offering. The gross proceeds to us from this offering were approximately \$40.1 million, before deducting underwriting discounts and commissions and other estimated offering expenses payable by us and excluding the proceeds, if any, from the exercise of warrants.

Certain affiliates of the Funds participated in the February 2014 Offering and purchased in the aggregate 341,250 shares of our common stock and pre-funded warrants to purchase up to 2,158,750 shares of our common stock for an aggregate purchase price of \$9,978,410.

February 2015 Offering

On February 19, 2015, we consummated an underwritten public offering of 23,000,000 shares of our common stock, which we refer to as the February 2015 Offering. The gross proceeds to us from this offering were approximately \$86.25 million, before deducting underwriting discounts and commissions and other offering expenses payable by us.

Certain affiliates of the Funds participated in the February 2015 Offering and purchased in the aggregate 5,333,333 shares of our common stock for an aggregate purchase price of \$19,999,999.

Registration Rights Agreement

On February 9, 2015, we entered into a registration rights agreement with the Funds relating to the registration for resale of the shares of our common stock held by the Funds, including the shares of our common stock that may be issued upon the exercise of warrants. We refer to these securities collectively as the Registrable Shares.

Under the registration rights agreement, we agreed to file a registration statement on Form S-3 with the SEC within 60 days after demand by any of the Funds, to register for resale the Registrable Shares. We also agreed to use our reasonable best efforts to cause the registration statement to become effective as promptly as practicable after filing, and to remain effective until the shares being registered thereunder have been sold or may be sold freely without limitations or restrictions as to volume or manner of sale pursuant to Rule 144.

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The registration rights agreement contains customary covenants and agreements by us, customary indemnification obligations of us and the Funds, including for liabilities under the Securities Act of 1933, as amended. The registration rights agreement terminates upon the occurrence of certain events, including when all Registrable Shares have been sold pursuant to an effective registration statement or when all Registrable Shares have been or may be sold without limitations as to volume or manner of sale pursuant to Rule 144.

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 2014 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 Pillar Invest Corp., certain of its affiliates and Mr. El Zein on February 11, 2014 to report the conversion of shares of our Series D convertible preferred stock into shares of our common stock, which filing was filed late due to administrative error.

By order of the board of directors,

Louis J. Arcudi, III, Secretary

April 29, 2015

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APPENDIX A

AMENDMENT TO
IDERA PHARMACEUTICALS, INC.
2013 STOCK INCENTIVE PLAN, AS AMENDED

WHEREAS, Idera Pharmaceuticals, Inc. (the *Company*) desires to amend the Idera Pharmaceuticals, Inc. 2013 Stock Incentive Plan, as amended (the *2013 Plan*), in the manner set forth below (the *Amendment*); and

WHEREAS, on April 13, 2015, subject to stockholder approval, the Board of Directors of the Company approved the Amendment.

NOW THEREFORE, in accordance with Section 11(d) of the 2013 Plan, the 2013 Plan is hereby amended as follows:

1. Section 4(a) of the 2013 Plan is hereby amended by deleting subsection (1) thereof in its entirety and substituting the following in lieu thereof:

(1) **Authorized Number of Shares**. 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) 15,224,460 shares of Common Stock; plus

(B) such additional number of shares of Common Stock (up to 6,946,978 shares) as is equal to the sum of the number of shares of Common Stock subject to awards granted under the Company's 2005 Stock Incentive Plan (the *2005 Plan*) or the Company's 2008 Stock Incentive Plan (the *2008 Plan* and, together with the 2005 Plan, the *Existing Plans*) 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. Section 10(f) of the 2013 Plan is hereby amended by deleting the first sentence thereof in its entirety and substituting the following in lieu thereof:

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, subject to Section 10(h), 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.

3. Section 10(h) of the 2013 Plan is hereby deleted in its entirety and replaced with the following:

(h) **Acceleration**. The Board may, at any time, provide that (i) any Award granted on or prior to April 13, 2015 shall become immediately exercisable in whole or in part, free of some or all of the restrictions or conditions applicable to such Award or otherwise realizable in whole or in part, as the case may be, and (ii) any Award granted after April 13, 2015 (a *New Award*) shall become immediately exercisable in whole or in part, free of some or all of the restrictions or conditions applicable to such New Award or otherwise realizable in whole or in part, as the case may be, solely (A) upon the death or disability of the Participant or (B) in connection with a change in control of the

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Company. Notwithstanding the foregoing, the Board may provide, at any time and for any reason, that any New Award shall become immediately exercisable in full or in part, free from some or all of the restrictions or conditions applicable to such New Award or otherwise realizable in full or in part, as the case may be, if required under any contractual obligation of the Company or other policy of the Company, in each case to the extent such obligation or policy is in effect on April 13, 2015.

4. A new Section 10(j) shall be added to the 2013 Plan, as follows:

(j) Limitations on Vesting. Subject to Section 10(h) and notwithstanding anything to the contrary in the Plan, no New Award shall vest earlier than the first anniversary of its date of grant. The foregoing sentence shall not apply to an aggregate of up to 5% of the maximum number of authorized shares set forth in Section 4(a)(1).

The Amendment shall be effective upon approval of the stockholders of the Company at the Company's 2015 annual meeting of stockholders and shall only be applicable with respect to Awards granted after such approval. If the Amendment is not so approved at such meeting, then the amendment to the 2013 Plan set forth herein shall be void ab initio.

Except as herein above provided, the 2013 Plan is hereby ratified, confirmed and approved in all respects.

Table of Contents**APPENDIX B**

The version of our 2013 Stock Incentive Plan below reflects the proposed changes in the Amendment (Appendix A) and as more fully described in Proposal Three. The text indicated by underline shows additions, and the text indicated by strikethrough shows deletions.

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) **Administration by Board of Directors**. 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) **Appointment of Committees**. 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) **Delegation to Officers**. 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

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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) Awards to Non-Employee Directors. 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.

4. Stock Available for Awards

(a) Number of Shares; Share Counting.

(1) Authorized Number of Shares. 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) ~~10,000,000~~ 15,224,460 shares of Common Stock; plus

(B) such additional number of shares of Common Stock (up to ~~5,945,000~~ 6,946,978 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~~ Company's 2005 Stock Incentive Plan (the *2005 Plan*) or the Company's 2008 Stock Incentive Plan (the *2008 Plan* and, together with the 2005 Plan, the *Existing Plans*) 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) Fungible Share Pool. 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;

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(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) Limit on Awards to Directors. 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) Substitute Awards. 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) General. 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

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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) **Duration of Options.** 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.

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(g) **Limitation on Repricing.** 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) **General.** 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) **Tandem Awards.** 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) **Independent SARs.** 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) **Measurement Price.** 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) **Duration of SARs.** 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) **Limitation on Repricing.** 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

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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) General. 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) Terms and Conditions for All Restricted Stock Awards. 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) Dividends. 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) Settlement. 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.

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(2) Voting Rights. A Participant shall have no voting rights with respect to any Restricted Stock Units.

(3) Dividend Equivalents. 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) General. 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) Terms and Conditions. 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) Definition. 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

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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 price thereof and any applicable tax withholdings) and (vi) any combination of the foregoing. In taking any of the actions permitted under this Section 9(b)(2), the Board shall not be obligated by the Plan to treat all Awards, all Awards held by a Participant, or all Awards of the same type, identically.

(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

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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) Transferability of Awards. 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) Documentation. 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) Board Discretion. 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) Termination of Status. 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 rates for federal and state tax purposes, including payroll taxes, that are applicable to such supplemental taxable income). Shares used to satisfy tax withholding requirements cannot be subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements.

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(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, subject to Section 10(h), 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) Acceleration. The Board may, at any time, provide that (i) any Award granted on or prior to April 13, 2015 shall become immediately exercisable in whole or in part, free of some or all of the restrictions or conditions, applicable to such Award or otherwise realizable in whole or in part, as the case may be, and (ii) any Award granted after April 13, 2015 (a "New Award") shall become immediately exercisable in whole or in part, free of some or all of the restrictions or conditions applicable to such New Award or otherwise realizable in whole or in part, as the case may be, solely (A) upon the death or disability of the Participant or (B) in connection with a change in control of the Company. Notwithstanding the foregoing, the Board may provide, at any time and for any reason, that any New Award shall become immediately exercisable in full or in part, free from some or all of the restrictions or conditions applicable to such New Award or otherwise realizable in full or in part, as the case may be, if required under any contractual obligation of the Company or other policy of the Company, in each case to the extent such obligation or policy is in effect on April 13, 2015.

(i) Performance Awards.

(1) Grants. 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) Committee. 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

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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.

(j) Limitations on Vesting. Subject to Section 10(h) and notwithstanding anything to the contrary in the Plan, no New Award shall vest earlier than the first anniversary of its date of grant. The foregoing sentence shall not apply to an aggregate of up to 5% of the maximum number of authorized shares set forth in Section 4(a)(1).

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.

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(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) **Authorization of Sub-Plans (including for Grants to non-U.S. Employees)**. 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) **Limitations on Liability**. 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

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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.

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Electronic Voting Instructions

Available 24 hours a day, 7 days a week!

Instead of mailing your proxy, you may choose one of the voting methods outlined below to vote your proxy.

VALIDATION DETAILS ARE LOCATED BELOW IN THE TITLE BAR.

Proxies submitted by the Internet or telephone must be received by 11:59 p.m., Eastern Time, on June 7, 2015.

Vote by Internet

Go to www.investorvote.com/IDRA

Or scan the QR code with your smartphone

Follow the steps outlined on the secure website

Vote by telephone

Call toll free 1-800-652-VOTE (8683) within the USA, US territories & Canada on a touch tone telephone

Using a **black ink** pen, mark your votes with an **x** as shown in this example. Please do not write outside the designated areas.

Follow the instructions provided by the recorded message

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

Proposals The Board of Directors recommends a vote FOR all the nominees listed and FOR Proposals 2 4.

1. Election of Directors: +

For Withhold

For Withhold

01 - Mr. Julian C. Baker " "

02 - Mr. James A. Geraghty " "

For Against Abstain

For Against Abstain

2. Approval, by non-binding vote, of executive compensation. " " "

3. Approval of an amendment to our 2013 Stock Incentive Plan to increase the number of shares authorized for issuance and make certain other changes related to the vesting of awards issued under our 2013 Stock Incentive Plan. " " "

4. Ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2015. " " "

B Non-Voting Items

Change of Address Please print new address below.

Comments Please print your comments below.

C Authorized Signatures This section must be completed for your vote to be counted. **Date and Sign Below** 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) below. / /	Please print date	Signature 1 within the box.	Please keep signature within the box.	Signature 2 within the box.	Please keep signature within the box.
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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 June 8, 2015

Those signing on the reverse side, revoking all prior proxies, hereby appoint(s) Mr. Vincent J. Milano 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 2015 Annual Meeting of Stockholders of Idera Pharmaceuticals, Inc. and at any adjournment or postponement 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 or postponement 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 STOCKHOLDER(S) SIGNING THE REVERSE SIDE AND IN THE DISCRETION OF THE PROXIES UPON ANY OTHER MATTERS WHICH PROPERLY COME BEFORE THE MEETING. IF NO INDICATION IS MADE, THE PROXIES SHALL VOTE FOR THE DIRECTOR NOMINEES AND FOR PROPOSALS NUMBERED 2, 3 AND 4.

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

YOUR VOTE IS IMPORTANT. PLEASE VOTE TODAY.