Dicerna Pharmaceuticals Inc Form FWP January 29, 2014

Issuer Free Writing Prospectus dated January 29, 2014

Filed Pursuant to Rule 433

Relating to the Preliminary Prospectus dated January 21, 2014 and

Registration Statement No. 333-193150

DICERNA PHARMACEUTICALS, INC.

This free writing prospectus relates only to the shares of common stock described below and should be read together with the preliminary prospectus, dated January 21, 2014 (Preliminary Prospectus), included in Amendment No. 2 to the Registration Statement on Form S-1 (File No. 333-193150) of Dicerna Pharmaceuticals, Inc., relating to its initial public offering of common stock. The Preliminary Prospectus has been updated by Amendment No. 4 to the Registration Statement filed with the Securities and Exchange Commission (SEC) on January 29, 2014. A copy of the most recent preliminary prospectus included in Amendment No. 4 to the Registration Statement can be accessed through the following link:

http://www.sec.gov/Archives/edgar/data/1399529/000119312514025536/d662742ds1a.htm.

This free writing prospectus contains certain information set forth in Amendment No. 4 to the Registration Statement and updates and, to the extent inconsistent therewith or prepared based on assumptions that are inconsistent with the information below, supersedes the information contained in the Preliminary Prospectus. All references to captions correspond to the Preliminary Prospectus unless otherwise specified. The information set forth in this free writing prospectus primarily relates to an increase in our assumed initial public offering price to \$14.00 per share, an increase in the shares of our common stock to be offered to 6,000,000 shares, an increase in the shares of common stock that may be purchased by the underwriters upon the exercise of their option to purchase additional shares, if any, to up to 900,000 shares, changes relating to the listing of common stock on The NASDAQ Global Select Market, updates to the proposed participation in the offering by certain of our existing stockholders, including certain affiliates of our directors, changes in response to comments from the staff of the SEC (Staff) set forth in a letter dated as of January 27, 2014, changes made in connection with a letter submitted by the Company to the SEC concurrently with the filing of Amendment No. 4 to the Registration Statement, an increase in the shares of common stock reserved for issuance pursuant to future awards under our 2014 Performance Incentive Plan to 1,900,000 shares, revisions of certain provisions in our amended and restated bylaws and other changes summarized below. As used in this free writing prospectus, unless otherwise noted, we, us, our and the Company refer to Dicerna Pharmaceuticals, Inc. and where appropriate, its consolidated subsidiary.

The following summarizes the information contained in Amendment No. 4 to the Registration Statement and supplements and updates the information contained in the Preliminary Prospectus.

Shares of common stock offered by us 6,000,000 shares.

Assumed initial public offering price \$14.00 per share.

immediately after this offering

Shares of common stock to be outstanding 16,627,660 shares, based on 10,627,660 shares of common stock outstanding as of December 31, 2013 (after giving effect to the conversion of all of our outstanding shares of preferred stock into an aggregate of 10,589,434 shares of common stock immediately prior to

the completion of the offering and assuming no exercise of the underwriters option to purchase additional shares).

Underwriters option to purchase additional shares of common stock in this offering

We have granted the underwriters a 30-day option to purchase up to 900,000 additional shares at the initial public offering price.

Use of proceeds

The Preliminary Prospectus has been updated to reflect that we estimate that the net proceeds from this offering will be approximately \$74.8 million, or approximately \$86.5 million if the underwriters exercise their option to purchase additional shares in full, based on the assumed initial public offering price of \$14.00 per share, after deducting the underwriting discounts and commissions and our estimated offering expenses. Our intended use of such net proceeds following the offering remain unchanged from that described in the section titled Use of Proceeds in the Preliminary Prospectus.

NASDAQ Global Select Market

The Preliminary Prospectus has been updated to reflect that our common stock has been approved for listing on The NASDAQ Global Select Market under the symbol DRNA.

Potential purchases by existing stockholders

The Preliminary Prospectus has been updated, including on the cover and in the sections titled The Offering, Risk Factors, Certain Relationships and Related Party Transactions and Principal Stockholders, to reflect that certain of our existing stockholders, including certain affiliates of our directors, have indicated an interest in purchasing up to \$48.0 million of shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, less or no shares in this offering to any of these stockholders, or any of these stockholders may determine to purchase more, less or no shares in this offering.

Pro forma as adjusted financial data

Our pro forma as adjusted balance sheet data set forth in the Preliminary Prospectus under the heading Summary Financial and Other Data in the section titled Prospectus Summary have been updated as set forth on Exhibit A attached hereto. Our pro forma as adjusted cash and cash equivalents and capitalization data set forth in the Preliminary Prospectus in the section titled Capitalization have been updated as set forth on Exhibit B attached hereto.

Capitalization

The Preliminary Prospectus has been updated to revise the section titled Capitalization as set forth on Exhibit B attached hereto.

Dilution

The Preliminary Prospectus has been updated to revise the disclosure on page 34 in the section titled Risk Factors and the section titled Dilution as set forth on Exhibit C attached hereto.

Stock-based compensation and common stock valuation

Certain disclosure in the section titled Management s Discussion and Analysis of Financial Condition and Results of Operations and the Notes to Financial Statements of the Preliminary Prospectus in relation to stock-based compensation and common stock valuation has been revised as set forth on Exhibit D attached hereto.

Business

The Preliminary Prospectus has been updated to revise certain disclosure in the section titled Business as set forth <u>on Exhibit</u> E attached hereto.

Executive and director compensation

The Preliminary Prospectus has been updated, including in the section titled Executive and Director Compensation as set forth on Exhibit F attached hereto, to reflect the increase in the number of shares of common stock authorized for issuance under our 2014 Performance Incentive Plan, which will become effective immediately prior to the completion of the offering, to 1,900,000 shares and to provide certain additional disclosure relating to our executive compensation.

Principal stockholders

The Preliminary Prospectus has been updated to revise the section titled Principal Stockholders as set forth on Exhibit G attached hereto.

Amended and restated bylaws

The Preliminary Prospectus has been updated, including in the sections titled Risk Factors, Management and Description of Capital Stock as set forth on Exhibit H attached hereto, to revise or add the disclosure of certain provisions in our amended and restated bylaws, which will come into effect immediately prior to the completion of this offering, as approved and adopted by our board of directors and stockholders.

Underwriting

The Preliminary Prospectus has been updated to revise the section titled Underwriting as set forth on Exhibit I attached hereto.

The Company has filed a registration statement (including a preliminary prospectus) with the SEC for the offering to which this communication relates. Before you invest, you should read the preliminary prospectus in that registration statement and other documents the Company has filed with the SEC for more complete information about the Company and this offering. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Alternatively, a copy of the preliminary prospectus may be obtained from the offices of: Jefferies LLC, Attention: Equity Syndicate Prospectus Department, 520 Madison Avenue, 12th Floor, New York, NY 10022, telephone: (877) 547-6340, e-mail: Prospectus Department@Jefferies.com; Leerink Partners LLC, Attention: Syndicate Department, One Federal Street, 37th Floor, Boston, MA, 02110, or by email at Syndicate@Leerink.com, or by phone at 800-808-7525; or Stifel, Nicolaus & Company, Incorporated, One Montgomery Street, Suite 3700, San Francisco, California 94104, Attention: Syndicate, (415) 364-2720.

EXHIBIT A

SUMMARY FINANCIAL AND OTHER DATA

The disclosure set forth on page 9 of the Preliminary Prospectus under the heading Summary Financial and Other Data has been updated by replacing the table on page 9 of the Preliminary Prospectus and the footnotes thereto in their entirety with the following.

	A	AS OF SEPTEMBER 30, 2013				
	ACTUAL	ACTUAL PRO FORMA (1) (Unaudited)		PRO FORMA AS ADJUSTED (2)		
Balance Sheet Data:						
Cash and cash equivalents	\$ 54,712	\$	54,712	\$	129,482	
Current assets	55,125		55,125		129,895	
Current liabilities	6,560		6,560		6,560	
Total assets	56,072		56,072		130,842	
Long-term debt net of current portion	1,407		1,407		1,407	
Preferred stock warrant liability	436					
Redeemable convertible preferred stock	110,237					
Additional paid-in capital	16,177		126,849		201,619	
Accumulated deficit	(78,746)		(78,746)		(78,746)	
Total stockholders' equity (deficit)	(62,568)		48,105		122,875	

- (1) Pro forma balance sheet data give effect to (i) the automatic conversion of all outstanding shares of preferred stock into an aggregate of 10,589,434 shares of common stock upon the closing of this offering and (ii) reclassification of our preferred stock warrants as a component of equity in connection with the conversion of preferred stock warrants into common stock warrants upon the closing of this offering.
- (2) Pro forma as adjusted balance sheet data give effect to the automatic conversion of all outstanding shares of preferred stock into an aggregate of 10,589,434 shares of common stock upon the closing of this offering and the sale of 6,000,000 shares of common stock by us in this offering at an assumed initial public offering price of \$14.00 per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us and the filing of our amended and restated certificate of incorporation, which will occur immediately prior to the closing of this offering.

EXHIBIT B

CAPITALIZATION

The disclosure set forth in the Preliminary Prospectus under the heading Capitalization has been replaced in its entirety with the following.

The following table sets forth our cash and cash equivalents and capitalization as of September 30, 2013:

- on an actual basis;
- on a pro forma basis to reflect the conversion of all of our outstanding preferred stock into common stock, which will occur automatically immediately prior to completion of this offering; and
- on a pro forma as adjusted basis to reflect the conversion referred to above and the sale of 6,000,000 shares of common stock by us in this offering at an assumed initial public offering price of \$14.00 per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us and the filing of our amended and restated certificate of incorporation, which will occur immediately prior to the closing of this offering.

The information below is illustrative only. Our cash and cash equivalents and capitalization following the closing of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at the pricing of this offering. You should read this table in conjunction with our financial statements and related notes and the sections titled Selected Historical Financial Information and Other Data, Management s Discussion and Analysis of Financial Condition and Results of Operations, Use of Proceeds and Description of Capital Stock appearing elsewhere in this prospectus.

	AS OF SEPTEMBER 30, 2013					
			PRO FORMA			
	A	CTUAL	PRO	FORMA	AS A	DJUSTED
Cash and cash equivalents	\$	54,712	\$	54,712	\$	129,482
Long-term debt net of current portion	\$	1,407	\$	1,407	\$	1,407
Preferred stock warrant liability		436				
Redeemable convertible preferred stock, \$0.0001 par value per						
share:						
Series A: 880,000 shares designated, 855,996 shares issued and						
outstanding, actual; no shares designated, issued or						
outstanding, pro forma and pro forma as adjusted		21,400				
Series B: 1,190,000 shares designated, 1,162,021 shares issued						
and outstanding, actual; no shares designated, issued or						
outstanding, pro forma and pro forma as adjusted		29,050				
Series C: 9,000,000 designated, 8,571,417 issued and						
outstanding, actual; no shares designated, issued or						
outstanding, pro forma and pro forma as adjusted		59,787				

Total redeemable convertible preferred stock	110,237		
Stockholders equity (deficit):			
Common stock, \$0.0001 par value per share; authorized 15,000,000 shares, 28,093 shares issued and outstanding, actual; authorized 15,000,000 shares, 10,617,527 shares issued and outstanding, pro forma; authorized 150,000,000 shares, 16,617,527 shares issued and outstanding, pro forma as			
adjusted	1	2	2
Additional paid-in capital	16,177	126,849	201,619
Accumulated deficit	(78,746)	(78,746)	(78,746)
Total stockholders equity (deficit)	(62,568)	48,105	122,875
Total capitalization	\$ 49,512	\$ 49,512	\$ 124,282

The number of shares of common stock issued and outstanding actual, pro forma and pro forma as adjusted in the table above excludes the following shares as of September 30, 2013 (giving effect to the reverse stock split effected by us on July 25, 2013):

- 11,187 shares of common stock issuable upon exercise of stock options outstanding as of September 30, 2013 under our 2007 Employee, Director and Consultant Stock Plan, as amended, at a weighted average exercise price of \$3.42 per share;
- 1,415,020 shares of common stock issuable upon exercise of stock options outstanding as of September 30, 2013 under our 2010 Employee, Director and Consultant Equity Incentive Plan, as amended (2010 Plan), at a weighted average exercise price of \$3.42 per share;
- 320,955 shares of common stock reserved for issuance pursuant to future awards under the 2010 Plan as of September 30, 2013;
- 1,900,000 shares of common stock reserved for issuance pursuant to future awards under our 2014 Performance Incentive Plan, which will become effective upon the effectiveness of the registration statement to which this prospectus relates;
- i 1,000,000 shares of common stock reserved for issuance pursuant to future awards under our 2014 Employee Stock Purchase Plan, which will become effective upon the effectiveness of the registration statement to which this prospectus relates; and
- 135,301 shares of common stock issuable upon exercise of warrants outstanding as of September 30, 2013 to purchase shares of common stock, Series A preferred stock, Series B preferred stock or Series C preferred stock, assuming the conversion of all outstanding shares of preferred stock immediately prior to the completion of this offering, at a weighted average exercise price of \$17.25 per share.

EXHIBIT C

RISK FACTORS

The disclosure set forth on page 34 of the Preliminary Prospectus under the heading Risk Factors Risk Related to Our Common Stock and This Offering You will experience immediate and substantial dilution as a result of this offering and may experience additional dilution in the future has been updated by replacing, in its entirety, the first sentence of the paragraph below such heading with the following.

If you purchase common stock in this offering, assuming a public offering price of \$14.00 set forth on the cover of this prospectus, you will incur immediate and substantial dilution of \$6.61 per share, representing the difference between the assumed initial public offering price of \$14.00 per share and our pro forma net tangible book value per share as of September 30, 2013 after giving effect to this offering and the conversion of all outstanding shares of our preferred stock upon the closing of this offering.

DILUTION

The disclosure set forth in the Preliminary Prospectus in the section titled Dilution has been replaced in its entirety with the following.

If you invest in our common stock, your interest will be diluted to the extent of the difference between the public offering price per share of our common stock that you pay and the pro forma as adjusted net tangible book value per share of our common stock after this offering. Net tangible book value per share is determined by dividing our total tangible assets less our total liabilities by the number of shares of common stock outstanding. Our historical net tangible book value as of September 30, 2013 was \$47.7 million, or \$1,696.83 per share, based on 28,093 shares of common stock outstanding as of September 30, 2013. Our pro forma net tangible book value as of September 30, 2013 was \$48.1 million, or \$4.53 per share, based on the total number of shares of our common stock outstanding as of September 30, 2013, after giving effect to the automatic conversion of all outstanding shares of our preferred stock as of September 30, 2013 into an aggregate of 10,589,434 shares of common stock immediately prior to the completion of this offering.

Net tangible book value dilution per share represents the difference between the amount per share paid by new investors who purchase shares from us in this offering and the pro forma net tangible book value per share of common stock immediately after completion of this offering. As of September 30, 2013, after giving effect to our sale of 6,000,000 shares of common stock in this offering at an assumed initial offering price of \$14.00 per share set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses that we must pay, our pro forma as adjusted net tangible book value would have been \$122.9 million, or \$7.39 per share. This represents an immediate increase in pro forma net tangible book value of \$2.86 per share to existing stockholders, and an immediate dilution in pro forma net tangible book value of \$6.61 per share to new investors purchasing shares in this offering. The table below illustrates this per share dilution as of September 30, 2013.

Decrease in pro forma net tangible book value per share as of September 30, 2013			
attributable to the conversion of preferred stock	\$ (1,6	592.30)	
Pro forma net tangible book value per share as of September 30, 2013, before giving effect			
to this offering	\$	4.53	
Increase in pro forma net tangible book value per share attributable to new investors			
participating in this offering	\$	2.86	
Pro forma as adjusted net tangible book value per share after this offering			\$ 7.39
Dilution of pro forma net tangible book value per share to new investors			\$ 6.61

If the underwriters exercise their option to purchase additional shares in full, our pro forma as adjusted net tangible book value will increase to \$7.68 per share, representing an increase to existing holders of \$3.15 per share, and there will be an immediate dilution of \$6.32 per share to new investors.

Each \$1.00 increase (decrease) in the assumed public offering price of \$14.00 per share would increase (decrease) our proforma as adjusted net tangible book value after this offering by \$0.3 per share, and the dilution to new investors by \$0.7 per share, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses that we must pay.

The following table sets forth, on a pro forma as adjusted basis as of September 30, 2013, the number of shares of common stock purchased or to be purchased from us, the total consideration paid or to be paid and the average price per share paid or to be paid by existing holders of common stock and by new investors, at an assumed initial public offering price of \$14.00 per share, before deducting estimated underwriting discounts and commissions and estimated offering expenses that we must pay.

		SHARES PURCHASED		AL RATION	AVERAGE PRICE PER		
	NUMBER	PERCENT	AMOUNT	PERCENT			
Existing stockholders	10,617,527	63.9%	\$ 110,756,489	56.99	% \$10.43		
New investors	6,000,000	36.1%	\$ 84,000,000	43.1%	% \$14.00		
Total	16,617,527	100.0%	\$ 194,756,489	100.09	% \$11.72		

The foregoing discussion and tables are based on the number of shares of common stock outstanding as of September 30, 2013 (taking into account the conversion of our preferred stock outstanding as of September 30, 2013, which will occur automatically upon the completion of this offering), and exclude:

- 11,187 shares of common stock issuable upon exercise of stock options outstanding as of September 30, 2013 under our 2007 Employee, Director and Consultant Stock Plan, as amended, at a weighted average exercise price of \$3.42 per share;
- 1,415,020 shares of common stock issuable upon exercise of stock options outstanding as of September 30, 2013 under our 2010 Employee, Director and Consultant Equity Incentive Plan, as amended (2010 Plan), at a weighted average exercise price of \$3.42 per share;
- 320,955 shares of common stock reserved for issuance pursuant to future awards under the 2010 Plan as of September 30, 2013;
- 1,900,000 shares of common stock reserved for issuance pursuant to future awards under our 2014 Performance Incentive Plan, which will become effective upon the effectiveness of the registration statement to which this prospectus relates;
- i 1,000,000 shares of common stock reserved for issuance pursuant to future awards under our 2014 Employee Stock Purchase Plan, which will become effective upon the effectiveness of the registration statement to which this prospectus relates; and
- 135,301 shares of common stock issuable upon exercise of warrants outstanding as of September 30, 2013 to purchase shares of common stock, Series A preferred stock, Series B preferred stock or Series C preferred stock, assuming the conversion of all outstanding shares of preferred stock immediately prior to the completion of this offering, at a weighted average exercise price of \$17.25 per share.

If the underwriters exercise their option to purchase additional shares of our common stock in full, our existing stockholders would own 60.6 percent and our new investors would own 39.4 percent of the total number of shares of our common stock outstanding upon completion of this offering. The total consideration paid by our existing stockholders would be approximately \$110.8 million, or 53.4 percent, and the total consideration paid by our new investors would be \$96.6 million, or 46.6 percent.

EXHIBIT D

MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The disclosure set forth under the heading Stock-based compensation and common stock valuation in the section titled Management s Discussion and Analysis of Financial Condition and Results of Operations of the Preliminary Prospectus has been updated by replacing, in its entirety, the footnote immediately below the table on page 58 with the following.

(1) At the time of the option grants on December 4, 2013 and December 30, 2013, our board of directors determined that the fair value of our common stock of \$3.42 per share calculated in the contemporaneous valuation as of August 31, 2013 reasonably reflected the per share fair value of our common stock as of each of the grant dates. However, as described below, a preliminary retrospective valuation, which was completed in early January 2014 and reasonably assumed the successful closing of this offering in the near term with the then estimated price range of \$11.00 to 13.00, estimated the fair value of our common stock was \$7.42 as of December 31, 2013. The disclosure set forth under the heading Stock-based compensation and common stock valuation in the section titled Management s Discussion and Analysis of Financial Condition and Results of Operations of the Preliminary Prospectus has been updated by replacing, in its entirety, the first two sentences of the first paragraph below the table on page 58 with the following.

Based on an assumed initial public offering price of \$14.00 per share, the aggregate intrinsic value of the stock options granted on September 24, 2013 and outstanding as of September 30, 2013 was \$14.8 million, of which \$0.7 million and \$14.1 million related to the stock options that were vested and unvested, respectively, at that date. Based on an assumed initial public offering price of \$14.00 per share, the aggregate intrinsic value of the stock options granted on September 24, December 4 and December 30, 2013 and outstanding as of December 31, 2013 was \$17.0 million, of which \$1.4 million and \$15.6 million related to stock options that were vested and unvested, respectively, at that date.

The disclosure set forth under the heading Stock-based compensation and common stock valuation in the section titled Management s Discussion and Analysis of Financial Condition and Results of Operations has been updated by replacing the second paragraph below the table on page 62 in its entirety with the following three paragraphs.

In applying the market approach to estimate our aggregate future enterprise value under the option pricing model scenario, as described previously, it was assumed that a liquidity event would occur in 2.50 years. The selected enterprise value utilized in the option pricing model scenario was based on the July 30, 2013 Series C preferred stock financing. In the Series C preferred stock financing, we issued and sold 8,142,891 shares of Series C preferred stock at a purchase price of \$7.00 per share for aggregate proceeds of \$57.0 million. The Series C preferred stock financing was an arm s length transaction with terms, including purchase price, negotiated between us and three investors that, prior to the Series C preferred stock financing, were not related parties and did not hold any shares or other interests in us.

As of June 30, 2013, we had cash and cash equivalents of approximately \$1.8 million, which would have allowed us to continue operations for less than two months. As we were running out of cash and existing investors expressed an unwillingness to invest additional capital, we pursued capital from new investors. In July 2013, we negotiated the Series C preferred stock financing with the three new investors. The terms of the financing required significant dilution to existing investors, management and other existing equity holders, by effecting a one-for-25 reverse split of our Series A and Series B preferred stock and a one-for-250 reverse split of our common stock. We used the back-solve method to determine the value of our common stock as of August 31, 2013, which we considered an

appropriate method for such determination as we had completed the recapitalization on July 25, 2013 as a condition to closing of our Series C preferred stock financing.

All of the shares of Series C preferred stock were sold and issued at \$7.00 per share, about half of which were purchased by the new investors and the other half by some of our existing stockholders. We also issued 428,526 shares of Series C preferred stock on the same day in satisfaction of a \$3.0 million bridge loan then outstanding. Holders of Series C preferred stock are entitled to senior rights, preferences and privileges as compared to our common stock, including a dividend preference as, if and when declared by the board of directors, a liquidation preference and a redemption right.

The disclosure set forth under the heading Stock-based compensation and common stock valuation in the section titled Management s Discussion and Analysis of Financial Condition and Results of Operations has been updated by replacing, in their entirety, the three bullet points on pages 62 to 63 relating to primary factors contributing to the decrease of the estimated per share fair value of our common stock from \$15.00 per share to \$3.42 per share with the following five bullet points.

- the purchase price per share of our Series C preferred stock was \$7.00, a purchase price negotiated on arm s length terms with third parties that were not related parties prior to purchasing shares in the Series C preferred stock financing, and these third parties purchased half of the shares of Series C preferred stock sold by us in the financing;
- our preferred stock is entitled to certain senior rights, preferences and privileges as compared to the common stock, including a dividend preference as, if and when declared by our board of directors, a liquidation preference and a redemption right;
- at the time of the Series C preferred stock financing and the August 31, 2013 contemporaneous valuation, the consummation of an initial public offering was a possibility considered by management, but it was not considered more likely than continuing to run the business as a private company after the Series C preferred stock financing, and management focused its attention on the use of funds from the Series C preferred stock financing to develop a product candidate to advance out of preclinical development, leaving open the possibility of being acquired by another company or remaining a private company;
- all of our product candidates are in preclinical development, a stage of development at which it is difficult to obtain substantial private sector equity financing and even more difficult to obtain public financing, in contrast with later state biopharmaceutical companies, which tend to have a greater number of potential sources of financing; and
- i we were delayed in identifying product candidates, which significantly impacted our ability to demonstrate potential to advance a product candidate out of preclinical development, a key factor in seeking financing from investors in either private or public markets.

The disclosure set forth on page 64 under the heading Stock option grants on December 4, 2013 and December 30, 2013 in the section titled Management s Discussion and Analysis of Financial Condition and Results of Operations has been updated by adding the following sentence after the third sentence in the paragraph below such heading.

The valuation concluded that, with such contemporaneous information, the fair value of our common stock as of December 31, 2013 was \$7.42 per share primarily due to feedback from investment bankers that the Company has an increased probability of executing a successful initial public offering in the first quarter of 2014 and feedback from investment bankers that public investors could potentially price the Company s common stock in the range of \$11.00 to \$13.00 per share in such an initial public offering.

NOTES TO FINANCIAL STATEMENTS

The discussion of the weighted-average grant date fair value of stock options set forth in the paragraph immediately below the second table on page F-21 in the Notes to Financial Statements of the Preliminary Prospectus has been revised by adding the wording Using the Black-Scholes option-pricing model at the beginning of the first sentence of that paragraph such that the first sentence reads as follows.

Using the Black-Scholes option-pricing model, the weighted-average grant date fair value of stock options granted during the years ended December 31, 2011 and 2012 and the nine months ended September 30, 2012 (unaudited) and 2013 (unaudited) was \$27.50, \$30.00, \$30.00 and \$2.01 per share, respectively.

EXHIBIT E

BUSINESS

The disclosure set forth on page 85 under the heading KHK research collaboration and license agreement in the section titled Business of the Preliminary Prospectus has been updated by replacing the fourth sentence in the third paragraph under such heading in its entirety with the following.

These royalties vary depending on the total net sales and range from percentages of net sales in the high single digits to the teens.

EXHIBIT F

EXECUTIVE AND DIRECTOR COMPENSATION

The disclosure set forth under the heading Employment Agreements in the section titled Executive and Director Compensation of the Preliminary Prospectus has been updated by adding the following sentences after the first sentence in the second paragraph on page 111.

The options granted to each executive officer under his employment agreement would generally vest on a change in control of the Company or, in Dr. Fambrough s case, an involuntary termination of his employment following a change in control. In January 2014, we entered into an agreement with Mr. Dentzer that provides for him to be reimbursed by us for any taxes imposed pursuant to Section 409A of the U.S. Internal Revenue Code of 1986, as amended, with respect to the option grant under his employment agreement.

The number of shares of common stock authorized for issuance with respect to awards granted under our 2014 Performance Incentive Plan has been increased from 1,540,000 to 1,900,000 shares under the heading 2014 Performance Incentive Plan in the section titled Executive and Director Compensation and other sections of the Preliminary Prospectus, including the sections titled The Offering, Capitalization and Dilution.

EXHIBIT G

PRINCIPAL STOCKHOLDERS

The disclosure set forth in the section titled Principal Stockholders of the Preliminary Prospectus has been replaced in its entirety with the following.

The following table sets forth certain information relating to the beneficial ownership of our common stock as of December 31, 2013, by:

- n each person, or group of affiliated persons, known by us to beneficially own more than five percent of the outstanding shares of our common stock;
- n each of our directors;
- n each of our named executive officers; and
- n all directors and executive officers as a group.

The number of shares beneficially owned by each entity, person, director or executive officer is determined in accordance with the rules of the Securities and Exchange Commission, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares over which the individual has sole or shared voting power or dispositive power as well as any shares that the individual has the right to acquire within 60 days of December 31, 2013 through the exercise of any stock option, warrants or other rights. Except as otherwise indicated, and subject to applicable community property laws, the persons named in the table have sole voting and dispositive power with respect to all shares of common stock held by that person.

The percentage of shares beneficially owned prior to this offering is computed on the basis of 10,627,660 shares of our common stock outstanding as of December 31, 2013, which reflects the assumed conversion of all of the outstanding shares of our preferred stock into an aggregate of 10,589,434 shares of common stock immediately upon the closing of this offering, as if the conversion had occurred as of December 31, 2013. The percentage of shares beneficially owned after this offering is computed on the basis of 16,627,660 shares of common stock outstanding immediately after the closing of this offering (assuming no exercise of the underwriters—over-allotment option to purchase additional shares of our common stock). Shares of our common stock that a person has the right to acquire within 60 days of December 31, 2013 are deemed outstanding for purposes of computing the percentage ownership of the person holding such rights, but are not deemed outstanding for purposes of computing the percentage ownership of any other person, except with respect to the percentage ownership of all directors and executive officers as a group. Unless otherwise noted below, the address of the persons listed on the table is c/o Dicerna Pharmaceuticals, Inc., 480 Arsenal Street, Building 1, Suite 120, Watertown, MA 02472.

Certain of our existing stockholders, including affiliates of our directors, have indicated an interest in purchasing up to \$48.0 million of shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, these stockholders may determine to purchase fewer shares than they indicate an interest in purchasing or not to purchase any shares in this offering. It is also possible that these stockholders could indicate an interest in purchasing more shares of our common stock. In

addition, the underwriters could determine to sell fewer shares to any of these stockholders than the stockholders indicate an interest in purchasing or not to sell any shares to these stockholders. The following table does not reflect any potential purchases by these stockholders.

PERCENTAGE OF SHARES BENEFICIALLY SHARES OF COMMON STOCK OWNED

BENEFICIALLY BEFORE **AFTER** NAME AND ADDRESS OF BENEFICIAL OWNER **OWNED OFFERINGOFFERING** 5 percent or Greater Stockholders Entities affiliated with Domain Associates (1) 1,786,908 16.8% 10.7% Skyline Venture Partners V, L.P. (2) 1,557,203 14.7% 9.4% Affiliates of Deerfield Mgmt, L.P. (3) 1,428,569 13.4% 8.6% RA Capital Healthcare Fund, LP (4) 1,428,571 13.4% 8.6% Abingworth Bioventures V, LP (5) 1,098,027 10.3% 6.6% Brookside Capital Partners Fund LP (6) 1,000,000 9.4% 6.0% S.R. One, Limited (7) 845,216 8.0% 5.1% Entities affiliated with Oxford Biosciences Partners V, L.P. (8) 771,838 7.3% 4.6% **Directors and Named Executive Officers** * Douglas M. Fambrough, III, Ph.D. (9) 117,925 1.1% Brian K. Halak, Ph.D. (10) 1,786,908 16.8% 10.7% Stephen J. Hoffman, M.D., Ph.D. (11) 1,557,203 14.7% 9.4% Peter Kolchinsky, Ph.D. (12) 1,428,571 13.4% 8.6% Dennis H. Langer, M.D., J.D. (13) * 107,205 1.0% David M. Madden (14) 26,955 Vincent J. Miles, Ph.D. (15) 1,098,027 10.3% 6.6% James E. Dentzer Bob D. Brown, Ph.D. (16) 25,075 James B. Weissman (17) 15,966 All directors and executive officers as a group (10 persons) (18) 6,163,835 37.1% 58.0%

^{*} Indicates beneficial ownership of less than one percent of the outstanding shares of our common stock.

⁽¹⁾ Consists of (a) 476,464 shares of common stock issuable upon conversion of shares of Series B preferred stock held by Domain Partners VIII, L.P. (Domain Partners), (b) 1,276,243 shares of common stock issuable upon conversion of shares of Series C preferred stock held by Domain Partners, (c) 21,041 shares of common stock issuable upon conversion of Series C preferred stock issuable upon exercise of a preferred stock warrant held by Domain Partners that is exercisable as of December 31, 2013 or will become exercisable within 60 days of such date, (d) 3,535 shares of common stock issuable upon conversion of Series B preferred stock held by DP VIII Associates, L.P. (DP Associates), (e) 9,469 shares of common stock issuable upon conversion of Series C preferred stock held by DP Associates and (f) 156 shares of common stock issuable upon conversion of Series C

preferred stock issuable upon exercise of a preferred stock warrant held by DP Associates that is exercisable as of December 31, 2013 or will become exercisable within 60 days of such date. James C. Blair, Brian H. Dovey, Jesse I. Treu, Kathleen K. Schoemaker, Brian K. Halak and Nicole Vitullo, the managing members of One Palmer Square Associates VIII, L.L.C., the general partner of Domain Partners and DP Associates, share the power to vote or dispose of the shares held by of Domain Partners and DP Associates and therefore each of the foregoing managing members may be deemed to have voting and dispositive power with respect to such shares. Each of the foregoing managing members disclaims beneficial ownership of such shares except to the extent of his or her pecuniary interest therein, if any. Brian K. Halak, Ph.D. is a member of our board of directors. The address of Domain Partners and DP Associates is One Palmer Square, Suite 515, Princeton, NJ 08542.

- (2) Consists of (a) 312,000 shares of common stock issuable upon conversion of shares of Series A preferred stock, (b) 179,322 shares of common stock issuable upon conversion of shares of Series B preferred stock, (c) 1,043,429 shares of common stock issuable upon conversion of Series C preferred stock, (d) 755 shares of common stock issuable upon exercise of a common stock warrant that is exercisable as of December 31, 2013 or will become exercisable within 60 days of such date and (e) 21,697 shares of common stock issuable upon conversion of shares of Series C preferred stock issuable upon exercise of a preferred stock warrant that is exercisable as of December 31, 2013 or will become exercisable within 60 days of such date. All of the shares of preferred stock and warrants are held by Skyline Venture Partners V, L.P. John G. Freund, M.D. and Yasunori Kaneko, M.D. are Managing Directors of Skyline Venture Management V, LLC, the general partner of Skyline Venture Partners V, L.P., and may be deemed to share voting and dispositive power over the shares held by Skyline Venture Management V, LLC and may be deemed to share voting and dispositive power over the shares held by Skyline Venture Partners V, L.P. Each of Drs. Freund, Kaneko and Hoffman disclaims beneficial ownership of such shares, except to the extent of his pecuniary interest therein. The address of Skyline Ventures Partners V, L.P. is 525 University Avenue, Suite 610, Palo Alto, CA 94301.
- (3) Consists of (a) 499,285 shares of common stock issuable upon conversion of shares of Series C preferred stock held by Deerfield Private Design Fund II, L.P., (b) 572,142 shares of common stock issuable upon conversion of shares of Series C preferred stock held by Deerfield Private Design International II, L.P., (c) 161,071 shares of common stock issuable upon conversion of shares of Series C preferred stock held by Deerfield Special Situations Fund International Master Fund, L.P. and (d) 196,071 shares of common stock issuable upon conversion of shares of Series C preferred stock held by Deerfield Special Situations Fund, L.P. (collectively, the Deerfield Funds). Deerfield Mgmt, L.P. is the general partner of each of the Deerfield Funds. Deerfield Management Company, L.P. is the investment manager of each of the Deerfield Funds. Mr. James E. Flynn is the sole member of the general partner of each of Deerfield Mgmt, L.P. and Deerfield Management Company, L.P. Each of Deerfield Mgmt, L.P., Deerfield Management Company, L.P. and Mr. Flynn may be deemed to beneficially own the shares held by the Deerfield Funds. The address of Deerfield Funds is 780 Third Avenue, 37th Floor, New York, NY 10017.
- (4) Consists of 1,428,571 shares of common stock issuable upon conversion of shares of Series C preferred stock held by RA Capital Healthcare Fund, LP. RA Capital Management, LLC is the sole general partner of the RA Capital Healthcare Fund, LP. Peter Kolchinsky, Ph.D., a member of our board of directors, is the manager of RA Capital Management, LLC. Each of Dr. Kolchinsky and RA Capital Management, LLC may be deemed to beneficially own the shares held by RA Capital Healthcare Fund, LP. Each of them disclaims beneficial ownership of such shares, except to the extent of its or his respective pecuniary interest therein. The address of RA Capital Healthcare Fund, LP is c/o RA Capital Management, LLC, 20 Park Plaza, Suite 1200, Boston, MA 02116.

Consists of (a) 220,000 shares of common stock issuable upon conversion of shares of Series A preferred stock, (b) 126,445 shares of common stock issuable upon conversion of shares of Series B preferred stock, (c) 735,751 shares of common stock issuable upon conversion of shares of Series C preferred stock, (d) 532 shares of common stock issuable upon exercise of a common stock warrant that is exercisable as of December 31, 2013 or will become exercisable within 60 days of such date and (e) 15,299 shares of common stock issuable upon conversion of shares of Series C preferred stock issuable upon exercise of a preferred stock warrant that is exercisable as of December 31, 2013 or will become exercisable within 60 days of such date. All of the shares of preferred stock and warrants are held by Abingworth Bioventures V, LP. Abingworth LLP is the manager of Abingworth Bioventures V, LP and may be deemed to beneficially own the shares held by Abingworth Bioventures V, LP. An investment committee, comprised of Joseph Anderson, Jonathan M. MacQuitty, Michael F. Bigham and Stephen W. Bunting, approves investment and voting decisions by a majority vote, and no individual member has the sole control or voting power over the shares held by Abingworth Bioventures V, LP. Each of Abingworth LLP, Joseph Anderson, Jonathan M. MacQuitty, Michael F. Bigham and Stephen W. Bunting disclaims the beneficial ownership of such shares, except to the extent of its or his pecuniary interest therein. The address of Abingworth Bioventures V, LP is 38 Jermyn Street, London SW1Y 6DN, United Kingdom.

- (6) Consists of 1,000,000 shares of common stock issuable upon conversion of shares of Series C preferred stock. Brookside Capital Management, LLC is the general partner of Brookside Capital Investors, L.P., which is the general partner of Brookside Capital Partners Fund LP. Brookside Capital Management, LLC is controlled by an executive committee whose members include Dewey J. Awad, Domenic J. Ferrante, Matthew V. McPherron, William E. Pappendick IV and John M. Toussaint, who may be deemed to share voting and dispositive power over the shares held by Brookside Capital Partners Fund LP, and each disclaims beneficial ownership of the shares held by Brookside Capital Partners Fund LP, except to the extent of his respective proportionate pecuniary interest therein. The address of Brookside Capital Partners Fund LP is 111 Huntington Ave, Boston, MA 02199.
- (7) Consists of (a) 160,000 shares of common stock issuable upon conversion of shares of Series B preferred stock, (b) 678,151 shares of common stock issuable upon conversion of shares of Series C preferred stock and (c) 7,065 shares of common stock issuable upon conversion of shares of Series C preferred stock issuable upon exercise of a preferred stock warrant that is exercisable as of December 31, 2013 or will become exercisable within 60 days of such date. All of the shares of preferred stock and the preferred stock warrant are held of record by S.R. One, Limited is a wholly-owned subsidiary of GlaxoSmithKline plc. The address of S.R. One, Limited is 161 Washington Street, Suite 500, Conshohocken, PA 19428-2077.
- (8) Consists of (a) 1,955 shares of common stock held by Oxford Bioscience Partners V, L.P. (Oxford Bioscience), (b) 287,518 shares of common stock issuable upon conversion of shares of Series A preferred stock held by Oxford Bioscience, (c) 165,253 shares of common issuable upon conversion of shares of Series B preferred stock held by Oxford Bioscience, (d) 279,417 shares of common stock issuable upon conversion of shares of Series C preferred stock held by Oxford Bioscience, (e) 696 shares of common stock issuable upon exercise of a common stock warrant held by Oxford Bioscience that is exercisable as of December 31, 2013 or will become exercisable within 60 days of such date, (f) 19,995 shares of common stock issuable upon conversion of shares of Series C preferred stock issuable upon exercise of a preferred stock warrant held by Oxford Bioscience that is exercisable as of December 31, 2013 or will become exercisable within 60 days of such date, (g) 43 shares of common stock held by mRNA Fund V L.P. (mRNA), (h) 6,478 shares of common stock issuable upon conversion of shares of Series A preferred stock held by mRNA, (i) 3,723 shares of common stock issuable upon conversion of shares of Series B preferred stock held by mRNA, (j) 6,295 shares of common stock issuable upon exercise of a common stock warrant held by mRNA that is exercisable as of December 31, 2013 or will become exercisable within 60 days of such date and (l) 450 shares of common stock issuable upon conversion of Series C preferred stock

issuable upon exercise of a preferred stock warrant held by mRNA that is exercisable as of December 31, 2013 or will become exercisable within 60 days of such date. Jonathan Fleming is the general partner of OBP Management V L.P., which is the general partner of both Oxford Bioscience and mRNA and may be deemed to beneficially own the shares held by Oxford Bioscience and mRNA. Each of Mr. Fleming and OBP Management V L.P. disclaims beneficial ownership of such shares, except to the extent of their respective pecuniary interests therein. The address of Oxford Bioscience and mRNA is c/o Oxford Bioscience Partners, 535 Boylston Street, Suite 402, Boston, MA 02116.

- (9) Consists of (a) 12,300 shares of common stock and (b) 105,625 shares of common stock issuable upon exercise of stock options that are exercisable as of December 31, 2013 or will become exercisable within 60 days of such date.
- (10) Dr. Halak is a managing member of One Palmer Square Associates VII, L.L.C., the general partner of Domain Partners and DP Associates, and may be deemed to share voting and dispositive power over the shares held by Domain Partners and DP Associates. Dr. Halak disclaims beneficial ownership of such shares, except to the extent of his pecuniary interest therein. The address of Dr. Halak is c/o Domain Associates, One Palmer Square, Suite 515, Princeton, NJ 08542.
- (11) Dr. Hoffman is a member of Skyline Venture Management V, LLC, the general partner of Skyline Venture Partners V, L.P., and may be deemed to share voting and dispositive power with respect to all shares of common stock held by Skyline Venture Partners V, L.P. Dr. Hoffman disclaims beneficial ownership of such shares, except to the extent of his pecuniary interest therein. The address of Dr. Hoffman is c/o Skyline Ventures, 525 University Avenue, Suite 610, Palo Alto, CA 94301.
- (12) Dr. Kolchinsky is the manager of RA Capital Management, LLC, the sole general partner of RA Capital Healthcare Fund, LP, and may be deemed to beneficially own the shares held by RA Capital Healthcare Fund, LP. Dr. Kolchinsky disclaims beneficial ownership of such shares, except to the extent of his pecuniary interest therein. The address of Dr. Kolchinsky is c/o RA Capital Management, LLC, 20 Park Plaza, Suite 1200, Boston, MA 02116.
- (13) Consists of (a) 11,651 shares of common stock issuable upon exercise of stock options held by Dennis H. Langer, M.D., J.D. that are exercisable as of December 31, 2013 or will become exercisable within 60 days of such date and (b) 180 shares of common stock, 15,000 shares of common stock issuable upon conversion of Series A preferred stock, 8,586 shares of common stock issuable upon conversion of Series B preferred stock, 71,428 shares of common stock issuable upon exercise of stock options that are exercisable as of December 31, 2013 or will become exercisable within 60 days of such date owned by Langer Family Holdings, LLLP. Dennis H. Langer, M.D., J.D. is a manager of Langer Family Investments, LLC, which is the general partner of Langer Family Holdings, LLLP. Dr. Langer disclaims beneficial ownership of the shares and options owned by Langer Family Holdings, LLLP.
- (14) Consists of 26,955 shares of common stock issuable upon exercise of stock options that are exercisable as of December 31, 2013 or will become exercisable within 60 days of such date.
- (15) Dr. Miles is an executive partner of Abingworth Management Inc, a wholly-owned subsidiary of Abingworth LLP. Dr. Miles disclaims beneficial ownership of the shares owned by Abingworth

Bioventures V, LP, except to the extent of his pecuniary interest therein. The address of Dr. Miles is c/o Abingworth, 890 Winter Street, Suite 150, Waltham, MA 02451.

- (16) Consists of 25,075 shares of common stock issuable upon exercise of stock options that are exercisable as of December 31, 2013 or will become exercisable within 60 days of such date.
- (17) Consists of (a) 833 shares of common stock and (b) 15,133 shares of common stock issuable upon exercise of stock options that are exercisable as of December 31, 2013 or will become exercisable within 60 days of such date.
- (18) Consists of (a) 197,572 shares of common stock held by our directors and four executive officers and issuable upon exercise of their stock options that are exercisable as of December 31, 2013 or will become exercisable within 60 days of such date and (b) 5,966,263 shares of common stock outstanding and issuable upon conversion or exercise of preferred stock, warrants and stock options that are convertible or exercisable as of December 31, 2013 or will become convertible or exercisable within 60 days of such date held by entities affiliated with certain of our directors.

EXHIBIT H

RISK FACTORS

The disclosure set forth in the Preliminary Prospectus under Risk Factors Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management has been updated by replacing, in its entirety, the second bullet point under the first paragraph on page 37 with the following.

a requirement that special meetings of stockholders, which the Company is not obligated to call more than once per calendar year, be called only by the chairman of our board of directors, our chief executive officer, our board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors, or, subject to certain conditions, by our secretary at the request of the stockholders holding of record, in the aggregate, shares entitled to cast not less than ten percent of the votes at a meeting of the stockholders (assuming all shares entitled to vote at such meeting were present and voted);

MANAGEMENT

The disclosure set forth in the third paragraph on page 106 under the heading Limitation of Liability and Indemnification relating to the indemnification provisions in our bylaws has been updated by adding a third bullet point to read as follows.

any indemnification agreement we enter into with any individual director, officer, employee or agent shall supersede all of the indemnification rights conferred upon such person under our bylaws to the extent so provided in such indemnification agreement.

DESCRIPTION OF CAPITAL STOCK

The disclosure set forth on page 126 under the heading Removal of directors in the section titled Description of Capital Stock of the Preliminary Prospectus has been updated by replacing, in its entirety, the paragraph under such heading with the following.

Our certificate of incorporation and bylaws provide that subject to any limitations imposed by law and the rights of the holders of any series of our preferred stock, the board of directors or any individual director may be removed from office at any time without cause by the affirmative vote of the holders of a majority of the voting power of all the then-outstanding shares of voting stock of the Company, entitled to vote at an election of directors.

The disclosure set forth on page 126 under the heading Meeting of stockholders in the section titled Description of Capital Stock of the Preliminary Prospectus has been updated by replacing, in its entirety, the first sentence in the paragraph under such heading with the following.

Our bylaws provide that special meetings of stockholders, which the Company is not obligated to call more than once per calendar year, may only be called by the chairman of our board of directors, our chief executive officer, our board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors, or, subject to certain conditions, by our secretary at the request of the stockholders holding of record, in the aggregate, shares entitled to cast not less than ten percent of the votes at a meeting of the stockholders (assuming all shares entitled to vote at such meeting were present and voted).

The disclosure set forth on page 126 under the heading Amendment to certificate of incorporation and bylaws in the section titled Description of Capital Stock of the Preliminary Prospectus has been updated by replacing, in its entirety, the second sentence in the paragraph under such heading with the following.

The affirmative votes of the holders of at least a majority of the voting power of all of the then-outstanding shares of our voting stock will be required to amend or repeal our bylaws.

EXHIBIT I

UNDERWRITING

The disclosure set forth under the heading Commission and Expenses in the section titled Underwriting of the Preliminary Prospectus has been updated by adding the name of the investment banking firm, Healthios Capital Markets, LLC, to the first sentence in the third paragraph below the table on page 134 and also adding a new sentence before the last sentence such that the entire paragraph reads as follows.

Prior to our engagement of the underwriters, we engaged Healthios Capital Markets, LLC, an investment banking firm, for an offering of our securities subject to certain conditions and limitations. We terminated our arrangement with that investment banking firm in July 2013. In relation to this offering, we have agreed to pay this investment banking firm a fee of \$350,000 in satisfaction of the compensatory terms of that arrangement. This investment banking firm had previously provided financial advisory services to us, but will not be participating in the underwriting or selling of securities in this offering. We have agreed to indemnify the underwriters in this offering against any liabilities arising from any claims related to that arrangement.

The disclosure set forth on page 136 under the heading Directed Share Program in the section titled Underwriting of the Preliminary Prospectus has been updated by revising the fourth, fifth and sixth sentences in paragraph under such heading to read as follows.

These shares will not be subject to any lock-up arrangement with any underwriters, except to the extent purchased by one or more of our executive officers, who have entered into lock-up agreements described above. For any such participants who have entered into lock-up agreements described above, the lock-up agreements contemplated therein shall govern with respect to their purchases of shares of common stock in the program. The representatives in their sole discretion may release any of the securities subject to these lock-up agreements at any time.