Filed Pursuant to Rule 433 Issuer Free Writing Prospectus dated May 22, 2014 Relating to Preliminary Prospectus dated May 22, 2014 Relating to Registration Statement No. 333-194621



Agile Therapeutics, Inc.

On May 22, 2014, Agile Therapeutics, Inc. (the "Company") filed Amendment No. 4 to its Registration Statement on Form S-1 (Registration Statement No. 333-194621) (the "Registration Statement") to update and supplement certain disclosures that had been provided in its preliminary prospectus dated May 9, 2014 (the "Initial Preliminary Prospectus"). This free writing prospectus summarizes the amendments and supplements to the Initial Preliminary Prospectus that appear in the most recent preliminary prospectus included in Amendment No. 4 to the Registration Statement (the "Preliminary Prospectus"). These changes primarily reflect a decrease in the assumed initial public offering price to a price of \$6.00 and indications of interest from certain of our existing stockholders and directors to purchase an aggregate of approximately \$25.0 million in shares of our common stock in the proposed offering. A copy of the Preliminary Prospectus is included in Amendment No. 4 to the Registration Statement and can be accessed through the following link:

http://www.sec.gov/Archives/edgar/data/1261249/000104746914005116/a2220264zs-1a.htm

The Company has filed a registration statement (including a preliminary prospectus) with the Securities and Exchange Commission (the "SEC") for the offering to which this communication relates. Before you invest, you should read the 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. Alternatively, the issuer, any underwriter or any dealer participating in the offering will arrange to send you the prospectus if you request it from RBC Capital Markets, LLC, Attention: Equity Syndicate, Three World Financial Center, 200 Vesey Street, 8th Floor, New York, New York 10281, Telephone: (877) 822-4089 or William Blair & Company, L.L.C., Attention: Prospectus Department, 222 West Adams Street, Chicago, IL 60606, Telephone: (800) 621-0687 or by email at prospectus@williamblair.com.

THE OFFERING

Common stock offered by us	9,166,667 shares
Common stock to be outstanding after this offering	18,592,059 shares
Option to purchase additional shares	We have granted the underwriters an option for 30 days from the date of the final prospectus relating to this offering to purchase up to 1,375,000 additional shares of common stock.
Assumed initial public offering price	\$6.00 per share

Net proceeds	We estimate that the net proceeds to us from this offering, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately \$49.2 million, assuming the shares are offered at \$6.00 per share, which is the estimated offering price set forth on the cover page of the Preliminary Prospectus.
	We anticipate that the majority of the net proceeds from this offering will be used for costs associated with the commencement and completion of an additional Phase 3 trial for Twirla. The remaining proceeds will be used for completion of the Corium equipment validation, development of our product pipeline, and for working capital and general corporate purposes which may include scheduled payments of principal and interest on our outstanding loan. See "Use of Proceeds" for additional information.
Insider participation	Certain of our existing stockholders and directors have indicated an interest in purchasing up to an aggregate of approximately \$25.0 million of shares of our common stock in this offering at the initial public offering price. Assuming an initial public offering price of \$6.00 per share, these stockholders would purchase an aggregate of approximately 4.2 million of the 9,166,667 shares offered in this offering based on these indications of interest. 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 may determine 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 could determine not to sell any shares to these stockholders.
Summary Financial Data	The disclosure set forth in the Preliminary Prospectus under "Summary Financial Data" has been updated in its entirety to read as set forth below.
Use of Proceeds	The disclosure set forth in the Preliminary Prospectus under "Use of Proceeds" has been updated in its entirety to read as set forth below.
Capitalization	The disclosure set forth in the Preliminary Prospectus under "Capitalization" has been updated in its entirety to read as set forth below.
Dilution	The disclosure set forth in the Preliminary Prospectus under "Dilution" has been updated in its entirety to read as set forth below.

SUMMARY FINANCIAL DATA

The following table summarizes our financial data. We have derived the following statement of operations data for the years ended December 31, 2012 and 2013 and the period from inception to December 31, 2013 and the balance sheet data as of December 31, 2013 from our audited financial statements, included elsewhere in this prospectus. We have derived the statements of operations data for the three months ended March 31, 2013 and 2014 and the balance sheet data as of March 31, 2014 from our unaudited financial statements included in this prospectus. The unaudited financial data include, in the opinion of management, all adjustments, consisting of normal recurring adjustments, that are necessary for a fair statement of our financial position and results of operations for these periods. Our historical results for any prior period are not necessarily indicative of results to be expected in any future period, and our results for any interim period are not necessarily indicative of the results to be expected for a full fiscal year. The following summary financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus.

	Years ended December 31,			Three Months Ended March 31,				Period from Inception (December 22, 1997)			
	2012			2013		2013		2014		to March 31, 2014	
	(In thousan			ds, except share and per s					e data)		
Statement of operations data:											
Operating expenses:											
Research and development	\$	17,387	\$	9,154	\$	3,072	\$	1,394	\$	87,612	
General and administrative		5,930		3,574		1,156		1,053		27,397	
Total operating expenses		23,317		12,728		4,228		2,447		115,009	
Loss from operations		(23,317)		(12,728)		(4,228)		(2,447)	_	(115,009)	
Total other income (expense)		57		(1,592)		(377)		(366)		(631)	
Loss before benefit for income taxes		(23,260)		(14,320)		(4,605)	_	(2,813)	_	(115,640)	
Benefit from income taxes				_				3,652		4,325	
Net loss		(23,260)		(14,320)		(4,605)		839	_	(111,315)	
Beneficial conversion charge		(600)		_		_		_	_	(6,160)	
Net (loss) income available to common									_		
shareholders	\$	(23,860)	\$	(14,320)	\$	(4,605)	\$	839	\$	(117,475)	
Weighted average basic common shares									_		
outstanding		39,518		49,486		42,181		106,309			
Weighted average diluted common shares			-				-				
outstanding		39,518		49,486		42,181		822,178			
(Loss) income per common share —											
basic(1)	\$	(603.78)	\$	(289.39)	\$	(109.18)	\$	0.10			
(Loss) income per common share —			-		_		-				
diluted(1)	\$	(603.78)	\$	(289.39)	\$	(109.18)	\$	0.01			
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(1) See Note 2 to our interim financial statements appearing at the end of this prospectus regarding the calculation of net income per share.

	As of March 31, 2014					
	1	Actual	Pro Forma(1) (In thousands)		Adju	Forma as sted(2)(3)
Balance sheet data:						
Cash and cash equivalents	\$	3,010	\$	6,010	\$	55,160
Total assets		15,992		18,992		68,142
Total current liabilities		7,897		7,265		7,265
Long term debt, less current portion		9,156		9,156		9,156
Convertible preferred stock		69,233		—		—
Deficit accumulated during the development stage		(117,475)		(117,490)		(117,490)
Total shareholders' equity (deficit)		(70,294)		2,570		51,720

(1) Pro forma amounts reflect (i) the expiration without exercise of all outstanding warrants to purchase shares of Series A-1 and Series A-2 convertible preferred stock, assuming an initial public offering price of \$6.00 per share, (ii) the conversion of all outstanding warrants to purchase shares of Series C convertible preferred stock into warrants to purchase 35,003 shares of common stock, (iii) the conversion of all our outstanding shares of convertible preferred stock into an aggregate of 8,809,317 shares of our common stock (iv) the sale of our convertible subordinated promissory notes on April 28, 2014 and (v) the conversion of all principal and interest accrued as of May 21, 2014 under our outstanding convertible subordinated promissory notes into an aggregate of 502,556 shares of our common stock, assuming an initial public offering price of \$6.00.

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- (2) Pro forma as adjusted amounts reflect the pro forma conversion adjustments described in footnote (1) above, as well as the sale of 9,166,667 shares of our common stock in this offering at an assumed initial public offering price of \$6.00 per share, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.
- (3) A \$1.00 increase (decrease) in the assumed initial public offering price would increase (decrease) each of cash and cash equivalents, total assets and total stockholders' equity by \$8.5 million, assuming the number of shares offered by us as stated on the cover page of this prospectus remains unchanged and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, a one million share increase (decrease) in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) each of cash and cash equivalents, working capital, total assets and total stockholders' equity by \$5.6 million, assuming an initial public offering price of \$6.00 per share remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of 9,166,667 shares of our common stock that we are offering will be approximately \$49.2 million, based on an assumed initial public offering price of \$6.00 per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters' overallotment option is exercised in full, we estimate that we will receive net proceeds of approximately \$56.8 million.

We intend to use approximately \$31 million of the proceeds from this offering to fund an additional Phase 3 clinical trial for Twirla, our lead product candidate.

We intend to use the remainder of the proceeds as follows:

- approximately \$2 to \$4 million for the completion of the equipment qualification and validation related to the expansion of Corium's manufacturing capabilities;
- approximately \$2 to \$4 million for the development of our product candidate pipeline, including Twirla line extensions; and
- the remainder of the net proceeds for making scheduled principal and interest payments beginning in February 2015 on our outstanding term loan with Oxford Finance, LLC and for working capital and general corporate purposes. For additional information related to this outstanding loan, including the interest rate and maturity, see "*Management's Discussion and Analysis of Financial Condition and Results of Operations December 2012 Loan Agreement*".

As of the date of this prospectus, we cannot specify with certainty all of the particular uses of the net proceeds to be received upon the completion of this offering. The amounts and timing of our actual expenditures will depend on numerous factors, including the implementation of our manufacturing strategy, the status of our product candidate development efforts, our sales and marketing activities, the amount of cash generated or used by our operations, and competition. Accordingly, our management will have broad discretion in the application of the net proceeds and investors will be relying on the judgment of our management regarding the application of the net proceeds of this offering.

Until we use the net proceeds of this offering for the above purposes, we intend to invest the funds in short-term, investment-grade, interest-bearing securities. We cannot predict whether these investments will yield a favorable return.

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$6.00 per share would increase (decrease) the net proceeds to us from this offering by approximately \$8.5 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 1.0 million shares in the number of shares offered by us would increase (decrease) the net proceeds to us from this offering by approximately \$5.6 million, assuming that the assumed initial public offering price remains the same, and after deducting the underwriting discounts and commissions and estimated offering price remains the same, and after deducting the underwriting discounts and commissions and estimated offering, although it may accelerate the time at which we will need to seek additional capital.

CAPITALIZATION

The following table describes our capitalization as of March 31, 2014:

- on an actual basis;
- on a pro forma basis to give effect to (i) the automatic conversion of all outstanding shares of our convertible preferred stock immediately prior to the closing of this offering, into an aggregate of 8,809,317 shares of our common stock, (ii) the expiration without exercise in connection with the closing of this offering of warrants to purchase shares of Series A-1 and Series A-2 convertible preferred stock, assuming an initial public offering price of \$6.00 per share, (iii) the automatic conversion of all outstanding warrants to purchase shares of Series C convertible preferred stock into warrants to purchase 35,003 shares of common stock, (iv) the sale of our convertible subordinated promissory notes on April 28, 2014 and (v) the conversion of all outstanding principal and interest accrued as of May 21, 2014 under our outstanding convertible subordinated promissory notes into an aggregate of 502,556 shares of our common stock, assuming a public offering price of \$6.00; and
- on a pro forma as adjusted basis to also reflect the sale of 9,166,667 shares of common stock by us in this offering at an assumed initial public offering price of \$6.00 per share.

Each day after May 21, 2014, our outstanding convertible subordinated promissory notes will accrue approximately \$667 of additional interest, in the aggregate. To calculate the number of additional shares of common stock that we will issue upon conversion of the convertible subordinated promissory notes in connection with this offering, take the product obtained by multiplying the daily interest accrual amount by the number of days beginning on May 22, 2014 and continuing through to the closing of this offering and divide that result by the initial public offering price.

You should read this capitalization table together with our financial statements and the related notes appearing at the end of this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section and other financial information included in this prospectus.

	As of March 31, 2014					
	Actual	Pro Forma(1)	Pro Forma As Adjusted(1)(2)			
		(In thousands) (Unaudited)				
Convertible preferred stock, par value \$0.0001 per share:						
Series A-1, 284,743 shares authorized, 137,787 shares issued and outstanding, actual; none authorized, issued or outstanding, pro forma	¢ 000	¢	¢			
and pro forma as adjusted	\$ 898	\$ —	\$ —			
Series A-2, 99,178 shares authorized, 66,116 shares issued and						
outstanding, actual; none authorized, issued or outstanding, pro forma	544					
and pro forma as adjusted	544	—	—			
Series B, 4,510,066 shares authorized, 4,510,066 shares issued and outstanding, actual; none authorized, issued or outstanding, pro forma						
and pro forma as adjusted	44,928					
Series C, 2,711,734 shares authorized, 1,578,400 shares issued and	44,520					
outstanding, actual; none authorized, issued or outstanding, pro forma						
and pro forma as adjusted	22,862					
Common stock, par value \$0.0001 per share, 12,000,000 shares authorized,	,00_					
119,304 shares issued and 113,519 shares outstanding, actual; 25,000,000						
shares authorized, 9,425,392 shares issued and outstanding pro forma;						
and 150,000,000 shares authorized, 18,592,059 shares issued and						
outstanding pro forma as adjusted	1	1	1			
Additional paid-in capital	47,181	120,060	169,209			
Deficit accumulated during the development stage	(117,475)	(117,490)	(117,490)			
Total stockholders' (deficit) equity	(70,294)	2,570	51,720			
Total capitalization	\$ (1,061)	\$ 2,570	\$ 51,720			

(1) A \$1.00 increase in the assumed initial public offering price of \$6.00 per share would decrease the number of shares of our common stock issuable upon the conversion of our outstanding convertible subordinated promissory notes by 71,794 shares. A \$1.00 decrease in the assumed initial public offering price of \$6.00 per share would increase the number of shares of our common stock issuable upon the conversion of our outstanding convertible subordinated promissory notes by 100,511 shares.

(2) A \$1.00 increase (decrease) in the assumed initial public offering price of \$6.00 per share would increase (decrease) each of cash and cash equivalents, additional paid-in capital, total stockholders' (deficit) equity and total capitalization on a pro forma as adjusted basis by approximately \$8.5 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The preceding table excludes:

- 1,387,291 of common stock issuable upon exercise of stock options outstanding as of March 31, 2014 at a weighted average exercise price of \$4.19 per share;
- 35,003 shares of common stock issuable upon the exercise of outstanding warrants as of March 31, 2014 at an exercise price of \$10.71 per share; and
- 867,759 shares of common stock available for future grant under our 2014 Incentive Compensation Plan, or the 2014 Plan, which will become effective on the date of this offering (including the shares of common stock reserved for issuance under our 2008 Equity Incentive Plan, which shares will be added to the shares reserved under the 2014 Plan upon its effectiveness), as of March 31, 2014.

DILUTION

The historical net tangible book value of our common stock as of March 31, 2014 was \$(71.2) million, or \$(627.21) per share, based on the number of shares of common stock outstanding as of March 31, 2014. Historical net tangible book value per share is determined by dividing our total tangible assets less total liabilities by the actual number of outstanding shares of our common stock. As of March 31, 2014, we had a pro forma net tangible book value of \$1.7 million or \$0.18 per share of common stock. Pro forma net tangible book value per share is equal to our total tangible assets less total liabilities, divided by the pro forma number of shares of our outstanding common stock, counting as outstanding the 8,809,317 shares of common stock underlying all outstanding preferred stock, including the Series C convertible preferred stock, Series B convertible preferred stock, Series A-1 convertible preferred stock and Series A-2 convertible preferred stock issued as of March 31, 2014 and including the conversion of all outstanding principal and interest accrued as of May 21, 2014 under our outstanding convertible subordinated promissory notes into an aggregate of 502,556 shares of our common stock, both assuming an initial public offering price of \$6.00 per share. After giving effect to the issuance of 9,166,667 shares of common stock offered hereby at an assumed initial public offering price of \$6.00 per share, and after deducting the estimated underwriting discounts and commissions and our estimated offering expenses, our pro forma net tangible book value as adjusted as of March 31, 2014, will be approximately \$50.8 million, or approximately \$2.73 per pro forma share of common stock. This represents an immediate increase in pro forma net tangible book value of \$2.55 per share to our existing stockholders and an immediate dilution of \$3.27 per share to new investors in this offering. The following table illustrates this per share dilution:

Assumed initial public offering price per share		\$ 6.00
Historical net tangible book value per share	\$ (627.21)	
Increase attributable to the conversion of the convertible preferred stock	627.39	
Pro forma net tangible book value per share before this offering	0.18	
Increase per share attributable to new investors	2.55	
Pro forma net tangible book value per share after this offering		2.73
Dilution per share to new investors		\$ 3.27

Dilution per share to new investors is determined by subtracting pro forma net tangible book value per share after this offering from the initial public offering price per share paid by a new investor. If any shares are issued in connection with outstanding options or the underwriters' over-allotment option, you will experience further dilution.

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$6.00 per share, would increase (decrease) our pro forma as adjusted net tangible book value by \$8.5 million, the pro forma as adjusted net tangible book value per share after this offering by \$0.47 per share and the dilution in pro forma as adjusted net tangible book value to new investors in this offering by \$0.53 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. We may also increase or decrease the number of shares we are offering. An increase of 1.0 million shares in the number of shares offered by us, together with a concurrent \$1.00 increase in the assumed initial public offering price of \$6.00 per share (a) would increase our pro forma as adjusted net tangible book value as of March 31, 2014 by approximately \$15.0 million and (b) would also increase the pro forma as adjusted net tangible book value per share after this offering and the dilution in net tangible book value per share to new investors by \$0.64 and \$0.36, respectively, after deducting estimated underwriting discounts and commissions. Conversely, a

decrease of 1.0 million shares in the number of shares offered by us together with a concurrent \$1.00 decrease in the assumed initial public offering price of \$6.00 per share (a) would decrease our pro forma as adjusted net tangible book value as of March 31, 2014 by approximately \$13.2 million and (b) would also decrease the pro forma as adjusted net tangible book value per share after this offering and the dilution in net tangible book value per share to new investors by \$0.60 and \$0.40, respectively, after deducting estimated underwriting discounts and commissions.

The following table summarizes, on a pro forma basis as of March 31, 2014, the difference between existing stockholders and the new investors with respect to the number of shares of common stock purchased, the total consideration paid and the average price per share paid. The table assumes that the initial public offering price will be \$6.00 per share.

	Shares Pu	rchased	Total Consid	leration	tion Average Price		
	Number Percent %		Amount	Percent %	per Share		
Existing stockholders	9,425,392	51%\$	106,375,000	66%	6\$ 11.29		
New Investors	9,166,667	49	55,000,000	34	6.00		
Total	18,592,059	100%\$	161,375,000	100%	6\$ 8.68		

The share data in the table above is based on shares outstanding as of March 31, 2014, counting as outstanding the shares of common stock underlying all outstanding preferred stock, including the 1,578,400 shares of Series C convertible preferred stock, 4,510,066 shares of Series B convertible preferred stock, 137,787 shares of Series A-1 convertible preferred stock and 66,116 shares of Series A-2 convertible preferred stock outstanding as of March 31, 2014, and excludes:

- 1,387,291 shares of common stock issuable upon exercise of stock options outstanding as of March 31, 2014 at a weighted average exercise price of \$4.19 per share;
- 35,003 shares of common stock available upon the exercise of outstanding warrants as of March 31, 2014 at an exercise price of \$10.71 per share; and
- 867,759 shares of common stock available for future grant under our 2014 Incentive Compensation Plan, or the 2014 Plan, which will become effective on the date of this offering (including the shares of common stock reserved for issuance under our 2008 Equity Incentive Plan, which shares will be added to the shares reserved under the 2014 Plan upon its effectiveness), as of March 31, 2014.

If the underwriters' over-allotment option is exercised in full, the shares held by existing stockholders will decrease to 47% of the total number of shares of common stock outstanding after this offering, and the number of shares held by new investors will increase to 10,541,667, or 53%, of the total number of shares of common stock outstanding after this offering.

Certain of our existing stockholders and directors have indicated an interest in purchasing up to an aggregate of approximately \$25.0 million of shares of our common stock in this offering at the initial public offering price. Assuming an initial public offering price of \$6.00 per share these entities would purchase an aggregate of up to approximately 4,166,667 of the 9,166,667 shares in this offering based on these indications of interest. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, less or no shares to any of these existing stockholders and any of these existing stockholders or their affiliated entities.

QuickLinks

Filed Pursuant to Rule 433 Issuer Free Writing Prospectus dated May 22, 2014 Relating to Preliminary Prospectus dated May 22, 2014 Relating to Registration Statement No. 333-194621

Agile Therapeutics, Inc. THE OFFERING SUMMARY FINANCIAL DATA USE OF PROCEEDS CAPITALIZATION DILUTION