Issuer Free Writing Prospectus Filed Pursuant to Rule 433 Registration Statement No. 333-149161 (Supplementing Preliminary Prospectus dated February 11, 2008)

4.75% Convertible Senior Subordinated Notes Final Term Sheet

Vertex Pharmaceuticals Incorporated

(VRTX / NASDAQ)

4.75% Convertible Senior Subordinated Notes due 2013

Offering Size: \$250,000,000

Overallotment Option (15%): \$37,500,000

Public Offering Price: \$1,000.00 per note (100%)

Underwriting Discount Per Note: \$30.00 per note (3%)

Net Proceeds: Approximately \$241,625,000 (\$278,000,000 if underwriters exercise overallotment option in full)

Maturity: February 15, 2013

Interest Rate: 4.75% per year, payable semiannually in arrears in cash

Interest Payment Dates: February 15 and August 15, beginning August 15, 2008

Last Sale Price of Common Stock (February 12, 2008): \$17.14

Conversion Price: Approximately \$23.14, subject to adjustment

Conversion Premium: Approximately 35%

Conversion Rate: 43.2171, subject to adjustment

Conversion Rate Cap: 58.3430, subject to adjustment

Optional Redemption: On or after February 15, 2010, the issuer may redeem the notes at its option at the redemption prices stated below, plus accrued and unpaid interest, if any, to, but excluding, the redemption date.

Year	Redemption Price
February 15, 2010	102.85%
February 15, 2011	101.90%
February 15, 2012	100.95%

Repurchase at the Option of Holder Upon a Fundamental Change: If a fundamental change occurs, each holder may require the issuer to purchase all or a portion of such holder's notes at a price equal to the principal and accrued and unpaid interest, if any.

Make-Whole Premium Upon a Fundamental Change: If a fundamental change described under clauses (1) or (2) of the definition of a control in control (as specified in the prospectus) occurs, the issuer will pay a make-whole premium on the notes converted in connection with such fundamental change by increasing the conversion rate on such notes.

The number of additional shares will be determined by reference to the following table and is based on the date on which such fundamental change becomes effective and the price paid per share of common stock on the effective date:

Make Whole Premium Upon Fundamental Change (Increase in Applicable Conversion Rate)

Stock Price on Effective Date							
		2/19/2008	2/15/2009	2/15/2010	2/15/2011	2/15/2012	2/15/2013
\$	17.14	15.1259	15.1259	15.1259	15.1259	15.1259	15.1259
	20.00	10.9491	9.0836	6.7829	6.7829	6.7829	6.7829
	22.50	8.5116	6.4661	1.2273	1.2273	1.2273	1.2273
	25.00	6.7916	4.7189	0.0000	0.0000	0.0000	0.0000
	30.00	4.6376	2.7475	0.0000	0.0000	0.0000	0.0000
	35.00	3.4279	1.8197	0.0000	0.0000	0.0000	0.0000
	40.00	2.6988	1.3526	0.0000	0.0000	0.0000	0.0000
	60.00	1.5021	0.7504	0.0000	0.0000	0.0000	0.0000
	80.00	1.0826	0.5596	0.0000	0.0000	0.0000	0.0000

If the stock price on the effective date exceeds \$80.00 per share, subject to adjustment, no adjustment to the applicable conversion rate will be made.

If the stock price on the effective date is less than \$17.14 per share, subject to adjustment, no adjustment to the applicable conversion rate will be made.

Trading: The notes will not be listed on any securities exchange or included in any automatic quotation system.

Trade Date: February 12, 2008

Settlement Date: February 19, 2008

CUSIP: 92532F AM2

Sole-Bookrunner: Merrill Lynch & Co.

Co-Managers: Goldman, Sachs & Co., Morgan Stanley, JPMorgan

Concurrent Offering: Concurrently with this offering, the issuer is offering 6,000,000 shares (and up to additional 900,000 shares if the underwriters exercise in full their overallotment option) of its common stock in a separate public offering at a public offering price of \$17.14 per share. Neither offering is conditioned on the other.

The issuer has filed a registration statement (including a prospectus) with 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 issuer has filed with the SEC for more complete information about the issuer and these offerings. You may get these documents for free by visiting EDGAR on the SEC Web site at www.sec.gov. Alternatively, the issuer, any underwriter or any dealer participating in the offering will arrange to send you the prospectus if you request it by calling toll-free 1-866-500-5408.

QuickLinks

<u>Issuer Free Writing Prospectus Filed Pursuant to Rule 433 Registration Statement No. 333-149161 (Supplementing Preliminary Prospectus dated February 11, 2008)</u>

4.75% Convertible Senior Subordinated Notes Final Term Sheet
Vertex Pharmaceuticals Incorporated
(VRTX / NASDAQ)
4.75% Convertible Senior Subordinated Notes due 2013