

VERTEX PHARMACEUTICALS INC / MA

Form 424B3

June 30, 2005

[QuickLinks](#) -- Click here to rapidly navigate through this document

Filed Pursuant to Rule 424(b)(3)

Registration No. 333-116376

PROSPECTUS SUPPLEMENT NO. 2 DATED JUNE 30, 2005
(TO PROSPECTUS DATED SEPTEMBER 10, 2004)

VERTEX PHARMACEUTICALS INCORPORATED

\$153,135,000 5³/₄% Convertible Senior Subordinated Notes Due 2011
10,250,000 Shares of Common Stock Issuable Upon Conversion of the Notes

This Prospectus Supplement No. 2 supplements and amends the Prospectus dated September 10, 2004 (the "Prospectus"), relating to the resale from time to time by holders of our 5³/₄% Convertible Senior Subordinated Notes Due 2011 (the "Notes") and shares of our common stock issuable upon the conversion of the Notes. Such information has been obtained from the selling holders. This prospectus supplement should be read in conjunction with the Prospectus, which is to be delivered with this prospectus supplement.

The information appearing in the table below, as of the date hereof, supplements and amends the information in the table appearing under the heading "Selling Holders" in the Prospectus, and, where the name of a selling holder identified in the table below also appears in the table in the Prospectus, the information set forth in the table below regarding that selling holder supercedes the information in the Prospectus:

| | | | |
|---|----|------------|---------|
| 05 | \$ | 100,000 | 6,693 |
| Alameda County Retirement Association Fund B | | 2,060,000 | 137,885 |
| Albertsons | | 1,800,000 | 120,482 |
| Amaranth LLC | | 5,000,000 | 334,672 |
| Bakery & Confectionery Union Pension Fund | | 1,605,000 | 107,430 |
| Barclays Global Investors Diversified Alpha Plus Funds | | 72,000 | 4,819 |
| Boston Medical Center | | 100,000 | 6,693 |
| CDC AM L/S Bond Fund | | 100,000 | 6,693 |
| CDC AM L/S High Yield Fund | | 2,300,000 | 153,949 |
| Childrens Medical Center | | 250,000 | 16,734 |
| City of Fresno Employees and Fire Police Retirement System | | 150,000 | 10,040 |
| City of Worcester Retirement System | | 185,000 | 12,383 |
| Delaware Public Employees Retirement System | | 950,000 | 63,588 |
| Desert States UFCW Unions Pension Plan | | 85,000 | 5,689 |
| Dow Corning Retirement Plan | | 155,000 | 10,375 |
| Ensign Peak Advisors, Inc. | | 600,000 | 40,161 |
| Firemens Annuity & Benefit Fund of Chicago Opportunistic FI | | 455,000 | 30,455 |
| Forest Fulcrum Fund LP | | 53,000 | 3,548 |
| Forest Global Convertible Fund, Ltd., Class A-5 | | 391,000 | 26,171 |
| Forest Multi-Strategy Master Fund SPC, on behalf of its Multi-Strategy Segregated Portfolio | | 454,000 | 30,388 |
| Hamilton Multi-Strategy Master Fund, LP | | 4,847,000 | 324,431 |
| Health Care Security Trust High Yield | | 85,000 | 5,689 |
| HFR CA Global Opportunity Master Trust | | 35,000 | 2,343 |
| HFR RVA Select Performance Master Trust | | 56,000 | 3,748 |
| High Yield PRIT | | 2,455,000 | 164,324 |
| Houston Firefighters Relief & Retirement Fund B | | 1,350,000 | 90,361 |
| Houston Municipal Employees Pension System | | 575,000 | 38,487 |
| Ironworkers District Council of New England | | 275,000 | 18,407 |
| Kansas Public Employees Retirement System | | 3,100,000 | 207,497 |
| LS Bond Fund | | 12,778,000 | 855,288 |

Edgar Filing: VERTEX PHARMACEUTICALS INC / MA - Form 424B3

| | | |
|-----------------------------------|-----------|--------|
| LS High Income Fund | 310,000 | 20,750 |
| LS Institutional High Income Fund | 1,200,000 | 80,321 |

Edgar Filing: VERTEX PHARMACEUTICALS INC / MA - Form 424B3

| | | |
|---|------------|-----------|
| LS Strategic Income Fund | 5,225,000 | 349,732 |
| Lyxor/Forest Fund Limited | 223,000 | 14,926 |
| Manmac 2 Limited | 4,453,000 | 298,059 |
| Massachusetts Laborers Health and Welfare Fund | 30,000 | 2,008 |
| McCarthy Group Asset Management Total Ret | 75,000 | 5,020 |
| Minnesota Laborers Pension Fund | 100,000 | 6,693 |
| MRP Trust | 400,000 | 26,774 |
| New Bedford City Retirement System | 225,000 | 15,060 |
| North Dakota State Investment Board | 300,000 | 20,080 |
| NSTAR Union Medical VEBA | 305,000 | 20,415 |
| NWW, Inc. | 225,000 | 15,060 |
| Partners HealthCare High Yield | 75,000 | 5,020 |
| Partners HealthCare System Inc. Pens. Fd High Yield | 200,000 | 13,387 |
| Partners HealthCare System Inc. Pooled Invest Acct. LT | 50,000 | 3,347 |
| Peter & Elizabeth Tower Foundation | 75,000 | 5,020 |
| Salomon Brothers Asset Management (2) | 19,000,000 | 1,271,754 |
| Sphinx Convertible Arbitrage SPC | 49,000 | 3,280 |
| State of Connecticut Fund B | 2,570,000 | 172,021 |
| State of Wisconsin Investment Board | 1,551,000 | 103,815 |
| The Children's Hospital Corporation Pension Fund | 25,000 | 1,673 |
| TransAmerica Life Insurance and Annuity Co. | 175,000 | 11,714 |
| Treasurers Unclaimed Property Fund | 115,000 | 7,697 |
| UA General Officers Retirement Plan | 21,000 | 1,406 |
| UA Local Union Officers & Employees Pension Plan | 180,000 | 12,048 |
| UA Office Employees Retirement Plan | 8,000 | 535 |
| UBS Securities LLC(2) | 265,000 | 17,758 |
| UFCW No. California Employers Joint Pension | 265,000 | 17,738 |
| UFCW Tri-State Pension Fund | 275,000 | 18,407 |
| UMWA Health & Retirement Funds | 1,000,000 | 66,934 |
| Unidentified Securityholders | 61,888,000 | 4,142,390 |
| United Technologies Corporation Master Retirement Trust | 1,500,000 | 100,402 |
| Wachovia Securities International, Ltd | 8,500,000 | 568,943 |
| Xavex Convertible Arbitrage 4 Fund | 21,000 | 1,406 |
| Zurich Institutional Benchmarks Master Fund Ltd. | 100,000 | 6,693 |

(1)

The number of securities beneficially owned is determined under the rules of the Securities and Exchange Commission and the information is not necessarily indicative of beneficial ownership for any other purpose. Under those rules, beneficial ownership includes any securities as to which the individual has sole or shared voting power or investment power and also any securities which the individual has the right to acquire within 60 days after the date the selling holder provided this information, through the exercise of any stock option or other right. The inclusion in the table of securities, however, does not constitute an admission that the selling holders are direct or indirect beneficial owners of those securities. The selling holders have sole voting power and investment power with respect to all securities of capital stock listed as owned by the selling holders.

(2)

The selling securityholder is the affiliate of a registered broker-dealer, however the selling securityholder purchased the securities in the ordinary course of business and, at the time of purchase, had no agreements or understandings, directly or indirectly, with any person to distribute the securities.

The selling holders identified above may have sold, transferred or otherwise disposed of all or a portion of their Notes since the date on which they provided the information about their Notes in transactions exempt from the registration requirements of the Securities Act.

QuickLinks

[\\$153,135,000 5 3/4% Convertible Senior Subordinated Notes Due 2011 10,250,000 Shares of Common Stock Issuable Upon Conversion of the Notes](#)