## PROSPECTUS SUPPLEMENT NO. 1 DATED APRIL 18, 2001 TO THE PROSPECTUS DATED MARCH 9, 2001 OF VERTEX PHARMACEUTICALS INCORPORATED

This Prospectus Supplement No. 1 amends the information in the table under the caption "Selling Holders" in the Prospectus dated March 9, 2001 by deleting the information contained in the table regarding the Selling Security Holders with respect to the principal amount of notes and common stock of Vertex Pharmaceuticals Incorporated and substituting therefor the following table:

|  | RINCIPAL AMOUNT<br>OF NOTES OWNED<br>AND OFFERED (1) | NUMBER OF SHARES OF<br>COMMON STOCK ISSUABLE<br>UPON CONVERSION OF<br>BENEFICIALLY THE NOTES<br>THAT MAY BE OFFERED |
|--|--|---|
| NAME OF SECURITY HOLDER                      | AND OFFERED (1)                                      | THAT MAT BE OFFERED   |
| AAM/Zazone Institutional Income Fund L.P.    | \$ 850,000   | 9,213   |
| AFTRA Health Fund                            | \$300,000  | 3,251   |
| AIG/National Union Fire Insurance            | \$ 975,000   | 10,567  |
| Alexandra Global Investment Fund 1 Ltd       | \$ 3,000,000   | 32,516  |
| AllState Insurance Company                   | \$ 2,000,000   | 21,677  |
| Alpine Associates                            | \$ 4,600,000   | 49,859  |
| Alpine Partners, L.P                         | \$ 700,000   | 7,587   |
| American Motorist Insurance Company          | \$ 763,000   | 8,270   |
| Arapahoe County Colorado                     | \$ 75,000  | 812   |
| Arkansas Teachers Retirement                 | \$ 5,850,000   | 63,407  |
| Argent Classic Arbitrage fund (Bermuda) L.P. | \$ 4,400,000   | 47,691  |

| Argent Classic Convertible Arbitrage Fund (Bermuda) L.P                    | \$ 5,400,000  | 58,530  |
|--|---------------|---------|
| Argent Classic Convertible Arbitrage Fund L.P                              | \$ 1,600,000  | 17,342  |
| Associated Electric & Gas Insurance Services Limited                       | \$ 400,000    | 4,335   |
| Attorney's Title Insurance Fund, Inc                                       | \$ 500,000    | 5,419   |
| Bank Austria Cayman Island, L  | \$ 5,800,000  | 62,865  |
| Baptist Health Southern Florida  | \$ 297,000    | 3,219   |
| Bear Stearns   | \$ 5,000,000  | 54,195  |
| BNP Cooper Neff Convertible Strategies Fund, L.P.                          | \$ 188,000    | 2,037   |
| Boilermakers Blacksmith Pension Trust                                      | \$ 1,650,000  | 17,884  |
| Boston Museum of Fine Arts   | \$ 151,000    | 1,636   |
| Boulder II Limited   | \$ 2,850,000  | 30,891  |
| BP Amoco PLC Master Trust  | \$ 1,758,000  | 19,054  |
| California Public Employees Retirement System Nominee Name Surfboard & Co. | \$ 3,000,000  | 32,516  |
| CALAMOS Market Neutral Fund-CALAMOS Investment Trust                       | \$ 1,670,000  | 18,101  |
| Canyon Value Realization (Cayman) Ltd.                                     | \$ 11,000,000 | 119,228 |
| CFFX, LLC  | \$ 2,000,000  | 21,677  |
| Chrysler Corporation Master Retirement Trust                               | \$ 1,130,000  | 12,248  |
| CIBC World Markets   | \$ 6,000,000  | 65,033  |
| City of New Orleans  | \$ 315,000    | 3,414   |
| City University of New York  | \$ 185,000    | 2,005   |
| Clinton Riverside Convertible Portfolio Limited                            | \$ 4,500,000  | 48,775  |
| Conseco Fund Group - Convertible Securities Fund                           | \$ 3,250,000  | 35,226  |
|  |               |         |

| Conseco Health Insurance Company - Convertible      | \$ 1,500,000  | 16,258  |
|---|---------------|---------|
| Conseco Senior Health Insurance Company Convertible | \$ 1,500,000  | 16,258  |
| Conseco Variable Insurance Company - Convertible    | \$ 750,000    | 8,129   |
| Consulting Group Capital Markets Funds              | \$ 450,000    | 4,877   |
| Cova Bond Debenture Fund                            | \$ 500,000    | 5,419   |
| Credit Suisse First Boston Corporation              | \$5,000,000   | 54,196  |
| D.E. Shaw Investments, L.P.                         | \$ 1,500,000  | 16,258  |
| D.E. Shaw Valence, L.P                              | \$ 5,500,000  | 59,614  |
| Deephaven Domestic Convertible Trading Co           | \$ 1,000,000  | 10,838  |
| Delphi Financial Group, Inc.                        | \$500,000     | 5,419   |
| Delaware PERS                                       | \$ 1,840,000  | 19,943  |
| Deutsche Bank Securities                            | \$ 48,500,000 | 525,688 |
| Elf Aquitaine                                       | \$ 200,000    | 2,167   |
| Engineers Joint Pension Fund                        | \$ 621,000    | 6,730   |
| Employee Benefit Convertible Securities Fund        | \$ 200,000    | 2,167   |
| Franklin and Marshall College                       | \$ 245,000    | 2,665   |
| First Republic Bank                                 | \$ 225,000    | 2,438   |
| Fuji U. S. Income Open                              | \$ 500,000    | 5,419   |
| Gaia Offshore Master Fund Ltd.                      | \$ 2,500,000  | 27,097  |
| Goldman Sachs and Company                           | \$ 52,000     | 564     |
| Grady Hospital Foundation                           | \$ 161,000    | 1,745   |
| Granville Capital Corporation                       | \$ 6,000,000  | 65,033  |
| Hamilton Partners Limited                           | \$ 4,000,000  | 43,355  |

| HFR Master Fund, Ltd                   | \$ 130,000    | 1,409   |
|--|---------------|---------|
| Highbridge International LLC           | \$ 18,000,000 | 195,100 |
| Hotel Union & Hotel Industry of Hawaii | \$ 980,000    | 10,622  |
| ICI American Holdings Trust            | \$ 980,000    | 10,622  |
| Independence Blue Cross                | \$ 138,000    | 1,495   |
| Island Holdings                        | \$ 60,000     | 650     |
| ITG, Inc                               | \$ 203,000    | 2,200   |
| JAS Securities                         | \$2,250,000   | 24,387  |
| J.P. Morgan Securities, Inc.           | \$ 10,950,000 | 118,686 |
| Jeffries & Company Inc.                | \$ 11,000     | 119     |
| Kentfield Trading, Ltd.                | \$ 3,760,000  | 40,754  |
| Lazard Freres & Co. LLC                | \$ 1,000,000  | 10,838  |
| Lehman Brothers International Europe   | \$ 1,550,000  | 16,800  |
| Lipper Convertibles Series II, L.P.'s  | \$ 1,875,000  | 20,323  |
| Lipper Offshore Convertibles, L.P.     | \$ 1,875,000  | 20,323  |
| Lipper Offshore Convertibles, L.P. #2  | \$ 750,000    | 8,129   |
| Lippers Convertibles, L.P.'s (Class B) | \$ 436,000    | 4,725   |
| Local Initiatives Union                | \$ 72,000     | 780     |
| Lord Abbett Bond Debenture Fund        | \$ 2,000,000  | 21,677  |
| Lord Abbett Bond Debenture Fund        | \$ 500,000    | 5,419   |
| Lumberman's Mutual Casualty            | \$ 643,000    | 6,969   |
| Mainstay Convertible Fund              | \$ 5,000,000  | 54,194  |
| Mainstay VP Convertible Portfolio      | \$ 1,000,000  | 10,838  |
| McMahan Securities                     | \$2,150,000   | 23,303  |
|  |               |         |

| Morgan Stanley & Co.                                      | \$ 5,000,000  | 54,194  |
|---|---------------|---------|
| Motion Picture Industry Health Plan - Active Member Fund  | \$130,000     | 1,409   |
| Motion Picture Industry Health Plan - Retiree Member Fund | \$ 60,000     | 650     |
| Nabisco Corporation                                       | \$45,000      | 487     |
| Nalco Chemical Company                                    | \$ 335,000    | 3,631   |
| Nations Convertible Securities Fund                       | \$ 3,300,000  | 35,768  |
| New Orleans Firefighters Pension/Relief Fund              | \$ 166,000    | 1,799   |
| New York Life Separate Account #7                         | \$600,000     | 6,503   |
| New York Life Insurance and Annuity Corporation           | \$ 17,000,000 | 184,262 |
| New York Life Insurance Company                           | \$ 19,500,000 | 211,359 |
| Nicholas Applegate Convertible Fund                       | \$ 2,107,000  | 22,837  |
| OCM Convertible Trust                                     | \$ 330,000    | 3,576   |
| Occidental Petroleum Corporation                          | \$ 305,000    | 3,305   |
| Onex Industrial Partners                                  | \$ 1,850,000  | 20,052  |
| Onyx Capital Management, LLC                              | \$ 5,000,000  | 54,195  |
| Oxford, Lord Abbett & Co,                                 | \$ 800,000    | 8,671   |
| Pacific Life Insurance Company                            | \$ 500,000    | 5,419   |
| Partner Reinsurance Company Ltd.                          | \$ 225,000    | 2,438   |
| Pebble Capital Inc.                                       | \$ 700,000    | 7,587   |
| Penn Treaty Network America Insurance Company             | \$ 295,000    | 3,197   |
| Peoples Benefit Life Insurance Company Teamsters          | \$ 3,725,000  | 40,375  |
| PGEP IV, LLC  | \$ 113,000    | 1,224   |

| Physicians Life  | \$ 487,000   | 5,278   |
|--|--------------|---------|
| PIMCO Convertible Bond   | \$ 3,000,000 | 32,516  |
| Police & Fireman Retirement System of the City<br>Of Detroit   | \$850,000    | 9,213   |
| Pro Mutual   | \$ 1,171,000 | 12,692  |
| Putnam Investment Management Inc. on behalf of: Putnam<br>Asset Allocation Funds-Balanced Portfolio        | \$ 190,000   | 2,059   |
| Putnam Investment Management, Inc. on behalf of: Putnam<br>Asset Allocation Funds - Conservative Portfolio | \$ 130,000   | 1,409   |
| Putnam Investment Management, Inc. on behalf of: Putnam<br>Convertible Income-Growth Trust                 | \$ 1,000,000 | 10,838  |
| Putnam Investment Management, Inc. on behalf of: Putnam<br>Convertible Opportunities and Income Trust      | \$ 70,000    | 758     |
| Quattro Global Capital, LLC  | \$ 1,500,000 | 16,258  |
| Quattro Global Capital, LLC  | \$ 1,500,000 | 16,258  |
| Ramius Capital Group Holdings, Ltd.  | \$ 900,000   | 9,755   |
| Raytheon Master Pension Trust  | \$ 829,000   | 8,985   |
| RCG Latitude Master Fund, Ltd.   | \$ 300,00    | 3,251   |
| RJ Reynolds (RJR)  | \$ 143,000   | 1,549   |
| Robertson Stephens   | \$30,000,000 | 325,168 |
| San Diego City Retirement  | \$ 1,247,000 | 13,516  |
| San Diego County Convertible   | \$ 2,674,000 | 28,983  |
| San Diego Employees Retirement Association   | \$ 1,900,000 | 20,593  |
| Salomon Brothers Asset Management Inc.   | \$31,750,000 | 344,136 |
| Screen Actors Guild Convertible  | \$ 662,000   | 7,175   |
|  |              |         |

| SG Cowen Securities  | \$9,000,000  | 97,550 |
|--|--------------|--------|
| Shell Pension Trust  | \$ 642,000   | 6,958  |
| Silvercreek Limited Partnership  | \$ 1,100,000 | 11,923 |
| Southern Farm Bureau Life Insurance  | \$ 770,000   | 8,345  |
| State Employees' Retirement Fund of the State of Delaware                      | \$ 565,000   | 6,124  |
| State of Connecticut Combined Investment Funds                                 | \$ 1,245,000 | 13,494 |
| State of Maryland Retirement Agency  | \$ 3,880,000 | 42,055 |
| State of Oregon Equity   | \$ 5,975,000 | 64,762 |
| State Street Bank custodian For GE Pension Trust                               | \$ 1,805,000 | 19,564 |
| Starvest Combined Portfolio  | \$ 1,185,000 | 12,844 |
| Teachers Insurance and Annuity Association                                     | \$ 3,500,000 | 37,936 |
| The Estate of James Campbell   | \$ 895,000   | 9,700  |
| The Putnam Advisory Company, Inc. on behalf of: University of Rochester        | \$ 30,000    | 325    |
| The Putnam Advisory Company, Inc. on behalf of:<br>Parker-Hammifin Corporation | \$ 50,000    | 541    |
| The Putnam Advisory Company, Inc. on behalf of: Museum of Fine Arts, Boston    | \$ 30,000    | 325    |
| The Putnam Advisory Company, Inc. on behalf of: ProMutual                      | \$ 100,000   | 1,083  |
| TQA Master Fund  | \$ 500,000   | 5,419  |
| Tracor, Inc. Employees Retirement Plan   | \$ 172,000   | 1,846  |
| Transamerica Life Insurance and Annuity Company                                | \$ 8,000,000 | 86,711 |
| Transamerica Premier Balanced Fund   | \$ 1,000,000 | 10,838 |
|  |              |        |

| UBS O'Connor LLC, F/B/O UBS Global Equity Arbitrage Master Limited | \$ 500,000   | 5,419  |
|--|--------------|--------|
| Value Realization Fund B, LP                                       | \$450,000    | 4,877  |
| Value Realization Fund, LP   | \$ 8,000,000 | 86,711 |
| Vanguard Convertible Securities Fund, Inc.                         | \$ 1,335,000 | 14,469 |
| Viacom Inc. Pension Plan Master Trust                              | \$ 68,000    | 737    |
| Wake Forest University   | \$ 1,163,000 | 12,605 |
| Writers Guild Convertible  | \$ 385,000   | 4,172  |
| Wyoming State Treasurer  | \$ 1,329,000 | 14,404 |
| Zeneca Holdings Trust  | \$765,000    | 8,291  |
| Zurich HFR Master Hedge Fund Index Ltd                             | \$ 100,000   | 1,083  |
| Zurich HFR Calamos Holding Limited                                 | \$ 80,000    | 867    |
| Zurich HFR Master Hedge Fund Index Ltd                             | \$ 200,000   | 2,167  |
| 1976 Distribution Trust FBO A.R. Lauder/Zinterhofer                | \$ 21,000    | 227    |
| 1976 Distribution Trust FBO Jane A. Lauder                         | \$ 21,000    | 227    |

(1) The number of securities beneficially owned is determined under the rules of the SEC 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.

This Prospectus Supplement No. 1 should be read in conjunction with the Prospectus dated March 9, 2001.