

GENENTECH INC  
Form 424B4  
September 07, 2004  
PROSPECTUS SUPPLEMENT

FILED PURSUANT TO RULE 424(B)(4)

TO PROSPECTUS DATED MARCH 28, 2001

REGISTRATION NO. 333-37072

## GENENTECH, INC.

### SHARES OF COMMON STOCK

This prospectus supplement relates to the sale by certain selling shareholders of our common stock, par value \$.02 per share, that was originally delivered in exchange for Liquid Yield Option Notes due 2015 issued by Roche Holdings, Inc.

This prospectus supplement should be read in conjunction with the prospectus dated March 28, 2001, which is to be delivered with this prospectus supplement. All capitalized terms used but not defined in the prospectus supplement shall have the meanings given them in the prospectus.

The table below sets forth information as of the date hereof concerning beneficial ownership of the common stock of the selling shareholders as listed below. All information concerning beneficial ownership has been furnished by the selling shareholders.

| NAME                                       | NUMBER OF SHARES<br>OF<br>COMMON STOCK<br>OWNED PRIOR TO<br>OFFERING | NUMBER OF<br>SHARES OFFERED | NUMBER OF SHARES<br>OF<br>COMMON STOCK<br>OWNED AFTER THE<br>OFFERING | PERCENTAGE OF<br>COMMON STOCK<br>OUTSTANDING |
|--|--|-----------------------------|---|--|
| KBC Bonds<br>Convertibles                  | 17,306   | 17,306                      | 0   | *  |
| Vorsorgestiftung der<br>Vopak (Schweiz) AG | 4,326  | 4,326                       | 0   | *  |
| Ferox Master Fund<br>Limited               | 1,228,742  | 1,228,742                   | 0   | *  |

\* Less than 1%

THE SECURITIES OFFERED HEREBY INVOLVE A HIGH DEGREE OF RISK. SEE  
RISK FACTORS BEGINNING ON PAGE 3 OF THE PROSPECTUS.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this Prospectus Supplement is September 7, 2004.