PROSPECTUS SUPPLEMENT (To Prospectus dated February 10, 2005)

7,600,000 Shares

Regeneron Pharmaceuticals, Inc.

COMMON STOCK

We are selling 7,600,000 shares of our common stock to Morgan Stanley & Co. Incorporated.

Our common stock is listed on the Nasdaq Global Market under the symbol "REGN." The last reported sale price of shares of our common stock as reported on the Nasdaq Global Market on November 13, 2006 was \$24.28.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 43 of our Quarterly Report on Form 10-Q for the quarter ended September 30, 2006, which is incorporated herein by reference, to read about risks that you should consider before buying shares of our common stock.

Morgan Stanley & Co. Incorporated has agreed to purchase the 7,600,000 shares of common stock from us at a price of \$23.03 per share which will result in \$175,028,000 of proceeds to us before expenses.

Morgan Stanley & Co. Incorporated proposes to offer the common stock in transactions on the NASDAQ Global Market, in the over-the-counter market or through negotiated transactions at market prices or negotiated prices.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved these securities or determined if this prospectus supplement or the prospectus to which it relates is truthful or complete. Any representation to the contrary is a criminal offense.

MORGAN STANLEY

November 13, 2006

TABLE OF CONTENTS

Prospectus Supplement

	Page S-1
Prospectus Supplement Summary	
The Offering	S-2
Use of Proceeds	S-3
Dilution	S-4
Plan of Distribution	S-5
Validity of Securities	S-8
Where You Can Find More Information	S-8

Prospectus

	Page
About This Prospectus	i
Where You Can Find More Information	i
<u>Special Note Regarding Forward — Looking Statements</u>	ii
Regeneron Pharmaceuticals, Inc	1
Risk Factors	2
<u>Use of Proceeds</u>	13
Ratio of Earnings to Combined Fixed Charges and Preferred Stock Dividends	13
Description of Securities	13
Description of Capital Stock	13
Description of Debt Securities	17
Description of Warrants	26
Plan of Distribution	28
Legal Matters	29
<u>Experts</u>	29

You should rely only on the information incorporated by reference or provided in this prospectus supplement and the accompanying prospectus. Neither we nor the underwriter have authorized anyone to provide you with additional or different information. If anyone provided you with additional or different information, you should not rely on it. Neither we nor the underwriter are making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed since those dates.

i

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights information contained elsewhere in this prospectus supplement and the accompanying prospectus. It does not contain all the information that you may consider important in making your investment decision. Therefore, you should read the entire prospectus supplement and the accompanying prospectus and the information incorporated by reference herein and therein carefully, including in particular the "Risk Factors" sections and the financial statements and related notes incorporated by reference in this prospectus supplement. Unless the context otherwise requires, the terms "we," "our," "us," "the Company" and "Regeneron" refer to Regeneron Pharmaceuticals, Inc.

Overview

Regeneron Pharmaceuticals, Inc. is a biopharmaceutical company that discovers, develops, and intends to commercialize pharmaceutical products for the treatment of serious medical conditions. We are currently focused on three development programs: VEGF Trap in oncology, VEGF Trap eye formulation (VEGF Trap-Eye) in eye diseases using intraocular delivery, and the IL-1 Trap (rilonacept) in various inflammatory indications. The VEGF Trap is being developed in oncology in collaboration with the sanofi-aventis Group. In October 2006, we entered into a collaboration with Bayer HealthCare LLC for the development of the VEGF Trap-Eye. Our preclinical research programs are in the areas of oncology and angiogenesis, ophthalmology, metabolic and related diseases, muscle diseases and disorders, inflammation and immune diseases, bone and cartilage, pain, and cardiovascular diseases. We expect that our next generation of product candidates will be based on our proprietary technologies for developing human monoclonal antibodies. Developing and commercializing new medicines entails significant risk and expense. Since inception we have not generated any sales or profits from the commercialization of any of our product candidates.

Our core business strategy is to maintain a strong foundation in basic scientific research and discovery-enabling technology and combine that foundation with our manufacturing and clinical development capabilities to build a successful, integrated biopharmaceutical company. Our efforts have yielded a diverse pipeline of product candidates that we believe has the potential to address a variety of serious medical conditions. We believe that our ability to develop product candidates is enhanced by the application of our technology platforms. Our discovery platforms are designed to identify specific genes of therapeutic interest for a particular disease or cell type and validate targets through high-throughput production of mammalian models. Our human monoclonal antibody (VelocImmune®) and cell line expression technologies may then be utilized to design and produce new product candidates directed against the disease target. Based on the strength of the VelocImmune platform, which we believe, in conjunction with our other proprietary technologies, can accelerate the development of fully human monoclonal antibodies, we plan to move two new antibody candidates into clinical trials each year going forward beginning in 2007. We continue to invest in the development of enabling technologies to assist in our efforts to identify, develop, and commercialize new product candidates.

We were incorporated as a New York corporation on January 8, 1988. Our common stock is listed on the Nasdaq Global Market under the symbol "REGN." Our headquarters and principal executive offices are located at 777 Old Saw Mill River Road, Tarrytown, New York 10591-6707. Our telephone number is (914) 347-7000.

You can get more information regarding our business by reading our Annual Report on Form 10-K for the fiscal year ended December 31, 2005, and the other reports we file with the SEC. See "Where You Can Find More Information" on page S-8 of this prospectus supplement.

Table of Contents

THE OFFERING		
Common stock offered	7,600,000 shares of our common stock.	
Shares outstanding after the offering:		
Common stock	62,735,904	
Class A stock	2,296,928	
Total	65,032,832	
Use of Proceeds	We currently intend to use the net proceeds of this offering to fund pre-clinical and clinical development of our product candidates, to fund basic research activities, to continue development of our technology platforms, for capital expenditures, to redeem, repay or purchase our 5 ¹ / ₂ % convertible senior subordinated notes due October 17, 2008, and for general corporate purposes, including working capital, acquisitions and other business opportunities. See "Use of Proceeds."	
Nasdaq Global Market symbol	REGN	
Risk Factors	Before investing in our common stock, you should carefully read and consider the information set forth in "Risk Factors" beginning on page 43 of our Quarterly Report on Form 10-Q for the quarter ended September 30, 2006, which is incorporated herein by reference.	

The number of shares of common stock to be outstanding after the offering is based on the number of shares of common stock outstanding as of October 31, 2006 and excludes as of that date an aggregate of 13,688,889 shares of our common stock subject to options outstanding as of that date under our 1990 and 2000 Long-Term Incentive Plans, of which 6,722,416 were exercisable as of that date.

USE OF PROCEEDS

We will receive approximately \$175 million of proceeds before expenses from the sale of 7,600,000 shares of our common stock. We currently intend to use the net proceeds of this offering to fund pre-clinical and clinical development of our product candidates, to fund basic research activities, to continue development of our technology platforms, for capital expenditures, to redeem, repay or purchase our 5½% convertible senior subordinated notes due October 17, 2008, and for general corporate purposes, including working capital, acquisitions, and other business opportunities.

DILUTION

As of September 30, 2006, our net tangible book value before the offering was \$62.5 million or \$1.09 per common share. "Net tangible book value per share" is determined by dividing our net tangible book value (total assets less total liabilities) by the number of common shares outstanding. After giving effect to the sale of the shares of our common stock in this offering at a price of \$23.03 per share and after deducting the estimated expenses of this offering, our pro forma net tangible book value as of September 30, 2006 would have been \$236.6 million in the aggregate, or \$3.66 per common share. This represents an immediate increase in net tangible book value of \$2.57 per common share to existing holders and immediate dilution of \$19.37 per common share to new investors purchasing shares of common stock in this offering. The following table illustrates this per share dilution:

Assumed public offering price		\$ 23.03
Net tangible book value per common share before this offering	\$ 1.09	
Increase attributable to new investors	2.57	
Pro forma net tangible book value per common share after this offering		3.66
Dilution per common share to new investors		\$ 19.37

"Dilution per common share to new investors" means the difference between the price per share of common stock of \$23.03 and the pro forma net tangible book value per common share after giving effect to the sale to the underwriter of the shares offered hereby.

The foregoing table does not take into effect further dilution to new investors that could occur upon the exercise of outstanding options having a per share exercise price less than the offering price per share in this offering. As of October 31, 2006 there were an aggregate of 13,688,889 shares of our common stock subject to options outstanding as of that date under our 1990 and 2000 Long-Term Incentive Plans, of which 6,722,416 were exercisable as of that date.

PLAN OF DISTRIBUTION

We and Morgan Stanley & Co. Incorporated have entered into an underwriting agreement with respect to the 7,600,000 shares of Common Stock being offered hereby.

The underwriter has agreed to purchase the common stock from us at a price of \$23.03 per share, which will result in approximately \$175 million of proceeds in the aggregate to us before expenses.

The underwriter proposes to offer the shares of common stock from time to time for sale in one or more transactions on the NASDAQ Global Market, in the over-the-counter market, through negotiated transactions or otherwise at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices, subject to receipt and acceptance by it and subject to its right to reject any order in whole or in part. In connection with the sale of the shares of common stock offered hereby, the underwriter may be deemed to have received compensation in the form of underwriting discounts. The underwriter may receive from purchasers of the shares normal brokerage commissions in amounts agreed with such purchasers. In addition, the underwriter may receive a commission from certain investors equivalent to five cents per share. The underwriter may effect such transactions by selling shares of common stock to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriter or purchasers of shares of common stock for whom they may act as agents or to whom they may sell as principal.

In connection with the offering, the underwriter may purchase and sell shares of common stock in the open market. These transactions may include short sales and purchases to cover positions created by short sales. Short sales involve the sale by an underwriter of a greater number of shares than it is required to purchase in the offering. The underwriter will need to close out any short sale by purchasing shares in the open market. The underwriter is likely to create a short position if it is concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Purchases to cover a short position, as well as other purchases by the underwriter for its own account, may have the effect of preventing or retarding a decline in the market price of the company's stock, and may maintain or otherwise affect the market price of the common stock. As a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued at any time. These transactions may be effected on NASDAQ Global Market, in the over-the-counter market or otherwise.

Our common stock is listed on the NASDAQ Global Market under the symbol "REGN."

We estimate that our total expenses of this offering will be approximately \$950,000.

Each of us, our directors and our executive officers has agreed that, with the exception of the common stock being offered pursuant to this prospectus supplement and without the prior written consent of Morgan Stanley & Co. Incorporated, each of us, our directors and our executive officers will not, during the period ending 90 days after the date of this prospectus supplement:

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock,

whether any transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise.

The restrictions described in the preceding paragraph do not apply to:

- the sale of shares to the underwriter;
- the issuance by us of shares of common stock upon the exercise of an option or a warrant or the conversion of a security outstanding on the date of this prospectus of which the underwriter has been

Table of Contents

advised in writing or which is described in this prospectus supplement and the accompanying prospectus;

- the grant of options or the issuance of shares of common stock by us to employees, officers, directors, advisors or consultants pursuant to any employee benefit plan described in this prospectus supplement and the accompanying prospectus;
- the issuance of any shares of common stock by us in connection with an acquisition, licensing, collaboration or similar strategic arrangements, provided that the recipient of any such shares also agrees to the restrictions described above;
- the issuance by us of shares of common stock as matching contributions under our 401(k) plan;
- transactions by any person other than us relating to shares of common stock or other securities acquired in open market transactions after the completion of the offering of the shares;
- transfers by any person other than us that are bona fide gifts;
- certain distributions or transfers by any person other than us to family member, trusts and/or controlled entities of such person in connection with estate planning, provided that each transferee also agrees to the restrictions described above;
- transactions in connection with a trading plan pursuant to Rule 10b5-1 under the Exchange Act of 1934, provided that such trading plan was in existence prior to the date of this prospectus supplement; or
- the sale of shares of common stock by our directors and executive officers as to which written permission is provided by us, provided that the aggregate number of shares sold in reliance on this clause shall not exceed 250,000 shares.

The underwriter has represented and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the "FSMA") to persons who are investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 or in circumstances in which Section 21(1) of the FSMA does not apply to us; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares in, from or otherwise involving the United Kingdom.

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of any shares which are the subject of this offering contemplated by this prospectus supplement may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any shares may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

(a) to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

(b) to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than \notin 3,000,000; and (3) an annual net turnover of more than \notin 50,000,000, as shown in its last annual or consolidated accounts; or

(c) to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) subject to obtaining the prior consent of the underwriter; or

Table of Contents

(d) in any other circumstances falling within Article 3 (2) of the Prospectus Directive, provided that no such offer of shares shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expressions "Prospectus Directive" means Directive 2003/71/ EC and includes any relevant implementing measure in each Relevant Member State.

The underwriter and its affiliates have performed investment banking, banking and/or advisory services for us from time to time for which they have received customary fees and expenses. The underwriter and its affiliates may, from time to time, engage in other transactions with and perform other services for us in the ordinary course of business.

A prospectus supplement in electronic format may be made available on the website maintained by the underwriter. In addition, shares may be sold by the underwriter to securities dealers who resell shares to online brokerage account holders.

We have agreed to indemnify the underwriter against certain liabilities, including liabilities under the Securities Act of 1933, as amended, or to contribute to payments the underwriter may be required to make because of any of those liabilities.

VALIDITY OF SECURITIES

Certain legal matters in connection with this offering will be passed upon for us by Skadden, Arps, Slate, Meagher & Flom LLP, New York, New York. Certain legal matters in connection with this offering will be passed upon for the underwriter by Ropes & Gray LLP.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements, and other information with the SEC. The public may read and copy any materials filed by us at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549 or on the Internet site maintained by the SEC at http://www.sec.gov. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room.

The SEC allows us to "incorporate by reference" the information we file with them. This permits us to disclose important information to you by referring to these filed documents. Any information referred to in this way is considered part of this prospectus supplement and accompanying prospectus. We incorporate by reference the following documents that have been filed with the SEC:

- our Annual Report on Form 10-K for the year ended December 31, 2005 filed with the SEC on February 28, 2006;
- our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2006 filed with the SEC on May 8, 2006, for the quarter ended June 30, 2006 filed with the SEC on August 8, 2006, and for the quarter ended September 30, 2006 filed with the SEC on November 6, 2006; and
- our Current Reports on Form 8-K filed with the SEC on April 19, 2006, May 2, 2006, June 1, 2006, June 9, 2006, September 8, 2006, October 18, 2006 and October 31, 2006.

Any information in any of the foregoing documents will automatically be deemed to be modified or superceded to the extent that information in this prospectus or in a later filed document that is incorporated or deemed to be incorporated herein by reference modifies or replaces such information.

We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Information in such future filings updates and supplements the information provided in this prospectus supplement and accompanying prospectus.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus, other than exhibits which are specifically incorporated by reference into such documents. Requests should be directed to the Investor Relations Department at Regeneron Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, New York 10591 or by calling us at 914-345-7400.