

ALNYLAM PHARMACEUTICALS, INC.

Form DEF 14A

April 30, 2007

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**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
SCHEDULE 14A
(Rule 14a-101)
INFORMATION REQUIRED IN PROXY STATEMENT
SCHEDULE 14A INFORMATION
Proxy Statement Pursuant to Section 14(a) of the Securities
Exchange Act of 1934**

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to §240.14a-12
ALNYLAM PHARMACEUTICALS, INC.

(Name of Registrant as Specified in Its Charter)

(Name of Person(s) Filing Proxy Statement, if Other Than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

- (4) Proposed maximum aggregate value of transaction:

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 - (1) Amount previously paid:

 - (2) Form, Schedule or Registration Statement No.:

 - (3) Filing Party:

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**ALNYLAM PHARMACEUTICALS, INC.
300 THIRD STREET
CAMBRIDGE, MASSACHUSETTS 02142**

**NOTICE OF 2007 ANNUAL MEETING OF STOCKHOLDERS
To Be Held On June 1, 2007**

To our Stockholders:

NOTICE IS HEREBY GIVEN that the Annual Meeting of Stockholders of Alnylam Pharmaceuticals, Inc. will be held on Friday, June 1, 2007 at 9:00 a.m., local time, at the offices of Alnylam Pharmaceuticals, Inc., 300 Third Street, Cambridge, Massachusetts 02142. At the meeting, stockholders will consider and vote on the following matters:

1. The election of two (2) members to our board of directors to serve as Class III directors, each for a term of three years; and
2. The ratification of the appointment by our board of directors of PricewaterhouseCoopers LLP, an independent registered public accounting firm, as our independent auditors for the fiscal year ending December 31, 2007.

The stockholders will also act on any other business that may properly come before the annual meeting or any adjournment thereof.

Stockholders of record at the close of business on April 13, 2007 are entitled to notice of, and to vote at, the annual meeting or any adjournment thereof. Your vote is important regardless of the number of shares you own.

We hope that all stockholders will be able to attend the annual meeting in person.

Whether or not you plan to attend the annual meeting in person, we hope you will take the time to vote your shares. If you are a stockholder of record, you may vote on the Internet, by telephone or by completing and mailing the enclosed proxy card in the envelope provided. If your shares are held in street name, that is, held for your account by a broker or other nominee, you will receive instructions from the holder of record that you must follow for your shares to be voted. If you attend the annual meeting, your proxy will, upon your written request, be returned to you and you may vote your shares in person.

By Order of the Board of Directors

John M. Maraganore, Ph.D.
President and Chief Executive Officer

Cambridge, Massachusetts
April 30, 2007

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**ALNYLAM PHARMACEUTICALS, INC.
300 THIRD STREET
CAMBRIDGE, MASSACHUSETTS 02142**

PROXY STATEMENT

**for the 2007 Annual Meeting of Stockholders
to be held on June 1, 2007**

This proxy statement and the enclosed proxy card are being furnished in connection with the solicitation of proxies by the board of directors of Alnylam Pharmaceuticals, Inc. for use at the Annual Meeting of Stockholders to be held on Friday, June 1, 2007 at 9:00 a.m., local time, at the offices of Alnylam Pharmaceuticals, Inc., 300 Third Street, Cambridge, Massachusetts 02142, and at any adjournment thereof.

All proxies will be voted in accordance with the instructions contained in those proxies. If no choice is specified, the proxies will be voted in favor of the matters set forth in the accompanying Notice of Meeting.

Our Annual Report to Stockholders and our Annual Report on Form 10-K for the fiscal year ended December 31, 2006 are being mailed to stockholders with the mailing of these proxy materials on or about May 1, 2007.

A copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2006, as filed with the Securities and Exchange Commission, or SEC, will be furnished without charge to any stockholder upon written request to Alnylam Pharmaceuticals, Inc., 300 Third Street, Cambridge, Massachusetts 02142, Attention: Cynthia Clayton, Director, Investor Relations and Corporate Communications. This proxy statement and our Annual Report on Form 10-K for the fiscal year ended December 31, 2006 are also available on the SEC's website at www.sec.gov.

IMPORTANT INFORMATION ABOUT THE ANNUAL MEETING AND VOTING

Q. Why did I receive these proxy materials? **A** We are providing these proxy materials to you in connection with the solicitation by our board of directors of proxies to be voted at our 2007 annual meeting of stockholders to be held at our offices at 300 Third Street, Cambridge, Massachusetts 02142 on Friday, June 1, 2007 at 9:00 a.m., local time. As a stockholder of Alnylam, you are invited to attend our annual meeting and are entitled and requested to vote on the proposals described in this proxy statement.

Q. Who can vote at the annual meeting? **A** To be able to vote, you must have been a stockholder of record at the close of business on April 13, 2007, the record date for our annual meeting. The holders of the 37,532,183 shares of our common stock outstanding as of the record date are entitled to vote at the annual meeting.

If you were a stockholder of record on that date, you will be entitled to vote all of the shares that you held on that date at the annual meeting and at

any postponements or adjournments of the annual meeting.

- Q. What are the voting rights of the holders of common stock?**
- A.** Each outstanding share of our common stock will be entitled to one vote on each matter considered at the annual meeting.
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Q. How do I vote?

A. If your shares are registered directly in your name, you may vote:

(1) **Over the Internet:** Go to the website of our tabulator, Computershare Trust Company, N.A., at *www.investorvote.com*. Use the vote control number printed on your enclosed proxy card to access your account and vote your shares. You must specify how you want your shares voted or your Internet vote cannot be completed and you will receive an error message. Your shares will be voted according to your instructions.

(2) **By Telephone:** Call 1-800-652-VOTE(8683) toll free from the U.S., Canada and Puerto Rico and follow the instructions on your enclosed proxy card. You must specify how you want your shares voted and confirm your vote at the end of the call or your telephone vote cannot be completed. Your shares will be voted according to your instructions.

(3) **By Mail:** Complete and sign your enclosed proxy card and mail it in the enclosed postage prepaid envelope to Computershare. Your shares will be voted according to your instructions. If you do not specify how you want your shares voted, they will be voted as recommended by our board of directors.

(4) **In Person at the Meeting:** If you attend the annual meeting, you may deliver your completed proxy card in person or you may vote by completing a ballot, which we will provide to you at the meeting.

If your shares are held in street name, meaning they are held for your account by a broker or other nominee, you may vote:

(1) **Over the Internet or by Telephone:** You will receive instructions from your broker or other nominee if they permit Internet or telephone voting. You should follow those instructions.

(2) **By Mail:** You will receive instructions from your broker or other nominee explaining how you can vote your shares by mail. You should follow those instructions.

(3) **In Person at the Meeting:** Contact your broker or other nominee who holds your shares to obtain a broker's proxy card and bring it with you to the annual meeting. A broker's proxy is *not* the form of proxy enclosed with this proxy statement. **You will not be able to vote shares you hold in street name in person at the annual meeting unless you have a proxy from your broker issued in your name giving you the right to vote your shares.**

Q. Can I change my vote?

A. If your shares are registered directly in your name, you may revoke your proxy and change your vote at any time before the annual meeting. To do so, you must do one of the following:

(1) Vote over the Internet or by telephone as instructed above. Only your latest Internet or telephone vote is counted.

(2) Sign a new proxy and submit it as instructed above. Only your latest dated proxy will be counted.

(3) Attend the annual meeting, request that your proxy be revoked and vote in person as instructed above. Attending the annual meeting will not

revoke your proxy unless you specifically request it.

If your shares are held in street name, you may submit new voting instructions by contacting your broker, bank or nominee. You may also vote in person at the annual meeting if you obtain a broker's proxy as described in the answer above.

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- Q. Will my shares be voted if I do not return my proxy?**
- A. If your shares are registered directly in your name,** your shares will not be voted if you do not vote over the Internet, by telephone, by returning your proxy or voting by ballot at the annual meeting.
- If your shares are held in street name,** your brokerage firm may under certain circumstances vote your shares if you do not return your proxy. Brokerage firms can vote customers' unvoted shares on routine matters. If you do not return a proxy to your brokerage firm to vote your shares, your brokerage firm may, on routine matters, either vote your shares or leave your shares unvoted. Your brokerage firm cannot vote your shares on any matter that is not considered routine.
- Proposal 1, the election of directors, and Proposal 2, ratification of the selection of our independent registered public accounting firm, are both considered routine matters. We encourage you to provide voting instructions to your brokerage firm by giving your proxy to them. This ensures that your shares will be voted at the annual meeting according to your instructions. You should receive directions from your brokerage firm about how to submit your proxy to them at the time you receive this proxy statement.
- Q. How many shares must be present to hold the annual meeting?**
- A.** A majority of our outstanding shares of common stock must be present at the meeting to hold the annual meeting and conduct business. This is called a quorum. For purposes of determining whether a quorum exists, we count as present any shares that are voted over the Internet, by telephone, or by completing and submitting a proxy or that are represented in person at the meeting. Further, for purposes of establishing a quorum, we will count as present shares that a stockholder holds even if the stockholder votes to abstain or only votes on one of the proposals. If a quorum is not present, we expect to adjourn the annual meeting until we obtain a quorum.
- Q. What vote is required to approve each matter and how are votes counted?**
- A. Proposal 1 Election of Class III Directors**
- The two nominees for director to receive the highest number of votes FOR election will be elected as directors. This is called a plurality. Abstentions are not counted for purposes of electing directors. If your shares are held by your broker in street name, and you do not vote your shares, your brokerage firm may vote your unvoted shares on Proposal 1. You may
- vote FOR all nominees; or
 - vote FOR one nominee and WITHHOLD your vote from the other nominee.
- Votes that are withheld will not be included in the vote tally for the election of directors and will not affect the results of the vote.
- Proposal 2 Ratification of Appointment of Independent Auditors**
- To approve Proposal 2, stockholders holding a majority of the votes cast on the matter must vote FOR the proposal. If your shares are held by your broker in street name, and you do not vote your shares, your brokerage

firm may vote your unvoted shares on Proposal 2. If you vote to ABSTAIN on Proposal 2, your shares will not be voted in favor of or against the proposal and will also not be counted as votes cast or shares voting on the proposal. As a result, voting to ABSTAIN will have no effect on the voting on the proposal.

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Although stockholder approval of our audit committee's selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm is not required, we believe that it is advisable to give stockholders an opportunity to ratify this selection. If this proposal is not approved at the annual meeting, our audit committee will reconsider its selection of PricewaterhouseCoopers LLP.

- Q. Are there other matters to be voted on at the annual meeting?** **A.** We do not know of any matters that may come before the annual meeting other than the election of two Class III directors and the ratification of the selection of our independent registered public accounting firm. If any other matters are properly presented at the annual meeting, the persons named in the accompanying proxy intend to vote, or otherwise act, in accordance with their judgment on the matter.
- Q. Where can I find the voting results?** **A.** We expect to report the voting results in our Quarterly Report on Form 10-Q for the second quarter ending June 30, 2007, which we anticipate filing with the Securities and Exchange Commission in August 2007.
- Q. What are the costs of soliciting these proxies?** **A.** We will bear the cost of soliciting proxies. In addition to these proxy materials, our directors, officers and employees may solicit proxies by telephone, e-mail, facsimile and in person, without additional compensation. We have also retained The Altman Group to solicit proxies by mail, courier, telephone and facsimile and to request brokers, custodians and fiduciaries to forward proxy soliciting materials to the owners of stock held in their names. For these services, we will pay a fee of \$5,000 plus expenses. We may reimburse brokers or persons holding stock in their names, or in the names of their nominees, for their expenses in sending proxies and proxy material to beneficial owners.
- Q: How do I vote my 401(k) shares?** **A.** You may give voting instructions for the number of shares of Alnylam common stock equal to the interest in Alnylam common stock credited to your 401(k) plan account as of the record date. To vote these shares, complete and return to Computershare the proxy card sent to you with this proxy statement. The 401(k) plan trustee will vote your shares according to your instructions. Only Computershare and its affiliates or agents will have access to your individual voting instructions. You may revoke previously given voting instructions by filing with the trustee either a written revocation or a properly completed and signed proxy bearing a later date.

Householding of Annual Meeting Materials

Some banks, brokers and other nominee record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that only one copy of our proxy statement and annual report to stockholders may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of either document to you upon written or oral request to Alnylam Pharmaceuticals, Inc., 300 Third Street, Cambridge, Massachusetts 02142, Attention: Cynthia Clayton, Director, Investor Relations and Corporate Communications, telephone: (617) 551-8200. If you want to receive separate copies of the proxy statement or annual report to

stockholders in the future, or if you are receiving multiple copies and would like to receive only one copy per household, you should contact your bank, broker or other nominee record holder, or you may contact us at the above address and phone number.

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The following table sets forth information regarding beneficial ownership of our common stock as of January 31, 2007 by:

each person, or group of affiliated persons, known to us to be the beneficial owner of more than 5% of the outstanding shares of our common stock;

each of our directors;

our principal executive officer, our principal financial officer and our two other executive officers who served during the year ended December 31, 2006; we refer to these officers collectively as our named executive officers; and

all of our directors and executive officers as a group.

The number of shares of common stock beneficially owned by each person or entity is determined in accordance with the applicable rules of the SEC and includes voting or investment power with respect to shares of our common stock. The information is not necessarily indicative of beneficial ownership for any other purpose. Unless otherwise indicated, to our knowledge, all persons named in the table have sole voting and investment power with respect to their shares of common stock, except to the extent authority is shared by spouses under community property laws. The inclusion of any shares deemed beneficially owned in this table does not constitute an admission of beneficial ownership of those shares.

Name and Address of Beneficial Owner(1)	Number of Shares Owned	+	Common Stock Underlying Options Acquirable Within 60 Days(2)	=	Total Beneficial Ownership	Percentage of Common Stock Beneficially Owned(3)
Holders of more than 5% of our common stock						
FMR Corp.(4)	5,549,610				5,549,610	14.8%
Novartis Pharma AG(5)	5,267,865				5,267,865	14.1%
Abingworth BioVentures(6)	2,040,000				2,040,000	5.5%
Directors and Named Executive Officers						
Peter Barrett, Ph.D.	332		10,000		10,332	*
John K. Clarke	8,891		10,000		18,891	*
Victor J. Dzau, M.D.						
John M. Maraganore, Ph.D.	324(7)		948,320		948,644	2.5%
Vicki L. Sato, Ph.D.			8,334		8,334	*
Paul R. Schimmel, Ph.D.	336,473(8)		10,000		346,473	*
Phillip A. Sharp, Ph.D.	252,630		85,986		338,616	*

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Kevin P. Starr		66,051	66,051	*
James L. Vincent	10,000	35,001	45,001	*
Patricia L. Allen	1,173(7)	73,697	74,870	*
Barry E. Greene	42,249(7)	195,937	238,186	*
Vincent J. Miles, Ph.D.	81(7)	124,095	124,176	*
All directors and executive officers as a group (11 persons)	652,072	1,443,326	2,095,398	5.4%

* Less than 1% of our outstanding common stock.

(1) Unless otherwise indicated, the address of each stockholder is *c/o* Alnylam Pharmaceuticals, Inc., 300 Third Street, Cambridge, MA 02142.

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- (2) All stock options granted by us prior to the completion of our initial public offering include a right of early exercise, pursuant to which an optionee can exercise unvested stock options for shares of restricted stock. However, for purposes of this table, options that will not vest within 60 days after January 31, 2007 have not been deemed exercisable or outstanding.
- (3) Percentage of beneficial ownership is based on 37,441,555 shares of our common stock outstanding as of January 31, 2007. Shares of common stock subject to options currently exercisable, or exercisable within 60 days of January 31, 2007, are deemed outstanding for computing the percentage of the person holding such options but are not deemed outstanding for computing the percentage for any other person.
- (4) According to Amendment No. 2 to a Schedule 13G filed by FMR Corp. with the SEC on February 14, 2007, as of December 31, 2006, Fidelity Management & Research Company, a wholly-owned subsidiary of FMR Corp., is the beneficial owner of 5,356,195 shares, as a result of acting as an investment advisor to various investment companies registered under Section 8 of the Investment Company Act of 1940. The ownership of one investment company, Fidelity Aggressive Growth Fund, amounted to 2,460,219 shares. Edward C. Johnson 3d, Chairman of FMR Corp., and FMR Corp., through its control of Fidelity Management & Research Company, and certain funds each has sole power to dispose of the 5,356,195 shares owned by such funds. Neither FMR Corp. nor Edward C. Johnson 3d has the sole power to vote or direct the voting of the shares owned directly by such funds, which power resides with the funds' Boards of Trustees. Fidelity Management & Research Company carries out the voting of the shares under written guidelines established by the funds' Boards of Trustees. Fidelity Management Trust Company, a wholly-owned subsidiary of FMR Corp., is the beneficial owner of 10,600 shares. Edward C. Johnson 3d and FMR Corp. each have sole dispositive power over these 10,600 shares and sole power to vote or to direct the voting of these 10,600 shares. Fidelity International Limited is the beneficial owner of 179,900 shares. Pyramis Global Advisors Trust Company, a wholly-owned subsidiary of FMR Corp., is the beneficial owner of 2,915 shares. Various persons have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the shares of our common stock held by these funds. The address of FMR Corp. is 82 Devonshire Street, Boston, MA 02109.
- (5) Novartis AG, as parent of Novartis Pharma AG, is the indirect beneficial owner of 5,267,865 shares. Our investor rights agreement with Novartis Pharma AG provides Novartis with the right to acquire additional equity securities of Alnylam in the event that we propose to sell or issue any equity securities, subject to specified exceptions, as described in the investor rights agreement, such that Novartis would be able generally to maintain its ownership percentage in Alnylam. In accordance with the terms of the investor rights agreement, in connection with the follow-on public offering of common stock that we completed in December 2006, Novartis Pharma AG has the right until on or about June 3, 2007 to purchase from us up to 915,987 shares of our common stock at a purchase price that is a 10% premium to the price that we sold shares in the offering or a 10% premium to the market price, as determined in accordance with the investor rights agreement, at the time of purchase by Novartis, whichever is greater, if Novartis exercises its purchase right within the time period set forth in the investor rights agreement. In connection with our sale of shares to Inex Pharmaceuticals, Inc. in January 2007, Novartis has the right to purchase from us up to 70,431 shares of our common stock at a purchase price that is a 10% premium to the market price, as determined in accordance with the investor rights agreement. In addition, in accordance with terms of the investor rights agreement, in connection with the issuance of shares of our common stock under our stock plans during 2006, Novartis has the right until on or about May 2, 2007 to purchase from us up to 117,618 shares of our common stock at a purchase price of \$17.51. The information contained in the table above does not include any shares that Novartis has the right to purchase under the investor rights agreement. The address of Novartis Pharma AG is Lichstrasse 35, 4053 Basel, Switzerland.

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- (6) According to Amendment No. 3 to a Schedule 13G filed by Abingworth Management Limited with the SEC on February 12, 2007, as of December 31, 2006, Abingworth Bioventures III A L.P. is the beneficial owner of 932,962 shares, Abingworth Bioventures III B L.P. is the beneficial owner of 566,908 shares, Abingworth Bioventures III C L.P. is the beneficial owner of 339,593 shares, Abingworth Bioventures III Executives L.P. is the beneficial owner of 14,799 shares and Abingworth Bioequities Master Fund Limited is the beneficial owner of 185,738 shares. Abingworth Bioventures III A L.P., Abingworth Bioventures III B L.P., Abingworth Bioventures III C L.P. and Abingworth Bioventures III Executives L.P., which are collectively referred to as the Funds, share a manager, Abingworth Management Limited, and are affiliated funds, and, on this basis, may be deemed to beneficially own the shares held by one another. Each of the Funds disclaims beneficial ownership of such shares of common stock except for the shares, if any, such Fund holds of record. Abingworth Management Limited, as the manager of each of the Funds and Abingworth Bioequities Master Fund Limited, may be deemed to beneficially own all of the shares held by the Funds and Abingworth Bioequities Master Fund Limited. Each of the Funds may be deemed to share the power to direct the disposition of and vote the shares held by the Funds. Abingworth Management Limited may be deemed to share the power to direct the disposition of and vote all of the shares held by the Funds and Abingworth Bioequities Master Fund Limited. The address of Abingworth BioVentures is c/o Abingworth Management Limited, Princess House, 38 Jermyn Street, London, England SW1Y 6DN.
- (7) Includes shares contributed by Alnylam to our 401(k) plan for the benefit of the named executive officers as of January 31, 2007: Dr. Maraganore, 324 shares; Ms. Allen, 103 shares; Mr. Greene, 198 shares; and Dr. Miles, 81 shares.
- (8) The shares are held by Paul Schimmel as Trustee of the Paul Schimmel Prototype PSP for which he is the trustee and over which he has sole investment and voting power.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934 requires our directors, executive officers and the holders of more than 10% of our common stock to file with the Securities and Exchange Commission initial reports of ownership of our common stock and other equity securities on a Form 3 and reports of changes in such ownership on a Form 4 or Form 5. Officers, directors and 10% stockholders are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file. Based solely on a review of our records and written representations by the persons required to file these reports, we believe that all filing requirements of Section 16(a) were satisfied with respect to our most recent fiscal year.

PROPOSAL 1 ELECTION OF CLASS III DIRECTORS

We have three classes of directors, currently consisting of three Class I directors, three Class II directors and three Class III directors. At each annual meeting, directors are elected for a full term of three years to succeed those whose terms are expiring. The terms of the three classes are staggered in a manner so that only one class is elected by stockholders annually. Peter Barrett, Ph.D., Victor J. Dzau, M.D. and Kevin P. Starr are currently serving as Class III directors. Dr. Barrett and Mr. Starr have served as directors since 2002 and 2003, respectively. Dr. Dzau was nominated for election to the board of directors by the nominating and corporate governance committee pursuant to the process described below in the Director Nomination Process on page 13 and was elected director by our board of directors in April 2007. Following the 2007 annual meeting, we will have a vacancy on our board of directors as a result of Dr. Barrett's decision to retire from the board and not stand for reelection as a Class III director. We intend to fill this vacancy by a vote of a majority of our remaining directors, which is expected to occur after the 2007 annual meeting, pursuant to our Amended and Restated By-Laws. The Class III directors elected this year will serve as

members of our board of directors until the 2010 annual meeting of stockholders, or until their respective successors are elected and qualified.

The persons named in the enclosed proxy will vote to elect Dr. Dzau and Mr. Starr as Class III directors unless the proxy is marked otherwise. Dr. Dzau and Mr. Starr have indicated their willingness to serve on our board of directors, if elected; however, if any nominee should be unable to serve, the person acting under the proxy may vote the proxy for a substitute nominee designated by our board of directors. Our board of directors has no reason to believe that Dr. Dzau or Mr. Starr would be unable to serve if elected.

Table of Contents**Board Recommendation**

The board of directors recommends a vote FOR the election of each of the Class III director nominees.

Set forth below for each director, including the Class III director nominees, Dr. Dzau and Mr. Starr, is information as of January 31, 2007 with respect to his or her (a) name and age, (b) positions and offices at Alnylam, (c) principal occupation and business experience during at least the past five years, (d) directorships, if any, of other publicly held companies and (e) the year such person became a member of our board of directors. The duration of an individual's service on our board of directors or as an officer described below includes service on the board of directors or as an officer of our predecessor company, which was also known as Alnylam Pharmaceuticals, Inc.

Name	Age	Director Since	Principal Occupation, Other Business Experience During the Past Five Years and Other Directorships
Class III directors, nominees to be elected at the annual meeting (terms expiring in 2010)			
Victor J. Dzau, M.D.	60	2007	Dr. Dzau has served as a member of our board of directors since April 2007. Dr. Dzau has served as Chancellor for Health Affairs at Duke University and President and CEO of the Duke University Health System since July 2004. From July 1996 until September 2004, he was the Hersey Professor of Theory and Practice of Medicine at Harvard Medical School and Chair of the Department of Medicine, Physician in Chief and Director of Research at Brigham and Women's Hospital. He is the previous Chairman of the National Institutes of Health (NIH) Cardiovascular Disease Advisory Committee and served on the Advisory Committee to the Director of the NIH. Dr. Dzau is a member of the Institute of Medicine. He currently serves as a director of Duke University Health System, PepsiCo, Inc. and Genzyme Corporation.
Kevin P. Starr(1)(3)	44	2003	Mr. Starr has served as a member of our board of directors since September 2003. Since April 2007, Mr. Starr has been a Partner of Third Rock Ventures, a venture capital firm, and since December 2002, he has been an entrepreneur. From December 2001 to December 2002, Mr. Starr served as Chief Operating Officer of Millennium Pharmaceuticals, Inc. He also served as Millennium's Chief Financial Officer from December 1998 to December 2002. Mr. Starr currently serves as a director of Human Genome Sciences, Inc.

Class III director (term expiring at the 2007 annual meeting)

Peter Barrett, Ph.D.	54	2002	Dr. Barrett has served as a member of our board of directors since July 2002. Dr. Barrett will resign from our board of directors and his term will expire at the 2007 annual meeting. Dr. Barrett has served as a Partner of Atlas Venture, a venture capital firm, since January 2004. From January 2002 to January 2004, he served as a Senior Principal of Atlas Venture. Dr. Barrett also serves as a director of Momenta Pharmaceuticals, Inc. and LAB International, Inc.
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Name	Age	Director Since	Principal Occupation, Other Business Experience During the Past Five Years and Other Directorships
Class I directors (terms expiring in 2008)			
John M. Maraganore, Ph.D.	44	2002	Dr. Maraganore has served as our President and Chief Executive Officer and as a member of our board of directors since December 2002. From April 2000 to December 2002, Dr. Maraganore served as Senior Vice President, Strategic Product Development for Millennium Pharmaceuticals, Inc. He currently serves as a director of the Biotechnology Industry Organization.
Paul R. Schimmel, Ph.D.(2)(3)	66	2002	Dr. Schimmel is a founder of Alnylam and has served as a member of our board of directors since June 2002. Dr. Schimmel has been the Ernest and Jean Hahn Professor of Molecular Biology and Chemistry and a member of the Skaggs Institute for Chemical Biology at the Scripps Research Institute since 1997. Dr. Schimmel is a member of the National Academy of Sciences, the Institute of Medicine and the American Academy of Arts and Sciences. Dr. Schimmel also serves as a director of Alkermes, Inc. and Avicena Group, Inc. and is Co-Chair of the board of directors of Repligen, Inc.
Phillip A. Sharp, Ph.D.	62	2002	Dr. Sharp is a founder of Alnylam and has served as a member of our board of directors since June 2002. Dr. Sharp is currently an Institute Professor at the Massachusetts Institute of Technology and was the Founding Director of the McGovern Institute for Brain Research at the Massachusetts Institute of Technology. Dr. Sharp has been a professor at the Massachusetts Institute of Technology since 1974. He is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the Institute of Medicine. Dr. Sharp received the Nobel Prize for Physiology or Medicine in 1993. He also serves as a director of Biogen Idec, Inc., which he co-founded in 1978.

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Name	Age	Director Since	Principal Occupation, Other Business Experience During the Past Five Years and Other Directorships
Class II directors (terms expiring in 2009)			
John K. Clarke(2)(3)	53	2002	Mr. Clarke has served as the Chair of our board of directors since June 2002. Since founding Cardinal Partners, a venture capital firm focused on healthcare, in 1997, Mr. Clarke has served as its Managing General Partner. Mr. Clarke also serves as a director of Momenta Pharmaceuticals, Inc.
Vicki L. Sato, Ph.D.(1)(2)	58	2005	Dr. Sato has served as a member of our board of directors since December 2005. Dr. Sato currently is Professor of Management Practice at Harvard Business School and Professor of the Practice at Harvard University Department of Molecular and Cell Biology. Dr. Sato served as President of Vertex Pharmaceuticals from December 2000 to February 2005. Prior to serving as Vertex's President, Dr. Sato served as its Chief Scientific Officer. Prior to joining Vertex, she held numerous positions at Biogen, Inc. (now Biogen Idec Inc.). She also serves as a director of Infinity Pharmaceuticals, Inc., PerkinElmer, Inc. and Bristol-Myers Squibb Co.
James L. Vincent(1)	67	2005	Mr. Vincent has served as a member of our board of directors since July 2005. Mr. Vincent was Chief Executive Officer and Chairman of Biogen, Inc. (now Biogen Idec Inc.) from 1985 to 2002.

(1) Member of Compensation Committee.

(2) Member of Nominating and Corporate Governance Committee.

(3) Member of Audit Committee.

For information relating to shares of our common stock owned by each of our directors, see the disclosure set forth under the heading "Ownership of Our Common Stock."

CORPORATE GOVERNANCE

General

We believe that good corporate governance is important to ensure that Alnylam is managed for the long-term benefit of our stockholders. This section describes key corporate governance practices that we have adopted.

We have adopted a Code of Business Conduct and Ethics which applies to all of our officers, directors and employees, as well as charters for our audit committee, our compensation committee and our nominating and corporate governance committee. We have posted copies of the Code of Business Conduct and Ethics and each committee's charter on the Corporate Governance section of our website, www.alnylam.com. We intend to disclose any amendments to, or waivers from, our Code of Business Conduct and Ethics on our website.

Corporate Governance Guidelines

Our board of directors has adopted corporate governance guidelines to assist in the exercise of its duties and responsibilities and to serve the best interests of Alnylam and our stockholders. These guidelines, which provide a framework for the conduct of the board of directors' business, provide that:

the board of directors' principal responsibility is to oversee the management of Alnylam;

a majority of the members of the board of directors shall be independent directors;

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the independent directors meet regularly in executive session;

directors have full and free access to management and, as necessary and appropriate, independent advisors; and

periodically, the board of directors and its committees will seek to conduct a self-evaluation to determine whether they are functioning effectively.

Board Determination of Independence

Under the Nasdaq Stock Market Marketplace Rules, a director will only qualify as an independent director if, in the opinion of our board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Our board of directors has determined that none of Drs. Barrett, Dzau, Sato and Schimmel and Messrs. Clarke, Starr and Vincent has a relationship which would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is an independent director as defined under Nasdaq Rule 4200(a)(15).

Board of Directors Meetings and Attendance

The board of directors has responsibility for establishing broad corporate policies and reviewing our overall performance rather than day-to-day operations. The primary responsibility of our board of directors is to oversee the management of our company and, in doing so, serve the best interests of the company and our stockholders. The board of directors selects, evaluates and provides for the succession of executive officers and, subject to stockholder election, directors. It reviews and approves corporate objectives and strategies, and evaluates significant policies and proposed major commitments of corporate resources. Our board of directors also participates in decisions that have a potential major economic impact on our company. Management keeps the directors informed of company activity through regular communication, including written reports and presentations at board of directors and committee meetings.

Our board of directors met seven times during the fiscal year ended December 31, 2006, either in person or by teleconference. During 2006, each of our directors attended at least 75% of the aggregate number of board meetings and meetings held by all committees on which he or she then served.

Directors are expected to attend the annual meeting of stockholders. All members of our board of directors attended the 2006 annual meeting of stockholders.

Board Committees

The board of directors has established three standing committees – audit, compensation and nominating and corporate governance – each of which operates under a written charter that has been approved by the board. We have posted copies of each committee’s charter on the Corporate Governance section of our website, www.alnylam.com. The members of each committee are appointed by our board of directors, upon recommendation of the nominating and corporate governance committee.

The board of directors has determined that all of the members of each of the board’s three standing committees are independent as defined under the Nasdaq Stock Market Marketplace Rules, including, in the case of all members of the audit committee, the additional independence requirements of Rule 10A-3 under the Securities Exchange Act of 1934.

Audit Committee

The audit committee is responsible for:

appointing, evaluating, retaining, approving the compensation of and, when necessary, terminating the engagement of our independent auditors;

taking appropriate action, or recommending that our board of directors take appropriate action, to oversee the independence of our independent auditors;

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reviewing and discussing with management and the registered public accounting firm our annual and quarterly financial statements and related disclosures;

monitoring our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;

reviewing and discussing our risk management policies;

establishing policies regarding hiring employees from the registered public accounting firm and procedures for the receipt and retention of accounting related complaints and concerns;

meeting independently with our accounting staff, registered public accounting firm and management; and

preparing the audit committee report required by SEC rules, which is included on page 14 of this proxy statement.

In addition, the audit committee must approve or ratify any related party transaction entered into by us. Our policies and procedures for the review, approval and ratification of related person transactions are summarized on page 16 of this proxy statement.

The members of the audit committee are Messrs. Starr (Chair) and Clarke and Dr. Schimmel. We believe that each member of the audit committee satisfies the requirements for membership, including independence, established by the Nasdaq Stock Market and the SEC.

The board of directors has determined that Mr. Starr is an audit committee financial expert as defined in Item 401(h) of Regulation S-K.

No member of the audit committee is the beneficial owner of more than 10% of our common stock.

The audit committee met seven times during 2006.

Compensation Committee

The compensation committee is responsible for:

annually reviewing and approving corporate goals and objectives relevant to compensation of our chief executive officer;

determining our chief executive officer's compensation;

reviewing and approving, or making recommendations to our board with respect to, the compensation of our other executive officers;

overseeing an evaluation of our senior executives;

overseeing and administering our stock based compensation plans, 401(k) plan and performing the duties imposed on the compensation committee by the terms of those plans;

reviewing and making recommendations to our board of directors with respect to director compensation;

reviewing and amending as necessary our compensation philosophy and objectives;

reviewing and discussing annually with management our Compensation Discussion and Analysis, which is included beginning on page 18 of this proxy statement; and

preparing the compensation committee report required by SEC rules, which is included on page 23 of this proxy statement.

The processes and procedures followed by our compensation committee in considering and determining executive and director compensation are described below under the heading Compensation Discussion and Analysis.

The members of our compensation committee are Dr. Sato (Chair) and Messrs. Starr and Vincent. Dr. Barrett was the Chair of this committee until April 25, 2007. At that time, in connection with his decision not to stand for re-election at the annual meeting, Dr. Barrett resigned from his position on the compensation committee and, upon the recommendation of the nominating and corporate governance committee, our board

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of directors appointed Dr. Sato to the committee. We believe that each member of the compensation committee satisfies the requirements for membership, including independence, established by the Nasdaq Stock Market.

The compensation committee met five times during 2006.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee is responsible for:

identifying individuals qualified to become members of our board of directors;

recommending to our board of directors the persons to be nominated for election as directors and the persons to be appointed to each of our board committees;

reviewing and making recommendations to our board of directors with respect to management succession planning;

developing and recommending to our board of directors a set of corporate governance principles; and

overseeing the evaluation of our board of directors.

The processes and procedures followed by the nominating and corporate governance committee in identifying and evaluating director candidates are described below under the heading Director Nomination Process.

The members of our nominating and corporate governance committee are Mr. Clarke (Chair) and Dr. Sato. Dr. Barrett was a member of this committee until April 25, 2007. At that time, in connection with his decision not to stand for re-election at the annual meeting, Dr. Barrett resigned from his position on the committee. We believe that each member of the nominating and corporate governance committee satisfies the requirements for membership, including independence, as established by the Nasdaq Stock Market.

The nominating and corporate governance committee met three times during 2006.

Director Nomination Process

The nominating and corporate governance committee is responsible for identifying individuals qualified to become board members, consistent with criteria approved by the board, and recommending the persons to be nominated for election as directors, except where we are legally required by contract, law or otherwise to provide third parties with the right to nominate.

The process followed by our nominating and corporate governance committee to identify and evaluate director candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates and interviews of selected candidates by members of the committee and the board.

In considering whether to recommend any particular candidate for inclusion in the board's slate of recommended director nominees, our nominating and corporate governance committee will apply certain criteria, including the candidate's integrity, business acumen, knowledge of our business and industry, experience, diligence, conflicts of interest and the ability to act in the interests of all stockholders. The committee does not assign specific weights to particular criteria and no particular criterion is a prerequisite for each prospective nominee. We believe that the

backgrounds and qualifications of our directors, considered as a group, should provide a composite mix of experience, knowledge and abilities that will allow the board to fulfill its responsibilities.

Stockholders may recommend individuals to the nominating and corporate governance committee for consideration as potential director candidates by submitting their names, together with appropriate biographical information and background materials and a statement as to whether the stockholder or group of stockholders making the recommendation has beneficially owned more than 5% of our common stock for at least a year as of the date such recommendation is made, to the nominating and corporate governance committee, c/o Corporate Secretary, Alnylam Pharmaceuticals, Inc., 300 Third Street, Cambridge, Massachusetts 02142. Assuming

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that appropriate biographical and background material has been provided on a timely basis, the committee will evaluate stockholder-recommended candidates by following substantially the same process, and applying substantially the same criteria, as it follows for candidates submitted by others. Stockholders also have the right under our bylaws to nominate director candidates directly, without any action or recommendation on the part of the committee or the board, by following the procedures set forth below under the heading Stockholder Proposals.

At the annual meeting, stockholders will be asked to consider the election of Dr. Dzau and Mr. Starr, both of whom currently serve on our board of directors. Dr. Dzau and Mr. Starr were proposed to the board of directors by the nominating and corporate governance committee and the board of directors determined to include them as its nominees.

Communicating with the Independent Directors

The board of directors will give appropriate attention to written communications that are submitted by stockholders, and will respond if and as appropriate. The chair of the board of directors (if an independent director), or the lead director (if one is appointed), or otherwise the chair of the nominating and corporate governance committee, is primarily responsible for monitoring communications from stockholders and for providing copies or summaries to the other directors as he or she considers appropriate.

Communications are forwarded to all directors if they relate to important substantive matters and include suggestions or comments that the chair of the board of directors (if an independent director), or the lead director (if one is appointed), or otherwise the chair of the nominating and corporate governance committee, considers to be important for the directors to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we tend to receive repetitive or duplicative communications.

Stockholders who wish to send communications on any topic to the board of directors should address such communications to the Board of Directors, c/o Corporate Secretary, Alnylam Pharmaceuticals, Inc., 300 Third Street, Cambridge, Massachusetts 02142.

Report of the Audit Committee

The audit committee reports to and acts on behalf of the board of directors by providing oversight of our financial management, related person transaction policies and procedures, audits of our financial statements and financial reporting controls and accounting policies and procedures. Our management is responsible for the preparation, presentation and integrity of our financial statements and the independent registered public accounting firm is responsible for conducting an independent audit of our annual financial statements. The audit committee is responsible for independently overseeing the conduct of these activities by our management and the independent registered public accounting firm.

The audit committee operates under a written charter adopted by the board of directors that reflects standards contained in the Nasdaq Stock Market Marketplace Rules. The audit committee reviews this charter annually. A complete copy of the current charter is posted on the Corporate Governance section of our website, www.alnylam.com.

The board of directors has determined that Mr. Starr, the audit committee chair, qualifies as an audit committee financial expert as defined in Item 401(h) of Regulation S-K and that each member of our audit committee is independent as defined under Rule 10A-3 of the Securities Exchange Act of 1934 and the Nasdaq Stock Market Marketplace Rules.

The audit committee has reviewed our audited financial statements for the fiscal year ended December 31, 2006, and has discussed them with our management and our independent registered public accounting firm, PricewaterhouseCoopers LLP. The audit committee has also discussed with PricewaterhouseCoopers LLP the matters required to be discussed by the Statement on Auditing Standards No. 61, *Communication with Audit Committees*, as amended, as adopted by the Public Company Accounting Oversight Board in Rule 3200T,

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which requires the independent registered public accounting firm to provide the audit committee with additional information regarding the scope and results of the audit, including the independent registered public accounting firm's responsibilities under generally accepted auditing standards, significant issues or disagreements concerning our accounting practices or financial statements, significant accounting policies, significant accounting adjustments, alternative accounting treatments, accounting for significant unusual transactions, and estimates, judgments and uncertainties.

In addition, PricewaterhouseCoopers LLP also provided the audit committee with the written disclosures and the letter required by Independence Standards Board Standard No. 1 (Independence Discussions with Audit Committees), and the audit committee and PricewaterhouseCoopers LLP have discussed their independence from the company and its management, including the matters in those written disclosures.

In this context, the audit committee members meet regularly with PricewaterhouseCoopers LLP and management (including private sessions with PricewaterhouseCoopers LLP and members of management) to discuss any matters that the audit committee or these individuals believe should be discussed. The audit committee conducts a meeting each quarter to review the financial statements prior to the public release of earnings.

Based on its discussions with management and PricewaterhouseCoopers LLP, and its review of the representations and information provided by management and PricewaterhouseCoopers LLP, the audit committee recommended to the board of directors that the audited financial statements be included in our Annual Report on Form 10-K for the year ended December 31, 2006. The audit committee also recommended to the board of directors, and the board of directors has approved, subject to stockholder ratification, the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2007.

By the audit committee of the board of directors of Alnylam

Kevin P. Starr, Chair
John K. Clarke
Paul R. Schimmel, Ph.D.

Principal Accountant Fees and Services

The following table summarizes the fees of our independent auditors, PricewaterhouseCoopers LLP, an independent registered public accounting firm, billed to us for each of the last two fiscal years for audit and other services:

Fee Category	2006	2005
Audit Fees(1)	\$ 580,560	\$ 442,860
Audit-Related Fees(2)	67,490	43,800
Tax Fees(3)	31,250	15,181
All Other Fees(4)	1,500	1,500
Total Fees	\$ 680,800	\$ 503,341

(1) Audit fees consist of fees for the audit of our financial statements, the review of the interim financial statements included in our quarterly reports on Form 10-Q, services in connection with our public stock offerings and other

professional services provided in connection with regulatory filings or engagements.

- (2) Audit-related fees consist of fees for services related to accounting consultations and advice, including consultations and advice relating to the adoption of Statement of Financial Accounting Standards No. 123R, Share-Based Payment, or SFAS 123R.
- (3) Tax fees consist of fees for tax compliance and tax consultations.
- (4) All other fees represent payment for access to the PricewaterhouseCoopers LLP on-line accounting research database.

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Pre-Approval Policies and Procedures

The audit committee is required to preapprove all audit services to be provided to us, whether provided by our principal independent auditors or other firms, and all other services to be provided to us by our independent auditors, except that de minimis non-audit services may be approved in accordance with applicable SEC rules.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Policies and Procedures For Related Person Transactions

Our board of directors has adopted written policies and procedures for the review of any transaction, arrangement or relationship in which Alnylam is a participant, the amount involved exceeds \$120,000, and one of our executive officers, directors, director nominees or 5% stockholders (or their immediate family members), each of whom we refer to as a related person, has a direct or indirect material interest.

If a related person proposes to enter into such a transaction, arrangement or relationship, which we refer to as a related person transaction, the related person must report the proposed related person transaction to our chief operating officer. The policy calls for the proposed related person transaction to be reviewed and, if deemed appropriate, approved by the board's audit committee. Whenever practicable, the reporting, review and approval will occur prior to entry into the transaction. If advance review and approval is not practicable, the audit committee will review, and, in its discretion, may ratify the related person transaction. The policy also permits the chair of the audit committee to review and, if deemed appropriate, approve proposed related person transactions that arise between committee meetings, subject to ratification by the audit committee at its next meeting. Any related person transactions that are ongoing in nature will be reviewed annually.

A related person transaction reviewed under the policy will be considered approved or ratified if it is authorized by the audit committee after full disclosure of the related person's interest in the transaction. As appropriate for the circumstances, the audit committee will review and consider:

the related person's interest in the related person transaction;

the approximate dollar value of the amount involved in the related person transaction;

the approximate dollar value of the amount of the related person's interest in the transaction without regard to the amount of any profit or loss;

whether the transaction was undertaken in the ordinary course of our business;

whether the terms of the transaction are no less favorable to us than terms that could have been reached with an unrelated third party;

the purpose of, and the potential benefits to us of, the transaction; and

any other information regarding the related person transaction or the related person in the context of the proposed transaction that would be material to investors in light of the circumstances of the particular transaction.

The audit committee may approve or ratify the transaction only if the committee determines that, under all of the circumstances, the transaction is not inconsistent with the best interests of Alnylam. The audit committee may impose any conditions on the related person transaction that it deems appropriate.

In addition to the transactions that are excluded by the instructions to the SEC's related person transaction disclosure rule, the board of directors has determined that the following transactions do not create a material direct or indirect interest on behalf of related persons and, therefore, are not related person transactions for purposes of this policy:

interests arising solely from the related person's position as an executive officer of another entity (whether or not the person is also a director of such entity), that is a participant in the transaction,

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where (a) the related person and all other related persons own in the aggregate less than a 10% equity interest in such entity, and (b) the related person and his or her immediate family members are not involved in the negotiation of the terms of the transaction and do not receive any special benefits as a result of the transaction; and

a transaction that is specifically contemplated by provisions of our charter or bylaws.

The policy provides that transactions involving compensation of executive officers shall be reviewed and approved by the compensation committee in the manner specified in its charter.

Agreements with Novartis

Beginning in September 2005, we entered into the first of two strategic alliances with Novartis Pharma AG and its affiliate, Novartis Institutes for Biomedical Research, Inc., whom we refer to collectively as Novartis. At that time, we and Novartis executed a stock purchase agreement and an investor rights agreement. When the transactions contemplated by the stock purchase agreement closed in October 2005, the investor rights agreement became effective, and we and Novartis executed a research collaboration and license agreement. Under the terms of the stock purchase agreement, on October 12, 2005, Novartis purchased approximately 5.3 million shares of our common stock at a purchase price of \$11.11 per share for an aggregate purchase price of approximately \$58.5 million, which, immediately after such issuance, represented 19.9% of our then outstanding common stock. Novartis owned approximately 14% of our common stock as of March 31, 2007 and has the right to purchase up to an additional 1,104,036 shares of our common stock pursuant to the terms of the investor rights agreement described below.

Under the terms of the investor rights agreement, we granted Novartis demand and piggyback registration rights under the Securities Act of 1933, as amended, for the shares of our common stock held by Novartis. We also granted to Novartis rights to acquire additional equity securities of Alnylam in the event that we propose to sell or issue any equity securities, subject to specified exceptions, as described in the investor rights agreement, such that Novartis would be able to maintain its ownership percentage in Alnylam. Novartis agreed, until the later of (1) three years from the date of the investor rights agreement and (2) the date of termination or expiration of the Selection Term, as defined in the collaboration and license agreement, not to acquire any of our securities, other than an acquisition resulting in Novartis and its affiliates beneficially owning less than 20% of the total outstanding voting securities of Alnylam, participate in any tender or exchange offer, merger or other business combination involving us or seek to control or influence our management, board of directors or policies, subject to specified exceptions described in the investor rights agreement.

Under the terms of the collaboration and license agreement, we agreed with Novartis to work on certain targets selected by Novartis, as defined in the collaboration and license agreement, to discover and develop therapeutics based on RNA interference, or RNAi. In consideration for rights granted to Novartis under the collaboration and license agreement, Novartis made an up-front payment totaling \$10.0 million to Alnylam in October 2005, partly to reimburse prior costs incurred by us to develop *in vivo* RNAi technology. In addition, the collaboration and license agreement includes terms under which Novartis will provide us with research funding and milestone payments as well as royalties on annual net sales of products resulting from the collaboration and license agreement.

In February 2006, we entered into the Novartis flu alliance. The agreement governing the flu alliance is structured as an addendum to the collaboration and license agreement for the broad Novartis alliance. This addendum supplements and, to the extent described therein, supersedes in relevant part the collaboration and license agreement for the broad Novartis alliance. Under the terms of the addendum, we and Novartis have joint responsibility for the development of RNAi therapeutics for pandemic flu. Novartis will have primary responsibility for commercialization of any such RNAi therapeutics worldwide, but we will be actively involved, and may in certain circumstances take the lead, in

commercialization in the United States. We are eligible to receive significant funding from Novartis for our efforts on RNAi therapeutics for pandemic flu, and to receive a significant share of any profits.

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INFORMATION ABOUT EXECUTIVE OFFICER AND DIRECTOR COMPENSATION

Compensation Discussion and Analysis

Our compensation committee is responsible for overseeing the compensation of all of our executive officers. In this capacity, the compensation committee designs, implements, reviews and approves all compensation for our chief executive officer and other named executive officers. The goal of the compensation committee is to ensure that our compensation programs are aligned with our business goals and objectives and that the total compensation paid to each of our named executive officers is fair, reasonable and competitive.

Compensation Objectives and Philosophy

Our compensation programs are designed to attract and retain qualified and talented executives, motivating them to achieve our business goals and rewarding them for superior short and long-term performance. In particular, our compensation programs are intended to reward the achievement of specified predetermined quantitative and qualitative goals and to align our executives' interests with those of our stockholders in order to attain the ultimate objective of increasing stockholder value.

Elements of Total Compensation and Relationship to Performance

Key elements of these programs include:

base salary compensation designed to reward annual achievements as measured against pre-determined quantitative and qualitative performance goals, with consideration given to the executive's qualifications, scope of responsibility, leadership abilities and management experience and effectiveness; and

equity incentive compensation, typically in the form of stock options, the value of which is dependent upon the performance of our common stock price, and which is subject to multi-year vesting that requires continued service.

Determining and Setting Executive Compensation

Our management develops our compensation plans by utilizing publicly available compensation data and subscription survey data for a peer group of national and regional companies in the biopharmaceutical and biotechnology industries, which we believe are generally comparable to Alnylam in terms of organization structure, size and stage of development, and against which we believe we compete for executive talent. This peer group of companies is reviewed with and approved by the compensation committee annually. We believe that the compensation practices of this peer group provide us with appropriate compensation benchmarks. Notwithstanding the similarities of the peer group companies to Alnylam, due to the nature of our business, we compete for executive talent with many companies that are larger and better established than we are or that possess greater resources than we do, as well as with highly prestigious academic and non-profit institutions. Accordingly, the compensation committee generally targets compensation for our executives between the 50th and 60th percentile of compensation paid to similarly situated executives of the companies in our peer group. Other considerations, including market factors and the experience level of an executive, may dictate variations to this general target.

As the biopharmaceutical industry is characterized by a very long product development cycle, including a lengthy research and product-testing period and a rigorous approval phase involving human testing and governmental

regulatory approval, many of the traditional benchmarking metrics, such as product sales, revenues and profits are inappropriate for an early-stage biopharmaceutical company such as Alnylam. Instead, the specific factors the compensation committee considers when determining our named executives' compensation include:

key research and development initiatives;

clinical trial progress;

achievement of regulatory milestones;

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establishment and maintenance of key strategic relationships;
implementation of appropriate financing strategies; and
financial and operating performance.

The compensation committee determines executive compensation after carefully reviewing corporate performance and performing a detailed evaluation of a named executive's annual performance against established goals. The compensation committee has implemented an annual performance review program for our executives under which annual corporate and individual performance goals are determined and set forth in writing at the beginning of each fiscal year. Annual corporate goals are proposed by our senior management and approved by our board of directors. Individual goals focus on contributions that facilitate the achievement of the corporate goals and are proposed by each executive and approved by the chief executive officer. The compensation committee approves the chief executive officer's goals. Annual salary increases and annual stock option awards granted to our executives are tied to the achievement of these corporate and individual performance goals.

During the last quarter of each fiscal year, our senior management evaluates our corporate performance and each executive's individual performance, as compared to the goals for that year. Based on this evaluation, the chief executive officer recommends to the compensation committee any annual executive salary increases or annual stock option awards. The chief executive officer's individual performance evaluation is conducted by the compensation committee, which also determines his compensation changes and stock option awards. Annual stock option awards are granted at the last board of directors meeting of the year. Any annual base salary increases granted to our executives are implemented at the beginning of the following year.

Executive Compensation Components, Role of our Executives, the Compensation Committee and Consultants in Determining Our Compensation Programs and Setting Compensation Levels

The principal components of our executive compensation program are:

base salary;
stock option grants;
annual stock option bonus plan; and
insurance, 401(k) and other employee benefits.

Defining and Comparing Compensation to Market Benchmarks

The compensation committee's goal is to determine an appropriate mix between cash payments and equity incentive awards to meet short and long-term goals and objectives. We do not have any pre-established target for allocations or apportionment by type of compensation. The mix of compensation components is designed to reward recent results and drive long-term company performance.

During 2006, we engaged W.T. Haigh & Company, Inc. to work with the compensation committee and our executive officers to conduct a review of our total executive compensation, comparing our executive compensation programs and levels to those of our industry peers, and to interpret the results, make specific and overall recommendations and assist us in implementing any changes or additions to our compensation mix.

We compare our executives' total compensation to others in our industry. For 2006, our peer group consisted of biotechnology and biopharmaceutical companies with 50 to 149 employees that are identified in the 2006 Radford Benchmark Survey. This peer group of companies is reviewed with and approved by the compensation committee annually.

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Base Salary

Base salaries are provided to named executive officers to compensate them with a fair and competitive base level of compensation for services rendered during the year. The compensation committee typically determines base salary for each executive based on the executive's responsibilities, education, experience and, if applicable, the base salary level of the executive at his or her prior employment. In addition, the compensation committee reviews and considers the level of base salary paid by companies in our peer group for similar positions. Generally, we believe that executive base salaries should be targeted between the 50th and 60th percentile of the range of salaries in our peer group.

Merit based increases for all of our executives, other than our president and chief executive officer, are based upon a written summary of the management team members' performance and recommendations submitted by the president and chief executive officer. A merit based increase for the president and chief executive officer is based upon a written assessment of his performance by the chair of our board of directors, discussion by our board of directors about his performance and a review of the base level salaries of chief executive officers in our peer group. In 2006, the compensation committee discussed with our board of directors its recommendation for a 4% merit increase in the annual base salary of our president and chief executive officer. The board adopted this recommendation. Based on our review of available compensation data, we believe the base salaries we paid our executives in 2006 were in approximately the 50th to 60th percentile of our peer group.

Equity Awards

Our equity awards program is designed to:

reward demonstrated leadership and performance;

align named executives' interests with those of our stockholders;

retain named executives through the term of the awards;

maintain competitive levels of compensation; and

motivate for outstanding future performance.

The market for qualified and talented executives in the biopharmaceutical industry is highly competitive, and we compete for these personnel with many companies that have greater resources than we do. Accordingly, equity compensation is a crucial component of any competitive executive compensation package we may offer.

Our equity awards have taken the form of stock options. We typically grant stock options to each of our executive officers upon commencement of employment and annually in conjunction with our review of individual performance. All stock option grants to our executive officers are approved by the compensation committee and, other than new hire grants, are typically granted at the compensation committee's regularly scheduled meeting at the end of the fiscal year. All stock options granted to our executives have exercise prices equal to the fair market value of our common stock on the date of grant, so that the recipient will earn no compensation from his or her options unless the share price increases beyond the exercise price. In addition, the stock options granted typically vest over four years, which we believe provides an incentive to our executives to add value to the company over the long term and to remain with Alnylam.

Stock option grant levels vary among executive officers based on their positions and annual performance assessment, and are determined partly based on peer group market data. In addition, the compensation committee reviews all components of the executive's compensation to ensure that an executive's total compensation conforms to our overall philosophy and objectives.

Typically, the stock options we grant to our executives have a ten-year term and vest as to 25% of the shares on the first anniversary of the grant date and as to an additional 6.25% of the shares at the end of each successive three-month period following the first anniversary of the grant date until the fourth anniversary of the grant date. Vesting ceases upon termination of employment and exercise rights cease three months

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following termination of employment, except in the case of death or disability. Prior to the exercise of an option, the holder has no rights as a stockholder with respect to the shares subject to such option, including voting rights and the right to receive dividends or dividend equivalents.

The number of stock options granted to our named executive officers, and the value of those grants determined in accordance with SFAS 123R, are shown below in the 2006 Grants of Plan-Based Awards Table on page 25.

We do not have any equity ownership guidelines for our executives.

Bonuses

In 2004, we offered to each of our vice presidents and executive officers two options relating to future bonuses. The vice president or executive officer could either (1) elect to continue to receive a cash bonus or (2) opt-out of the cash bonus program and elect to receive an increased number of stock options as part of his or her annual stock option grant. Dr. Miles elected to continue to receive an annual cash bonus and the other executive officers elected to receive additional shares as part of their annual stock option grant. Effective in 2007, our U.S. vice presidents and executive officers only receive additional stock options and no longer have the option to receive a cash bonus.

In March 2007, the compensation committee authorized the implementation of an Executive Stock Option Bonus Plan for 2007, pursuant to which each of our U.S. vice presidents and executive officers is eligible to receive an annual bonus in the form of common stock options based upon the achievement of individual and corporate objectives for 2007 that have been approved by the compensation committee. In addition, under this plan, each participant is eligible to receive an additional award of stock options for individual performance that exceeds his or her annual individual performance objectives. Stock options awarded under this plan are expected to be granted at the regularly scheduled December 2007 board of directors meeting and will have an exercise price equal to the fair market value of our common stock on the date of grant. In addition, any such stock options will vest as to 25% of the shares on the first anniversary of the date of grant and as to an additional 6.25% of the shares at the end of each successive three-month period following the first anniversary of the date of grant until the fourth anniversary.

Benefits and Other Compensation

Other compensation to named executive officers primarily relates to the broad-based benefits we provide to all employees, including health and dental insurance, life and disability insurance and a 401(k) plan. Executives are eligible to participate in all of our employee benefit plans, in each case on the same basis as other employees. Our 401(k) plan is a tax-qualified retirement savings plan pursuant to which all U.S. based employees, including the named executive officers, are able to contribute the lesser of up to 60% of their annual salary or the limit prescribed by the Internal Revenue Service on a before tax basis. We match, in our common stock, 50% of the first 6% of a plan participant's pay that is contributed to the plan. Our contribution is made at the end of each quarter up to an annual maximum of \$5,250 for each participant. All employee contributions to the plan are fully vested and our contribution is fully vested after the employee has been employed by us for two years.

Compensation for the Named Executive Officers in 2006

In determining the 2006 compensation for our President and Chief Executive Officer, John M. Maraganore, Ph.D., the compensation committee reviewed his performance as compared to his corporate, financial, strategic and operational goals for the year. In particular, in making its determination, the compensation committee considered Dr. Maraganore's leadership of and contributions to the achievement of our long-term business strategy and corporate objectives in the areas of clinical milestones, scientific success, establishment of business alliances and financial results. The overall review of Dr. Maraganore's performance against his objectives resulted in a 4% annual salary rate increase from

\$415,000 in 2006 to \$431,600 in 2007.

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Similar to our chief executive officer, the compensation for our Chief Operating Officer, Barry E. Greene, and our Vice President of Finance and Treasurer, Patricia L. Allen, was established by comparing their annual achievement against the performance objectives established for them at the beginning of the year. These objectives were in the areas of business development, external alliance management and funding, pipeline development, financial and operating performance and strategic planning.

Severance and Change of Control Benefits

In 2002 and 2003, respectively, prior to our initial public offering, we entered into agreements with Dr. Maraganore and Mr. Greene regarding their employment with us. These agreements provide that if Dr. Maraganore or Mr. Greene is employed upon a change in control of Alnylam, options to purchase up to an aggregate of 417,367 shares of common stock held by Dr. Maraganore and options to purchase up to an aggregate of 131,578 shares of common stock held by Mr. Greene will vest and become immediately exercisable to the extent that such options have not already vested. As of March 31, 2007, 3,010 of Dr. Maraganore's options had not yet vested and 16,448 of Mr. Greene's options had not yet vested.

In September 2006, we announced that Dr. Miles was planning to leave Alnylam to pursue other interests. We have entered into a letter agreement with Dr. Miles relating to his employment. Under the terms of the agreement, Dr. Miles will continue as a part-time employee from January 1, 2007 until August 1, 2007. In the event Dr. Miles terminates his employment with us or we terminate his employment for cause (as defined in the agreement) prior to August 1, 2007, Dr. Miles shall be entitled to receive 20% of his then current base salary thereafter until August 1, 2007. In addition, in the event we terminate Dr. Miles' employment without cause prior to August 1, 2007, he shall be entitled to continue to receive his applicable salary until August 1, 2007. During his part-time employment, Dr. Miles shall not be entitled to medical and dental insurance coverage under our group plans, however, if Dr. Miles elects to continue receiving such insurance coverage pursuant to the federal COBRA law, we will reimburse him for any difference between the premiums he is required to pay for such coverage and the premiums he would have paid if he were still an eligible employee covered by our group plan. Unless Dr. Miles terminates his employment with us or we terminate his employment for cause, we will pay him a lump-sum cash payment in an amount equal to (1) \$1,122.91 multiplied by (2) the number of full weeks that he remains continuously employed by us as a 50% part-time employee during the period beginning on January 1, 2007 and ending on August 1, 2007, provided that, in the event we terminate Dr. Miles without cause prior to August 1, 2007, he will be entitled to receive the amount he would have been due if he had been continuously employed by us as a 20% part-time employee between January 1, 2007 and August 1, 2007. In consideration for these payments and benefits, Dr. Miles has agreed to execute a document releasing Alnylam and related parties from any and all claims.

Compliance with IRS Code Section 162(m)

Section 162(m) of the Internal Revenue Code of 1986, as amended, generally disallows a tax deduction to public companies for compensation in excess of \$1.0 million paid to a company's chief executive officer and its four other most highly paid executive officers. Qualified performance-based compensation is not subject to the deduction limitation if specified requirements are met. We periodically review the potential effects of Section 162(m) and we generally intend to structure the performance-based portion of our executive compensation, where feasible, to comply with exemptions in Section 162(m) so that the compensation remains tax deductible to us. However, the compensation committee may, in its judgment, authorize compensation payments that do not comply with the exemptions in Section 162(m) when it believes that such payments are appropriate to attract and retain executive talent and are in the best interest of Alnylam and our stockholders.

Stock Option Granting Practices

Delegation to Our Chief Executive Officer

Currently, all of our employees, including our named executive officers, are eligible to participate in our 2004 Stock Incentive Plan. All new U.S. employees are granted stock options when they start employment and all continuing employees on a worldwide basis are eligible for stock option grants on an annual basis based on

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performance and upon promotions to positions of greater responsibility. The compensation committee has delegated to Dr. Maraganore, our President and Chief Executive Officer, the authority to make stock option grants under our 2004 Stock Incentive Plan to new hires, other than vice presidents and executive officers. The number of stock options he may grant to any one individual must be within the range specifically set by the board of directors for these grants. The exercise price of such stock options must be equal to the closing price of our common stock on the Nasdaq Global Market on the date of grant. Dr. Maraganore is required to maintain a list of options granted pursuant to such delegated authority and report to the compensation committee regarding such grants.

With respect to stock option grants to new hires other than vice presidents, Dr. Maraganore typically approves the grant prior to the employee's first date of employment with such approval providing that the award is to be granted to the new hire on his or her first date of employment, with a price equal to the closing price of the common stock as reported on the Nasdaq Global Market on the first date of employment.

Report of the Compensation Committee on Executive Compensation

The compensation committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management. Based upon such review and discussions, the compensation committee recommended to the board of directors that such section be included in this proxy statement and incorporated by reference in Alnylam's Annual Report on Form 10-K for the year ended December 31, 2006, which was filed with the SEC on March 12, 2007.

By the compensation committee of the board of directors

Peter Barrett, Ph.D., Chair

Kevin P. Starr

James L. Vincent

Table of Contents**Executive Compensation**

The following table sets forth the total compensation paid or accrued for the year ended December 31, 2006 to named executive officers.

2006 Summary Compensation Table

Name	Year	Salary (\$)	Bonus (\$)	Option Awards(2)(3) (\$)	All Other Compensation(4) (\$)	Total (\$)
John M. Maraganore, Ph.D. <i>President and Chief Executive Officer</i>	2006	415,000		951,008	20,886	1,386,894
Barry E. Greene <i>Chief Operating Officer</i>	2006	300,000		567,164	24,827	891,991
Patricia L. Allen <i>Vice President of Finance and Treasurer</i>	2006	210,746		230,197	2,027	442,970
Vincent J. Miles, Ph.D.(1) <i>Senior Vice President, Business Development</i>	2006	251,531	37,730	254,341	3,580	547,182

(1) Dr. Miles ceased serving as an executive officer in March 2006. Pursuant to an October 2006 letter agreement with us, Dr. Miles will terminate his employment with us effective August 1, 2007.

(2) We did not grant any stock awards in 2006.

(3) The amounts reported in the Option Awards column represent the compensation expense, without any reduction for risk of forfeiture, for financial reporting purposes for the fiscal year ended December 31, 2006 of grants of options to each of the named executive officers, calculated in accordance with the provisions of SFAS 123R. The assumptions we used in calculating these amounts are included in footnote 8 of our audited financial statements for the year ended December 31, 2006 included in our annual report on Form 10-K filed with the SEC on March 12, 2007. Portions of option awards over several years are included. To see the value of awards made to the named executive officers in 2006, see the 2006 Grants of Plan-Based Awards Table on page 25. To see the value actually received by the named executive officer in 2006, see the 2006 Option Exercises and Stock Vested Table on page 27.

Details of each of the grants reflected above can be found in the Outstanding Equity Awards at Fiscal Year-End Table for 2006 on page 26.

We caution that the amounts reported in the 2006 Summary Compensation Table for these option awards may not represent the amounts that the named executive officers will actually realize from the awards. Whether, and to what extent, a named executive officer realizes value will depend on our actual operating performance, stock price fluctuations and the named executive officer's continued employment.

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- (4) The amounts reported in the All Other Compensation column reflect, for each named executive officer, the sum of (i) the incremental cost to us of all perquisites and other personal benefits; (ii) the amount we contributed to the 401(k) plan; and (iii) the dollar value of life insurance premiums we paid. Specifically the All Other Compensation column above includes:

Name	Term Life Insurance Premiums Paid by Alnylam (\$)	Dollar Value of Alnylam Common Stock Contributed by Alnylam to the Executive's Account Under 401(k) Plan (\$)	Incremental Cost to Alnylam of All Perquisites and Other Personal Benefits (\$)
John M. Maraganore, Ph.D. <i>President and Chief Executive Officer</i>	540	4,844	15,502(a)
Barry E. Greene <i>Chief Operating Officer</i>	540	3,000	21,287(b)
Patricia L. Allen <i>Vice President of Finance and Treasurer</i>	446	1,581	
Vincent J. Miles, Ph.D. <i>Senior Vice President, Business Development</i>	2,322	1,258	

(a) Consists of \$15,502 for travel and related expenses, paid by Alnylam, including \$4,947 as a gross-up for the related tax liability, for the executive's spouse to accompany the executive to certain industry events that spouses were expected to attend.

(b) Consists of \$21,287 for travel and related expenses, paid by Alnylam, including \$6,927 as a gross-up for the related tax liability, for the executive's spouse to accompany the executive to certain industry events that spouses were expected to attend.

The following table sets forth information concerning each grant of an award made to a named executive officer during the fiscal year ended December 31, 2006 under any plan, contract, authorization or arrangement pursuant to which cash, securities, similar instruments or other property may be received:

2006 Grants of Plan-Based Awards

Option Awards: Number of	Exercise or Base Price of Option
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Name	Date of Grant	Securities Underlying Options	Awards (\$)	Grant Date Fair Value of Option Awards (\$)(1)
John M. Maraganore, Ph.D. <i>President and Chief Executive Officer</i>	12/14/06(2)	125,000	22.75	1,838,625
Barry E. Greene <i>Chief Operating Officer</i>	12/14/06(2)	60,000	22.75	882,540
Patricia L. Allen <i>Vice President of Finance and Treasurer</i>	12/14/06(2)	20,000	22.75	294,180
Vincent J. Miles, Ph.D. <i>Senior Vice President, Business Development</i>				

(1) Date of Grant Fair Value, computed in accordance with SFAS 123R, represents the SFAS 123R value of options granted during the year.

(2) None of the named executive officers received stock awards in 2006. The option awards reported in the 2006 Grants of Plan-Based Awards Table were granted pursuant to our 2004 Stock Incentive Plan. Our 2004 Stock Incentive Plan generally provides that the option exercise price may not be less than 100% of the fair market value of our common stock at the time the option is granted. Pursuant to the 2004 Stock

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Incentive Plan, these stock options vest as to 25% of the shares on the first anniversary of the grant date and as to an additional 6.25% of the shares at the end of each successive three-month period following the first anniversary of the grant date until the fourth anniversary of the grant date.

We caution that the amounts reported in the 2006 Summary Compensation Table for these option awards reflect our accounting expense and may not represent the amounts the named executive officers will actually realize from the awards. Whether, and to what extent, a named executive officer realizes value will depend on our stock price fluctuations and the named executive officer's continued employment.

Information Relating to Equity Awards and Holdings

The following table sets forth information concerning stock options that have not been exercised for each of the named executive officers outstanding at December 31, 2006.

Outstanding Equity Awards at Fiscal Year-End for 2006

Name	Number of Securities Underlying Unexercised Options Exercisable	Option Awards		
		Number of Securities Underlying Unexercised Options Unexercisable	Option Exercise Price (\$)	Option Expiration Date
John M. Maraganore, Ph.D. <i>President and Chief Executive Officer</i>	246,052(1)		0.475	02/26/2013
	90,295(2)	6,020(2)	0.475	02/26/2013
	50,657(3)	23,027(3)	0.95	01/06/2014
	105,263(4)		0.95	01/06/2014
	75,000(5)	75,000(5)	6.78	12/07/2014
	250,000(6)		7.47	12/21/2014
	31,250(7)	93,750(7)	13.12	12/07/2015
		125,000(8)	22.75	12/14/2016
Barry E. Greene <i>Chief Operating Officer</i>	54,276(10)	24,671(10)	0.95	11/06/2013
	5,427(3)	2,467(3)	0.95	01/06/2014
	9,330(11)	5,598(11)	0.95	04/26/2014
	37,500(5)	37,500(5)	6.78	12/07/2014
	18,750(7)	56,250(7)	13.12	12/07/2015
		60,000(8)	22.75	12/14/2016
Patricia L. Allen <i>Vice President of Finance and Treasurer</i>	49,342(9)	29,605(9)	0.95	05/04/2014
	8,375(5)	8,375(5)	6.78	12/07/2014
	8,000(7)	24,000(7)	13.12	12/07/2015
		20,000(8)	22.75	12/14/2016
Vincent J. Miles, Ph.D. <i>Senior Vice President, Business Development</i>		14,802(12)	0.475	08/01/2013
		2,058(3)	0.95	01/06/2014
		4,934(11)	0.95	04/26/2014
	1,290(13)	5,757(13)	5.23	08/05/2014
	17,500(5)	17,500(5)	6.78	12/07/2014
	10,500(7)	31,500(7)	13.12	12/07/2015

- (1) These options were granted on February 26, 2003. The options vested as to 25% of the shares on the first anniversary of the vesting commencement date, December 9, 2002, and as to an additional 6.25% at the end of each successive three-month period following the first anniversary of the vesting commencement date grant date until the fourth anniversary.
- (2) These options were granted on February 26, 2003 and vested as to 50% of the shares upon us entering into our first significant strategic alliance, which occurred on September 8, 2003. The remaining 50% of these shares vest in equal installments on the last day of each quarterly period thereafter over four years.
- (3) These options were granted on January 6, 2004. The options vest as to 25% of the shares on the first anniversary of the grant date and as to an additional 6.25% at the end of each successive three-month period following the first anniversary of the grant date until the fourth anniversary.
- (4) These options were granted on January 6, 2004 and vested in full upon our initial public offering in May 2004.

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- (5) These options were granted on December 7, 2004. The options vest as to 25% of the shares on the first anniversary of the grant date and as to an additional 6.25% at the end of each successive three-month period following the first anniversary of the grant date until the fourth anniversary.
- (6) These options were granted on December 21, 2004 and, pursuant to the terms of the grant, vested in full upon the effective date of the Novartis Collaboration and License Agreement, described above under Agreements with Novartis on page 17.
- (7) These options were granted on December 7, 2005. The options vest as to 25% of the shares on the first anniversary of the grant date and as to an additional 6.25% at the end of each successive three-month period following the first anniversary of the grant date until the fourth anniversary.
- (8) These options were granted on December 14, 2006. The options vest as to 25% of the shares on the first anniversary of the grant date and as to an additional 6.25% at the end of each successive three-month period following the first anniversary of the grant date until the fourth anniversary.
- (9) These options were granted on May 4, 2004. The options vest as to 25% of the shares on the first anniversary of the grant date and as to an additional 6.25% at the end of each successive three-month period following the first anniversary of the grant date until the fourth anniversary.
- (10) These options were granted on November 6, 2003. The options vest as to 25% of the shares on the first anniversary of the grant date and as to an additional 6.25% at the end of each successive three-month period following the first anniversary of the grant date until the fourth anniversary.
- (11) These options were granted on April 26, 2004. The options vest as to 25% of the shares on the first anniversary of the grant date and as to an additional 6.25% at the end of each successive three-month period following the first anniversary of the grant date until the fourth anniversary.
- (12) These options were granted on August 1, 2003. The options vest as to 25% of the shares on the first anniversary of the grant date and as to an additional 6.25% at the end of each successive three-month period following the first anniversary of the grant date until the fourth anniversary.
- (13) These options were granted on August 5, 2004. The options vest as to 25% of the shares on the first anniversary of the grant date and as to an additional 6.25% at the end of each successive three-month period following the first anniversary of the grant date until the fourth anniversary.

The following table sets forth information concerning the exercise of stock options during 2006 for each of the named executive officers.

2006 Option Exercises and Stock Vested

Name	Option Awards	
	Number of Shares Acquired on Exercise(1)	Value Realized on Exercise (\$)

John M. Maraganore, Ph.D. <i>President and Chief Executive Officer</i>	75,000	1,100,115
Barry E. Greene <i>Chief Operating Officer</i>		
Patricia L. Allen <i>Vice President of Finance and Treasurer</i>		
Vincent J. Miles, Ph.D. <i>Senior Vice President, Business Development</i>	83,000	1,335,915

(1) The value realized on exercise is based on the sales price of the shares less the applicable option exercise price.

Table of Contents**Potential Payments Upon Termination or Change-in-Control****Employment Arrangements**

In 2002 and 2003, respectively, prior to our initial public offering, we entered into agreements with Dr. Maraganore and Mr. Greene regarding their employment with us. Dr. Maraganore's agreement provides that if he is employed upon a change in control of Alnylam, options to purchase up to an aggregate of 417,367 shares of our common stock held by Dr. Maraganore will vest and become immediately exercisable to the extent such options have not already vested. Mr. Greene's agreement provides that if he is employed upon a change in control of Alnylam, an option to purchase 131,578 shares of our common stock held by Mr. Greene will vest and become immediately exercisable to the extent such option has not already vested.

Each executive officer has signed a nondisclosure, invention and non-competition agreement providing for the protection of our confidential information and ownership of intellectual property developed by such executive officer and a covenant not to compete with us for a period of one year after termination of employment.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information as of December 31, 2006 about the securities authorized for issuance under our equity compensation plans, consisting of our 2002 Employee, Director and Consultant Stock Option Plan, our 2003 Employee, Director and Consultant Stock Option Plan, our 2004 Stock Incentive Plan and our 2004 Employee Stock Purchase Plan. All of our equity compensation plans were adopted with the approval of our stockholders.

Equity Compensation Plan Information

	Number of Securities to Be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights (\$) (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))(1) (c)
Equity compensation plans approved by stockholders	4,649,959	10.03	962,772
Equity compensation plans not approved by stockholders			
Total:	4,649,959	10.03	962,772

(1) Consists of 739,305 shares of our common stock available for future issuance under our 2004 Stock Incentive Plan and 223,467 shares of our common stock available for future issuance under our 2004 Employee Stock

Purchase Plan. No shares of our common stock were available for issuance under our 2002 Employee, Director and Consultant Stock Option Plan or our 2003 Employee, Director and Consultant Stock Option Plan as of December 31, 2006. On January 1, 2007, and in accordance with the provisions of the 2004 Plan, the number of shares available for issuance under the 2004 Plan was automatically increased by 1,852,531 shares.

Compensation of Directors

We compensate our non-employee directors for their service as directors. We do not pay directors who are also Alnylam employees any additional compensation for their service as a director. Accordingly, Dr. Maraganore does not receive any additional compensation for his service as a director.

The compensation committee periodically reviews the compensation we pay our non-employee directors. The compensation committee compares our board compensation to compensation paid to non-employee directors of similarly size public companies at a similar stage of development in the biotechnology industry.

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The compensation committee also considers the responsibilities we ask of our board members along with the amount of time required to perform those responsibilities.

Each non-employee director is eligible to receive \$20,000 per year and the chairs of our board of directors, the compensation committee and the nominating and corporate governance committee are entitled to receive an additional \$5,000 per year. The chair of our audit committee is entitled to receive an additional \$15,000 per year. Each non-employee director is also entitled to receive upon his or her initial election to the board a stock option grant for 25,000 shares of common stock, vesting annually over three years, and an additional stock option grant to purchase 10,000 shares of common stock at each year's annual meeting at which he or she serves as a director. Commencing in September 2006, the initial election stock option grant was increased to 30,000 shares of common stock, vesting annually over three years, and the annual stock option grant to each non-employee director granted on the date of our annual meeting was increased to 15,000 shares of common stock, vesting in full on the first anniversary of the date of grant. In addition, the chair of the audit committee is entitled to an additional stock option grant to purchase 10,000 shares of common stock per year. The exercise price of these stock options is the fair market value of our common stock on the date of grant.

The following table sets forth information concerning the compensation of our non-employee directors in 2006.

Director Compensation

Name	Fees Earned or		All Other	Total (\$)
	Paid in Cash (\$)	Option Awards \$(1)(2)(3)	Compensation \$(4)	
Peter Barrett, Ph.D.	25,000	70,775		95,775
John K. Clarke	30,000	70,775		100,775
Victor J. Dzau, M.D.				
Vicki L. Sato, Ph.D.	20,000	119,865		139,865
Paul R. Schimmel, Ph.D.	20,000	70,775	26,508	117,283
Phillip A. Sharp, Ph.D.	20,000	70,775	1,049,768	1,140,543
Kevin P. Starr	35,000	314,989(5)		349,989
James L. Vincent	20,000	192,533		212,533

- (1) The amounts in this column include the compensation expense for financial statement reporting purposes for the fiscal year ended December 31, 2006, in accordance with SFAS 123R of stock options granted under our equity plans for service on the board and treated for accounting purposes as employee grants, and may include amounts from stock options granted in and prior to 2006. There can be no assurance that the SFAS 123R amounts will ever be realized. The assumptions we used to calculate these amounts are included in footnote 8 to our audited financial statements for the fiscal year ended December 31, 2006 included in our Annual Report on Form 10-K filed with the SEC on March 12, 2007. See footnote 5 below for the compensation expense of a stock option granted under our equity plans for service on the board, but not accounted for under SFAS 123R.

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- (2) As of December 31, 2006, each non-employee director held the following aggregate number of shares under outstanding stock options:

Name	Number of Shares Underlying Outstanding Stock Options for Board Service	Number of Shares Underlying Outstanding Stock Options for Non-Board Service
Peter Barrett, Ph.D.	20,000	
John K. Clarke	20,000	
Victor J. Dzau, M.D.		
Vicki L. Sato, Ph.D.	25,000	
Paul R. Schimmel, Ph.D.	20,000	5,000
Phillip A. Sharp, Ph.D.	20,000	156,842
Kevin P. Starr	92,631	
James L. Vincent	85,000	

- (3) The number of shares underlying stock options granted to our non-employee directors for their service on our board in 2006 and the grant date fair value of such stock options is:

Name	Date of Grant	Number of Shares Underlying Stock Option Grants in 2006	Grant Date Fair Value of Stock Option Grants in 2006 \$(a)
Peter Barrett, Ph.D.	06/01/2006	10,000	94,900
John K. Clarke	06/01/2006	10,000	94,900
Victor J. Dzau, M.D.	06/01/2006		
Vicki L. Sato, Ph.D.	06/01/2006		
Paul R. Schimmel, Ph.D.	06/01/2006	10,000	94,900
Phillip A. Sharp, Ph.D.	06/01/2006	10,000	94,900
Kevin P. Starr	06/01/2006	20,000	189,800
James L. Vincent	06/01/2006	10,000	94,900

- (a) The Grant Date Fair Value computed in accordance with SFAS 123R represents the SFAS 123R value of stock and options granted during 2006. The weighted-average grant date fair value per option was \$9.49. There can be no assurance that the Grant Date Fair Value computed in accordance with SFAS 123R will ever be realized.

- (4) These amounts relate to cash payments and/or stock option grants for service on our scientific advisory board and include: (i) in the case of Dr. Sharp, (A) \$36,000 paid to him in 2006 and (B) the compensation expense for financial statement reporting purposes for stock options granted to him in 2003, 2005 and 2006 for an aggregate

of 156,842 shares and (ii) in the case of Dr. Schimmel, the compensation expense for financial statement reporting purposes for a stock option granted to him in 2006 for 5,000 shares. Because these stock options were compensation for service on our scientific advisory board, they are non-employee grants and, therefore, are accounted for using the fair value method in accordance with SFAS No. 123, as amended, and Emerging Issues Task Force Issues No. 96-18 *Accounting for Equity Instruments that are Issued to Other than Employees for Acquiring, or in Conjunction with, Selling, Goods or Services* , or EITF 96-18, under which compensation is generally recognized over the vesting period of the award. Under the fair value method, compensation associated with non-employee stock-based awards is determined based on the estimated fair value of the award, measured using an established option-pricing model. At the end of each financial reporting period prior to vesting, the value of these options (as calculated using the Black-Scholes option pricing model) are re-measured using the then current fair value of our common stock. The assumptions we used to calculate this amount is included in footnote 8 to our audited financial statements for the fiscal year ended December 31, 2006 included in our Annual Report on Form 10-K filed with the SEC on March 12, 2007.

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- (5) This amount includes the compensation expense for financial statement reporting purposes for the fiscal year ended December 31, 2006 for a stock option for 52,631 shares granted to Mr. Starr for service on our board of directors in 2003, which grant was deemed to be a non-employee grant for accounting purposes and, therefore, is accounted for at its fair value in accordance with SFAS No. 123 and EITF 96-18. See footnote 4 for a description of the fair value method of determining compensation expense.

Compensation Committee Interlocks and Insider Participation

None of our executive officers served as a member of the board of directors or compensation committee (or other committee serving an equivalent function) of any other entity while an executive officer of that other entity served as a member of our board of directors or compensation committee. None of the current members of our compensation committee has ever been an employee of Alnylam.

PROPOSAL 2 RATIFICATION OF APPOINTMENT OF INDEPENDENT AUDITORS

Board Recommendation

The board of directors recommends a vote FOR the ratification of the appointment of PricewaterhouseCoopers LLP as our independent auditors for the fiscal year ending December 31, 2007.

Our board of directors has appointed the firm of PricewaterhouseCoopers LLP, an independent registered public accounting firm, as independent auditors for the fiscal year ending December 31, 2007. Although stockholder approval of the board of directors appointment of PricewaterhouseCoopers LLP is not required by law, our board of directors believes that it is advisable to give stockholders an opportunity to ratify this appointment. If this proposal is not approved at the annual meeting, our board of directors will reconsider its appointment of PricewaterhouseCoopers LLP. Representatives of PricewaterhouseCoopers LLP are expected to be present at the annual meeting and will have the opportunity to make a statement, if they desire to do so, and will be available to respond to appropriate questions from our stockholders.

OTHER MATTERS

Our board of directors does not know of any other matters which may come before the meeting. However, if any other matters are properly presented to the meeting, it is the intention of the persons named in the accompanying proxy card to vote, or otherwise act, in accordance with their judgment on those matters.

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STOCKHOLDER PROPOSALS

In order to be included in proxy material for the 2008 annual meeting of stockholders, stockholders' proposals must be received by us at our principal executive offices, 300 Third Street, Cambridge, Massachusetts 02142 no later than December 29, 2007. We suggest that proponents submit their proposals by certified mail, return receipt requested, addressed to our Corporate Secretary.

In addition, our by-laws require that we be given advance notice of stockholder nominations for election to the board of directors and of other matters which stockholders wish to present for action at an annual meeting of stockholders, other than matters included in our proxy statement. The required notice must be in writing and received by our corporate secretary at our principal offices not later than March 3, 2008 (90 days prior to the first anniversary of our 2007 Annual Meeting of Stockholders) and not before February 1, 2008 (120 days prior to the first anniversary of our 2007 Annual Meeting of Stockholders). However, if the 2008 Annual Meeting of Stockholders is advanced by more than 20 days, or delayed by more than 60 days, from the first anniversary of the 2007 Annual Meeting of Stockholders, notice must be received not earlier than the 120th day prior to such Annual Meeting and not later than the close of business on the later of (1) the 90th day prior to such Annual Meeting and (2) the 10th day following the date on which notice of the date of such Annual Meeting was mailed or public disclosure of the date of such Annual Meeting was made, whichever occurs first. Our by-laws also specify requirements relating to the content of the notice which stockholders must provide, including a stockholder nomination for election to the board of directors, to be properly presented at the 2008 annual meeting of stockholders.

By Order of the Board of Directors,

JOHN M. MARAGANORE, Ph.D.
President and Chief Executive Officer

Cambridge, Massachusetts
April 30, 2007

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OUR BOARD OF DIRECTORS HOPES THAT STOCKHOLDERS WILL ATTEND THE ANNUAL MEETING. WHETHER OR NOT YOU PLAN TO ATTEND IN PERSON, YOU ARE URGED TO VOTE BY PROXY OVER THE INTERNET, BY TELEPHONE OR BY MAIL AS DESCRIBED IN THE ENCLOSED PROXY CARD. A PROMPT RESPONSE WILL GREATLY FACILITATE ARRANGEMENTS FOR THE ANNUAL MEETING AND YOUR COOPERATION WILL BE APPRECIATED. STOCKHOLDERS WHO ATTEND THE ANNUAL MEETING MAY VOTE THEIR STOCK PERSONALLY EVEN THOUGH THEY HAVE SUBMITTED A PROXY PREVIOUSLY.

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Appendix A

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