UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

ALEXION PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter

Delaware

(State or other jurisdiction of incorporation or organization)

13-3648318 (I.R.S Employer Identification No.)

352 Knotter Drive, Cheshire, CT (Address of Principal Executive Offices)

06410 (Zip Code)

Alexion Pharmaceuticals, Inc. 2004 Incentive Plan (Full title of the plan)

Thomas I.H. Dubin, Esq.
Vice President and General Counsel
Alexion Pharmaceuticals, Inc.
352 Knotter Drive
Cheshire, Connecticut 06410
(203) 272-2596

Copies to:

Merrill M. Kraines, Esq. Lawrence A. Spector, Esq. Fulbright & Jaworski L.L.P. 666 Fifth Avenue New York, New York 10103-3198 (212) 318-3000

(Name, address, and telephone number, including area code, of agent for service)

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered (2)	Proposed maximum offering price per share	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, \$.0001 par value per share (1)	3,012,019	\$20.77(3)	\$62,559,635	\$7,363.27
Common Stock, \$.0001 par value per share (1)	81,500	\$22.21 (4)	\$1,810,115	\$213.05
Total				\$7,576.32

- All shares of common stock of the registrant carry rights to purchase Junior Participating Cumulative Preferred Stock, par value \$.0001 per share. Such
 purchase rights are attached to and trade with the common stock. Value attributable to such rights, if any, is reflected in the market price of the common
 stock.
- (2) This registration statement shall also cover any additional indeterminable number of shares as may be required pursuant to Alexion Pharmaceuticals, Inc. 2004 Incentive Plan in the event of a stock dividend, stock split, recapitalization or other similar change in the common stock.
- (3) Computed in accordance with Rule 457(h)(1) based on the average of the high and low prices of the Common Stock as quoted on the Nasdaq National Market on March 8, 2005 of \$20.77 per share.
- (4) Computed in accordance with Rule 457(h)(1) based on the price at which the options may be exercised, which is \$22.21 per share.

EXPLANATORY NOTE

This Registration Statement registers 3,093,519 shares of common stock, par value \$.0001 per share, of Alexion Pharmaceuticals, Inc. (along with the
attached Junior Participating Cumulative Preferred Stock purchase rights) that may be issued and sold pursuant to the Alexion Pharmaceuticals, Inc. 2004
Incentive Plan.

PART I INFORMATION REQUIRED IN THE SECTION 10(A) PROSPECTUS

The documents containing the information specified in Item 1 and Item 2 of Part I of the Registration Statement on Form S-8 are omitted from this filing in accordance with the provisions of Rule 424 under the Securities Act of 1933, as amended (the "Securities Act") and the introductory note to Part I of Form S-8. The documents containing the information specified in Part I will be sent or given to directors, officers, employees and consultants as specified by Rule 428(b)(1) of the Securities Act. These documents and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of this Registration Statement, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

ITEM 3. Incorporation of Documents by Reference.

The following documents filed by us with the Securities and Exchange Commission pursuant to the Securities Act and the Exchange Act are incorporated by reference in this Registration Statement:

- (i) our annual report on Form 10-K, for the fiscal year ended July 31, 2004, filed on September 28, 2004;
- (ii) our quarterly reports on Form 10-Q for the quarters ended October 31, 2004 and January 31, 2005, filed on December 6, 2004 and March 8, 2005 respectively;
- (iii) our current reports on Form 8-K, filed on September 24, 2004, November 18, 2004, December 13, 2004, December 16, 2004, January 19, 2005, January 20, 2005 and January 25, 2005;
- (iv) our registration statement on Form 8-A, filed on February 21, 1997, as amended by Amendment No. 1 to Form 8-A filed on October 6, 2000, Amendment No. 2 to Form 8-A filed on February 12, 2002 and Amendment No. 3 to Form 8-A filed on November 17, 2004; and
- (v) our registration statement on Form 8-A, filed on February 12, 1996.

All documents subsequently filed by us with the Securities and Exchange Commission pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which (i) indicates that all securities offered under this Registration Statement have been sold or (ii) which deregisters all securities remaining unsold, shall be deemed to be incorporated by reference into this Registration Statement and to be a part of this Registration Statement from the date of filing of such documents. Any statement contained in a document incorporated by reference in this Registration Statement shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document that is also incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

ITEM 4. Description of Securities.

Not applicable.

ITEM 5. Interest of Named Experts and Counsel.

Not applicable.

ITEM 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law (the "DGCL") empowers a Delaware corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation) by reason of the fact that such person is or was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. A corporation may, in advance of the final disposition of any civil, criminal, administrative or

investigative action, suit or proceeding, pay the expenses (including attorneys' fees) incurred by any officer, director, employee or agent in defending such action, provided that the director or officer undertakes to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the corporation. A corporation may indemnify such person against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful.

A Delaware corporation may indemnify officers and directors in an action by or in the right of the corporation to procure a judgment in its favor under the same conditions, except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him against the expenses (including attorneys fees) which he actually and reasonably incurred in connection therewith. The indemnification provided is not deemed to be exclusive of any other rights to which an officer or director may be entitled under any corporation's by-law, agreement, vote or otherwise.

In accordance with Section 145 of the DGCL, Section EIGHTH of the company's Certificate of Incorporation, as amended (the "Certificate") provides that the company shall indemnify each person who is or was a director, officer, employee or agent of the company (including the heirs, executors, administrators or estate of such person) or is or was serving at the request of the company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, to the fullest extent permitted. The indemnification provided by the Certificate shall not be deemed exclusive of any other rights to which any of those seeking indemnification or advancement of expenses may be entitled under any by-law, agreement, vote of stockholder or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person. Expenses (including attorneys' fees) incurred in defending a civil, criminal, administrative or investigative action, suit or proceeding shall be paid by the company in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of the indemnified person to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the company. Section NINTH of the certificate provides that a director of the company shall not be personally liable to the company or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the company or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which the di

ITEM 7. Exemption from Registration Claimed.

Not Applicable.

ITEM 8. Exhibits.

Description
Opinion of Fulbright & Jaworski L.L.P.
Alexion Pharmaceuticals, Inc. 2004 Incentive Plan*
Form of Stock Option Agreement for Directors*
Form of Stock Option Agreement for Executive Officers (Form A)**
Form of Stock Option Agreement for Executive Officers (Form B)**
Consent of Counsel (contained in Exhibit 5.1)
Consent of Independent Registered Public Accounting Firm

^{*} Incorporated by reference to our current report on Form 8-K filed on December 16, 2004.

ITEM 9. Undertakings.

- (a) The undersigned Registrant hereby undertakes:
- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

^{**} Incorporated by reference to our quarterly report on Form 10-Q filed on March 8, 2005.

- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.
- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof;
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Cheshire, State of Connecticut on March 8, 2005.

ALEXION PHARMACEUTICALS, INC.

By: /s/ David W. Keiser
David W. Keiser

President and Chief Operating Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints LEONARD BELL and DAVID W. KEISER, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place, and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments, exhibits thereto and other documents in connection therewith) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith (including any registration statement relating to this Registration Statement and filed pursuant to Rule 462(b) of the Securities Act of 1933, as amended), with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or either of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated.

/s/ Leonard Bell	Chief Executive Officer, Secretary,	March 8, 2005
Leonard Bell	Treasurer and Director (Principal Executive Officer)	
/s/ David W. Keiser	President, Chief Operating Officer and Director	March 8, 2005
David W. Keiser	and Director	
/s/ Carsten Boess	Vice President and Chief Financial Officer (Principal Financial Officer)	March 8, 2005
Carsten Boess	(1 Interpar I maneral Officer)	

/s/ Barry P. Luke Barry P. Luke	Vice President, Finance and Administration (Principal Accounting Officer)	March 8, 2005
/s/ Max Link	Director	March 8, 2005
Max Link		
Joseph A. Madri	Director	March , 2005
/s/ R. Douglas Norby	Director	March 9, 2005
R. Douglas Norby		
/s/ Alvin S. Parven	Director	March 9, 2005
Alvin S. Parven		
/s/ Larry L. Mathis	Director	March 9, 2005
Larry L. Mathis		
Ruedi E. Waeger	Director	March , 2005

EXHIBIT INDEX

Exhibit No.	Description
5.1	Opinion of Fulbright & Jaworski L.L.P.
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10.2	Form of Stock Option Agreement for Directors*
10.3	Form of Stock Option Agreement for Executive Officers (Form A)**
10.4	Form of Stock Option Agreement for Executive Officers (Form B)**
23.1	Consent of Counsel (contained in Exhibit 5.1)
23.2	Consent of Independent Registered Public Accounting Firm

^{*} Incorporated by reference to the Registrant's current report on Form 8-K filed on December 16, 2004. ** Incorporated by reference to the Registrant's quarterly report on Form 10-Q filed on March 8, 2005.

Fulbright & Jaworski L.L.P.

A Registered Limited Liability Partnership 666 Fifth Avenue, 31st Floor New York, New York 10103-3198 www.fulbright.com

telephone: (212) 318-3000 facsimile: (212) 318-3400

March 9, 2005

Alexion Pharmaceuticals, Inc. 352 Knotter Drive Cheshire, Connecticut 06410

Re: Registration Statement on Form S-8

Ladies and Gentleman:

We refer to the Registration Statement on Form S-8 (the "Registration Statement") to be filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Act"), on behalf of Alexion Pharmaceuticals, Inc., a Delaware corporation (the "Company"), relating to 3,093,519 shares of the Company's Common Stock, \$.0001 par value (the "Common Stock"), issuable pursuant to the Alexion Pharmaceuticals, Inc. 2004 Incentive Plan (the "Plan").

As counsel to the Company, we have examined such corporate records, other documents and such questions of law as we have deemed necessary or appropriate for the purposes of this opinion and, upon the basis of such examinations, advise you that in our opinion the 3,093,519 shares of Common Stock issuable pursuant to the Plan have been duly and validly authorized and, subsequent to the exercise of the stock award and payment of the exercise price of the stock award, will be validly issued, fully paid and non-assessable.

We consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement. This consent is not to be construed as an admission that we are a person whose consent is required to be filed with the Registration Statement under the provisions of the Act.

Very truly yours,

Fulbright & Jaworski L.L.P.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated September 15, 2004 relating to the financial statements of Alexion Pharmaceuticals, Inc., which appears in Alexion Pharmaceuticals, Inc.'s Annual Report on Form 10-K for the year ended July 31, 2004.

/s/ PricewaterhouseCoopers LLP Hartford, Connecticut March 7, 2005