

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

AMENDMENT NO. 1

TO

FORM S-3

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 Number)

25 SCIENCE PARK
NEW HAVEN, CT 06511
(203) 776-1790

(Address, including zip code, and telephone number, including
area code, of registrant's principal executive offices)

LEONARD BELL, M.D.
ALEXION PHARMACEUTICALS, INC.
25 SCIENCE PARK
NEW HAVEN, CT 06511
(203) 776-1790

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

Copies of all communications, including all communications sent to
the agent for service, should be sent to:

MERRILL M. KRAINES, ESQ.
FULBRIGHT & JAWORSKI L.L.P.
666 FIFTH AVENUE
NEW YORK, NEW YORK 10103

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: From time
to time after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered
pursuant to dividend or interest reinvestment plan, please check the following
box:

If any of the securities being registered on this Form are to be offered on
a delayed or continuous basis pursuant to Rule 415 under the Securities Act of
1933, as amended, other than securities offered only in connection with dividend
or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering
pursuant to Rule 462(b) under the Securities Act, please check the following box
and list the Securities Act registration statement number of the earlier
effective registration statement for the same offering. _____

If this Form is a post-effective amendment filed pursuant to Rule 462(c)
under the Securities Act, check the following box and list the Securities Act
registration statement number of the earlier effective registration statement
for the same offering. _____

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. |_|

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

INFORMATION CONTAINED HEREIN IS SUBJECT TO COMPLETION OR AMENDMENT. A REGISTRATION STATEMENT RELATING TO THESE SECURITIES HAS BEEN FILED WITH THE SECURITIES AND EXCHANGE COMMISSION. THESE SECURITIES MAY NOT BE SOLD NOR MAY OFFERS TO BUY BE ACCEPTED PRIOR TO THE TIME THE REGISTRATION STATEMENT BECOMES EFFECTIVE. THIS PROSPECTUS SHALL NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY NOR SHALL THERE BE ANY SALE OF THESE SECURITIES IN ANY STATE IN WHICH SUCH OFFER SOLICITATION OR SALE WOULD BE UNLAWFUL PRIOR TO REGISTRATION OF QUALIFICATION UNDER THE SECURITIES LAWS OF ANY SUCH STATE.

SUBJECT TO COMPLETION -- DATED MARCH 17, 1998

ALEXION PHARMACEUTICALS, INC.

960,831 Shares

Common Stock

This Prospectus relates to the resale of shares of Common Stock, \$.0001 par value per share (the "Common Stock") of Alexion Pharmaceuticals, Inc. (the "Company" or "Alexion") from time to time for the account of the Selling Stockholders (the "Selling Stockholders"). Certain of the shares of Common Stock registered hereby are issuable upon the exercise of warrants (the "Warrants") owned by certain of the Selling Stockholders. The Company will not receive any of the proceeds from the sale of the Common Stock by the Selling Stockholders. The proceeds from the exercise of the Warrants, if any, will be received by the Company. See "Use of Proceeds."

Of the 960,831 shares of Common Stock offered hereby, 670,000 were issued by the Company in connection with a private placement in March 1998, 70,831 shares of Common Stock were issued as a dividend on the Company's Series B Convertible Preferred Stock, \$.0001 par value per share (the "Series B Preferred Stock") and the remaining 220,000 shares of Common Stock are issuable upon the exercise of the Warrants at an exercise price of \$9.90. The Warrants were originally issued to Josephthal Lyon & Ross Incorporated in connection with their acting as underwriters of the Company's initial public offering and were later distributed to certain employees of the underwriter.

The distribution of the Common Stock by the Selling Stockholders may be effected from time to time in one or more transactions (which may involve block transactions) in the over-the-counter market (including the Nasdaq National Market) or any exchange on which the Common Stock may then be listed, in negotiated transactions, through the writing of options on shares (whether such options are listed on an options exchange or otherwise), or a combination of such methods of sale, at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices. The Selling Stockholders may effect such transactions by selling shares to or through broker-dealers, and such broker-dealers may receive compensation in the form of underwriting discounts, concessions or commissions from the Selling Stockholders and/or purchasers of shares for whom they may act as agent (which compensation may be in excess of customary commissions). The Selling Stockholders may also sell the shares of Common Stock pursuant to Rule 144 promulgated under the Securities Act of 1933, as amended (the "Securities Act"), or may pledge shares as collateral for margin accounts and such shares could be resold pursuant to the terms of such accounts. The Selling Stockholders and any broker-dealers that act in connection with the sale of Common Stock might be deemed to be "underwriters" within the meaning of Section 2(11) of the Securities Act and any commissions received by them and any profit on the resale of the shares might be deemed to be underwriting discounts or commissions under the Securities Act. The Selling Stockholders may agree to indemnify any agent, dealer or broker-dealer

that participates in transactions involving sales of the Common Stock against certain liabilities, including liabilities arising under the Securities Act.

The Company's Common Stock trades on the Nasdaq National Market under the symbol "ALXN." On March 6, 1998, the closing sale price of the Common Stock was \$15.00 per share.

All expenses of the registration of securities covered by this Prospectus are to be borne by the Company, except that the Selling Stockholders will pay underwriting discounts, selling commissions, and fees and the expenses, if any, of counsel or other advisers to the Selling Stockholders.

THE SECURITIES OFFERED HEREBY INVOLVE A HIGH DEGREE OF RISK.

SEE "RISK FACTORS" LOCATED ON PAGE 4.

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

The date of this Prospectus is March __, 1998

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The following documents filed by Alexion Pharmaceuticals, Inc. are incorporated herein by reference and made a part hereof:

1. The Company's Annual Report on Form 10-K for the fiscal year ended July 31, 1997, as amended by Form 10-K/A, dated November 14, 1997.
2. The Company's Quarterly Report on Form 10-Q for the quarterly period ended October 31, 1997, dated December 9, 1997.
3. The Company's Quarterly Report on Form 10-Q for the quarterly period ended January 31, 1998, dated March 13, 1998.
4. The Company's Current Report on Form 8-K, dated March 6, 1998.

In addition to the foregoing, all documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, prior to the filing of a post-effective amendment indicating that all of the securities offered hereunder have been sold or deregistering all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof 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.

This Prospectus incorporates documents by reference which are not presented herein or delivered herewith. These documents are available upon request from: Alexion Pharmaceuticals, Inc., 25 Science Park, New Haven, CT 06511, Attention: David W. Keiser, Executive Vice President and Chief Operating Officer, (203) 776-1790. The Company undertakes to provide without charge to each person to whom this Prospectus is delivered, upon written or oral request of such person, a copy of any or all of the foregoing documents incorporated by reference herein, other than exhibits to such documents, unless such exhibits are specifically incorporated by reference into such documents.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a) Exhibits.

- 3.1 Certificate of Incorporation, as amended+
- 5.1 Opinion of Fulbright & Jaworski L.L.P.
- 10.1 Stock Purchase Agreement between the Registrant and Biotech Target S.A., dated March 4, 1998.**
- 10.2 Form of warrant certificate representing the right to purchase Common Stock at an exercise price of \$9.90 per share.**
- 23.1 Consent of Fulbright & Jaworski L.L.P. (included in Exhibit 5.1).
- 23.2 Consent of Arthur Andersen LLP.
- 24.1 Power of Attorney (included on signature page).**

- - - - -

+ Incorporated by reference from the Company's Registration Statement on Form S-1 (Registration No. 333-00202).

** Previously filed.

ITEM 17. 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 of 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; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement of any material change to such information in the registration statement.

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference 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 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 provisions described under Item 15 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy 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 HAS DULY CAUSED THIS REGISTRATION STATEMENT TO BE SIGNED ON ITS BEHALF BY THE UNDERSIGNED, THEREUNTO DULY AUTHORIZED, IN THE CITY OF NEW HAVEN AND STATE OF CONNECTICUT ON THE 16TH DAY OF MARCH, 1998.

ALEXION PHARMACEUTICALS, INC.

By: /s/ LEONARD BELL

Leonard Bell, M.D.
President, Chief Executive Officer,
Secretary and Treasurer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each individual whose signature appears below constitutes and appoints LEONARD BELL, M.D. and DAVID W. KEISER, or either of them, his true and lawful attorney-in-fact and agent 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) to this Registration Statement, and to file the same with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting said attorney-in-fact and agent, 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 and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or any 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 by the following persons in the capacities and on the dates indicated:

/s/ LEONARD BELL ----- Leonard Bell, M.D.	President, Chief Executive Officer, Secretary, Treasurer and Director (principal executive officer)	March 16, 1998
/s/ DAVID W. KEISER ----- David W. Keiser	Executive Vice President and Chief Operating Officer (principal financial officer)	March 16, 1998
/s/ BARRY P. LUKE* ----- Barry P. Luke	Senior Director of Finance and Administration (principal accounting officer)	March 16, 1998
/s/ JOHN H. FRIED* ----- John H. Fried, Ph.D.	Chairman of the Board of Directors	March 16, 1998
/s/ JOSEPH A. MADRI* ----- Joseph A. Madri, Ph.D., M.D.	Director	March 16, 1998
/s/ LEONARD MARKS* ----- Leonard Marks, Jr., Ph.D.	Director	March 16, 1998
/s/ MAX LINK* ----- Max Link, Ph.D.	Director	March 16, 1998
/s/ EILEEN M. MORE* ----- Eileen M. More	Director	March 16, 1998
/s/ TIMOTHY F. HOWE* ----- Timothy F. Howe	Director	March 16, 1998

*By: /s/ LEONARD BELL

(Leonard Bell, M.D. as

attorney-in-fact for each
of the persons indicated)

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EXHIBIT INDEX

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10.2	Form of warrant certificate representing the right to purchase Common Stock at an exercise price of \$9.90 per share.**
23.1	Consent of Fulbright & Jaworski L.L.P. (included in Exhibit 5.1).
23.2	Consent of Arthur Andersen LLP.
24.1	Power of Attorney (included in signature page).**

- - - - -

+ Incorporated by reference from the Company's Registration Statement on
Form S-1 (Registration No. 333-00202).

** Previously filed.

FULBRIGHT & JAWORSKI
L.L.P.
A REGISTERED LIMITED LIABILITY PARTNERSHIP
666 FIFTH AVENUE
NEW YORK, NEW YORK 10103-3198

HOUSTON
WASHINGTON, D.C.
AUSTIN
SAN ANTONIO
DALLAS
NEW YORK
LOS ANGELES
LONDON
HONG KONG

TELEPHONE: 212/318-3000
FACSIMILE: 212/752-5958

WRITER'S DIRECT DIAL NUMBER:

March 17, 1998

Alexion Pharmaceuticals, Inc.
25 Science Park
New Haven, Connecticut 06511

Dear Sirs:

We refer to the Registration Statement on Form S-3 (Reg. No. 333-47645) (the "Registration Statement"), filed by Alexion Pharmaceuticals, Inc. (the "Company") on behalf of the selling stockholders (the "Selling Stockholders") with the Securities and Exchange Commission under the Securities Act of 1933, as amended, relating to 220,000 shares of the Company's common Stock, \$.0001 par value (the "Warrant Shares") issuable upon exercise of warrants (the "Warrants"), an aggregate of 70,831 shares of Common Stock issued as a dividend upon the Company's previously outstanding Series B Preferred Stock (the "Dividend Shares") and an aggregate of 670,000 shares of Common Stock (the "Private Placement Shares"), to be sold by the Selling Stockholders.

As counsel for the company, we have examined such corporate records, documents and such questions of law as we have considered necessary or appropriate for purposes of this opinion and, upon the basis of such examination, advise you that in our opinion (i) the 220,000 Warrant Shares issuable upon the exercise of the Warrants have been duly and validly authorized and, subsequent to the exercise of the Warrants and payment of the exercise price by the Selling Stockholders, will be legally issued, fully paid and nonassessable, (ii) the 670,000 Private Placement Shares have been duly and validly authorized and, when issued and paid for in accordance with the stock purchase agreement by and between the Company and Biotech Target S.A., dated March 4, 1998 upon the effectiveness of the Registration Statement, will be legally issued, fully paid and nonassessable and (iii) the 70,831 Dividend Shares have been duly and validly authorized and are legally issued, fully paid and nonassessable.

We consent to the filing of this opinion as an exhibit to the Registration Statement and the reference to this firm under the caption "Legal Matters" in the prospectus contained therein and elsewhere in the Registration Statement and prospectus. This consent is not to be construed as an admission that we are a party whose consent is required to be filed with the Registration Statement under the provisions of the Securities Act of 1933, as amended.

Very truly yours,

/s/ FULBRIGHT & JAWORSKI L.L.P.

Fulbright & Jaworski L.L.P.

ARTHUR ANDERSON LLP

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation by reference in this registration statement of our report dated August 29, 1997, included in Alexion Pharmaceuticals, Inc.'s Form 10-K for the year ended July 31, 1997, and to all references to our firm included in this registration statement.

/s/ Arthur Andersen LLP

Hartford, Connecticut
March 16, 1998