Prospectus Supplement (To Prospectus dated October 16, 2000)

3,600,000 Shares



Alexion Pharmaceuticals, Inc. is offering 3,600,000 shares of common stock.

Our common stock is listed on the Nasdaq National Market under the symbol "ALXN." On September 12, 2003, the last reported sale price of our common stock on the Nasdaq National Market was \$15.11.

Investing in our common stock involves risks. See "Risk Factors" filed as Exhibit 99.2 to our Quarterly Report on Form 10-Q for the fiscal quarter ended October 31, 2002 and beginning on page S-4 of this prospectus supplement and page 3 of the accompanying prospectus for a discussion of some important risks you should consider before buying the common stock.

	Per Share	Total
Public Offering Price	\$ 13.00	\$ 46,800,000
Underwriting Discount	\$ 0.78	\$ 2,808,000
Proceeds to Alexion Pharmaceuticals, Inc., before expenses	\$ 12.22	\$ 43,992,000

The underwriters may offer the common stock through negotiated transactions at market prices prevailing at the time of sale, at prices relating to prevailing market prices or at negotiated prices. See "Underwriting."

Delivery of the shares will be made on or about September 17, 2003.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved these securities, or passed upon the accuracy or adequacy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

Bear, Stearns & Co. Inc.

SG Cowen

The date of this prospectus supplement is September 15, 2003

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You should rely only on the information contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein or therein. We have not authorized anyone to provide you with information different from that contained in any of these documents. The information contained in these documents is accurate only as of the date of each document, as the case may be, regardless of the time of delivery of this prospectus supplement and accompanying prospectus or of any sale of common stock. Our business, financial condition, results of operations and prospects may change after the date set forth in each document in which the information is presented.

ABOUT THIS PROSPECTUS SUPPLEMENT

We provide information to you about this offering of shares of our common stock in two separate documents: (a) the accompanying prospectus, which provides general information, some of which may not apply specifically to this offering; and (b) this prospectus supplement, which describes the specific details regarding this offering. Generally, when we refer to this "prospectus," we are referring to both documents combined.

If information contained in this prospectus supplement is inconsistent with the accompanying prospectus, you should rely on this prospectus supplement.

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein or therein contain some "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 and information relating to us that is based on the beliefs of, assumptions made by, and the information currently available to, our management. When used in these documents, the words "estimate," "project," "believe," "anticipate," "intend," "expect" and similar expressions are intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are subject to risks and uncertainties that could cause actual results to differ materially from those contemplated in these forward-looking statements, including those risks discussed in this prospectus.

You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this prospectus supplement, the accompanying prospectus or the documents incorporated by reference herein or therein, as the case may be. Except for special circumstances in which a duty to update arises when prior disclosure becomes materially misleading in light of subsequent events, we do not intend to update any of these forward-looking statements to reflect events or circumstances after the date of this prospectus or to reflect the occurrence of unanticipated events.

RECENT DEVELOPMENTS

On August 4, 2003, we announced preliminary results of our Phase III study in a large, multinational trial consisting of greater than 3,000 patients undergoing coronary artery bypass graft surgery, or CABG, with cardiopulmonary bypass. The primary endpoint in this trial was a composite of the incidence of death or myocardial infarction, measured at 30 days post-procedure, in patients undergoing CABG without concomitant valve surgery. Although there was reduction in the primary endpoint, it was not achieved with statistical significance. However, key pre-specified secondary endpoints consisting of the same composite in the total study population, which included all patients undergoing CABG with or without concomitant valve surgery, were achieved. Several other pre-specified secondary endpoints were met as well. We also announced that further details of this Phase III study will be provided after all data analyses are complete, and are expected to be presented in the Late-Breaking Clinical Trials Session of the 2003 Scientific Sessions Meeting of the American Heart Association in Orlando, Florida, during the second week of November 2003.

Our fourth quarter ended on July 31, 2003. Although the Company's operating results for the quarter have not been conclusively determined, we had cash and marketable securities of \$215.4 million at the end of the quarter.

RISK FACTORS

Before purchasing our common stock, you should carefully consider the risks described below in this section, the risks described under the heading "Risk Factors" beginning on page 3 of the accompanying prospectus and the risks described in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus.

If our drug trials are delayed or achieve unfavorable results, we will have to delay or may be unable to obtain regulatory approval for our products.

We must conduct extensive testing of our product candidates before we can obtain regulatory approval for our products. We need to conduct both preclinical animal testing and clinical trials. These tests and trials may not achieve favorable results. We would need to reevaluate any drug that did not test favorably and either alter the study, the drug or the dose and perform additional or repeat tests, or abandon the drug development project. In those circumstances, we would not be able to obtain regulatory approval on a timely basis, if ever. Even if approval is granted, the approval may require limitations on the indicated uses for which the drug may be marketed.

In December 1999 we completed a Phase IIb trial of pexelizumab, one of our two lead antibody product candidates, for the treatment of complications in patients after cardiopulmonary bypass surgery, including the reduction of the frequency and severity of myocardial infarctions, or heart attacks, and frequency of death. The primary therapeutic exploratory pre-set goal of the trial, referred to as the primary endpoint, was not achieved. However, in the pre-specified population that included approximately 90% of the patient population (i.e. the 800 patients who had coronary artery bypass graft surgery without valve surgery), those that received pexelizumab at the highest dose level experienced a significant reduction in larger post-surgical heart attacks. Based on these results, in January 2002, we commenced enrollment of a pivotal Phase III clinical trial of pexelizumab patients undergoing coronary artery bypass graft surgery with cardiopulmonary bypass operations. This study completed the target patient enrollment of approximately 3,000 patients in February 2003. In August 2003, we disclosed preliminary results that indicated that although there was reduction in the primary endpoint, it was not achieved with statistical significance. The primary endpoint in this trial was a composite of the incidence of death or myocardial infarction, measured at 30 days post-procedure, in patients undergoing CABG without concomitant valve surgery. However, key pre-specified secondary endpoints consisting of the same composite in the total population which included all patients undergoing CABG with or without concomitant valve surgery, were achieved. Several other pre-specified secondary endpoints were met as well.

We are not currently able to predict the reaction of the United States Food and Drug Administration and other regulatory agencies to the results of this Phase III trial. Such reactions may include, but not be limited to, the view that the results may be sufficient for filing and approval of a Biologics License Application, or BLA, supportive of the filing and approval of a BLA together with additional studies, or not supportive of the filing or approval of a BLA. Further, we are not currently able to predict the reaction of Procter & Gamble Pharmaceuticals, or P&G, our collaborative partner, to the results of this Phase III trial, including how those results may affect P&G's views of pexelizumab. P&G retains the development rights and the termination rights discussed in our SEC filings.

Completion of these and other trials does not guarantee that we will initiate additional trials for our product candidates, that if the trials are initiated what the scope and phase of the trial will be or that they will be completed, or that if the trials are completed, the results will provide a sufficient basis to proceed with further trials or to apply for or receive regulatory approvals or to commercialize products. Results of trials could be inconclusive, requiring additional or repeat trials.

If our collaboration with Procter & Gamble is terminated or Procter & Gamble reduces its commitment to our collaboration, our ability to commercialize pexelizumab in the time expected, or at all, and our business would be harmed.

We rely heavily on Procter & Gamble to perform development, obtain commercial manufacturing, and provide sales and marketing for pexelizumab. While we cannot assure you that pexelizumab will ever be successfully developed and commercialized, if Procter & Gamble does not perform its obligations in a timely manner, or at all, our ability to commercialize pexelizumab will be significantly adversely affected. We rely on Procter & Gamble, or P&G, to provide funding and additional resources for the development and commercialization of pexelizumab. These include funds and resources for:

- · clinical development and clinical and commercial manufacturing;
- · obtaining regulatory approvals; and
- · sales, marketing and distribution efforts worldwide.

P&G has the right to terminate the collaboration at any time. Termination of our agreement with Procter & Gamble would cause significant delays in the development of pexelizumab and result in additional development costs. If we were to continue development of pexelizumab, we would need to fund the development and commercialization of pexelizumab on our own or identify a new development partner. We cannot guarantee that Procter & Gamble will devote the resources necessary to successfully develop and commercialize pexelizumab in a timely manner, if at all. Furthermore, Procter & Gamble may devote the necessary resources, but we still may not successfully develop and commercialize pexelizumab. We might also have to repeat testing already completed with Procter & Gamble.

There is a large number of shares that may be sold in the market following this offering, which may depress the market price of our common stock.

Sales of a substantial number of shares of our common stock in the public market following this offering could cause the market price of our common stock to decline. Upon completion of this offering, we will have outstanding an aggregate of 21,820,446 shares of common stock, assuming no exercise of outstanding options or warrants or conversion of convertible notes. All of the shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act of 1933 unless these shares are purchased by affiliates. In addition, as of September 12, 2003, 4,001,463 shares of common stock are issuable upon exercise of options granted by us, which also have been registered for resale on registration statements filed with the Securities and Exchange Commission. We also may issue up to 1,127,555 shares of common stock upon conversion of 5 3/4% convertible subordinated notes due 2007, which have been registered for resale pursuant to a registration statement filed with the Securities and Exchange Commission.

Our management will have broad discretion with respect to the use of the proceeds of this offering, and may not apply the proceeds to uses that will benefit stockholders.

Our management will have broad discretion as to how to use the proceeds of this offering. You will be relying on the judgment of our management regarding the application of the proceeds of this offering. The results and effectiveness of the use of the proceeds are uncertain.

USE OF PROCEEDS

We expect the net proceeds from this sale of common stock to be approximately \$43.9 million after deducting estimated underwriting discounts and estimated offering expenses. We intend to use the net proceeds from the sale of the common stock to fund research and product development activities, manufacturing development, manufacturing and commercialization of our product candidates, drug discovery, as well as for working capital and general corporate purposes, including for potential acquisitions of companies, additional technologies and compounds. Our management will have broad discretion in the allocation of the net proceeds of the offering. Pending such uses, we intend to invest the net proceeds in short-term, investment grade, interest-bearing securities.

DILUTION

Our net tangible book value as of April 30, 2003 was approximately \$120.0 million or \$6.59 per share of common stock. Net tangible book value per share is determined by dividing our net tangible book value, which consists of tangible assets less total liabilities, by the number of shares of common stock outstanding at that date. Without taking into account any other changes in the net tangible book value after April 30, 2003, other than to give effect to our receipt of the estimated net proceeds from the sale of the 3.6 million shares of common stock from this offering at an offering price of \$13.00 per share, less estimated offering expenses, our net tangible book value as of April 30, 2003 after giving effect to the items above would have been approximately \$163.9 million or \$7.51 per share. This represents an immediate increase in the net tangible book value per share of \$0.92 per share to existing stockholders and an immediate dilution of \$5.49 per share to new investors. The following table illustrates this per share dilution:

Offering price		\$ 13.00
Net tangible book value per share prior to the offering	\$6.59	
Increase in net tangible book value per share after the offering	\$0.92	
Net tangible book value per share after the offering		\$ 7.51
Dilution per share to new investors		\$ 5.49

This table is based on the number of outstanding shares as of April 30, 2003 and does not include the following:

- 1,127,555 shares of common stock issuable upon conversion of our 5³/₄% convertible subordinated notes;
- 4,048,503 shares of common stock issuable upon exercise of outstanding stock options as of April 30, 2003 at a weighted average exercise price of \$22.92 per share;

CAPITALIZATION

The following table sets forth our unaudited capitalization as of April 30, 2003 on an actual basis and on an as adjusted basis. The as adjusted column gives effect to our receipt of the net proceeds of approximately \$43.9 million from the sale of 3.6 million shares of common stock in this offering, after deducting estimated underwriting discounts and estimated offering expenses. The outstanding share information in the table below excludes 4,048,503 shares of common stock issuable upon exercise of options outstanding as of April 30, 2003.

	April 30, 2003	
	Actual	As Adjusted
	(unaudited) (amounts in thousands)	
Notes payable	\$ 3,920	
Convertible Subordinated Debt	\$ 120,000	\$ 120,000
Stockholders' equity		
Preferred Stock: \$0.0001 par value; authorized shares—5,000; no shares issued	\$ —	\$ —
Common Stock: \$0.0001 par value; authorized shares—145,000; issued shares—18,249 actual; 21,849 as adjusted	2	2
Paid-in capital in excess of par value	385,382	429,244
Accumulated deficit	(243,682)	(243,682)
Accumulated other comprehensive income	1,294	1,294
Treasury stock: 37 shares	(600)	(600)
Total stockholders' equity	\$ 142,396	\$ 186,258
Total capitalization	\$ 266,316	\$ 310,178

UNDERWRITING

We have entered into an underwriting agreement, dated as of September 12, 2003, with Bear, Stearns & Co. Inc. as representative of the several underwriters named therein. Subject to the terms and conditions of the underwriting agreement, the underwriters have agreed to purchase from us the number of shares of common stock shown opposite its name in the table below at the public offering price less the underwriting discount as set forth on the cover page of this prospectus supplement.

Underwriter	Shares
Bear, Stearns & Co., Inc.	3,060,000
SG Cowen Securities Corporation	540,000
Total	3,600,000

The underwriters have advised us that, initially, they propose to offer the shares of common stock to the public at the public offering price set forth on the cover page of this prospectus supplement. If all the shares are not sold at the public offering price, the underwriters may change the offering price and the other selling terms. The shares are offered by the underwriters as stated herein, subject to receipt and acceptance by the underwriters and subject to the underwriters' right to reject any order in whole or in part. The underwriters do not intend to confirm sales to any accounts over which they exercise discretionary authority.

The following table shows the public offering price, underwriting discount and proceeds to us from the sale of common stock.

	Per Share	_	Total
Public offering price	\$13.00	\$	46,800,000
Underwriting discount	\$ 0.78	\$	2,808,000
Proceeds to us, before expenses	\$12.22	\$	43,992,000

The expenses of the offering, other than the underwriting discount referred to above, are estimated at approximately \$130,000 and are payable entirely by us.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments that the underwriters may be required to make in respect of those liabilities.

We and each of our executive officers and directors have agreed for a period of 90 days after the date of this prospectus supplement, subject to specified exceptions (including the ability of three of our officers to sell up to 25,000 shares of common stock each in limited circumstances), not to issue, offer, sell, agree to offer or sell, solicit offers to purchase, grant any call option or purchase any put option with respect to, pledge, borrow or otherwise dispose of, make any short sale or maintain any short position, establish or increase a "put equivalent position" or liquidate or decrease a "call equivalent position," or otherwise enter into any swap, derivative transaction or other transaction or arrangement that transfers to another, in whole or in part, any of the economic consequences of common stock, whether or not such transaction is to be settled by delivery of common stock, other securities, cash or other consideration, or otherwise dispose of, any common stock, or any securities convertible into, exercisable or exchangeable for common stock, or interest therein of ours or of any of our subsidiaries without the prior consent of the underwriters. The underwriters may, in their sole discretion and at any time or from time to time before the termination of the 90-day period, without notice, release all or any portion of the securities subject to lock-up agreements. The underwriters do not have any current intention to release any portion of the securities subject to lock-up agreements. The foregoing restrictions will not apply to the sale of common stock in this offering or the grant and exercise of options under, or the issuance and sale of shares pursuant to, employee stock option plans, previously existing trading plans established pursuant to Rule 10b5-1 and bona fide gifts of shares of common stock, provided that any such transferee agrees to be bound in writing by the restrictions set forth herein.

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the shares of common stock offered by this prospectus supplement and the accompanying prospectus in any jurisdiction where action for that purpose is required. The shares of common stock offered by this prospectus supplement and the accompanying prospectus may not be offered or sold, directly or indirectly, nor may this prospectus supplement, the accompanying prospectus or any other offering material or advertisements in connection with the offer and sale of any such shares of common stock be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus supplement and the accompanying prospectus to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement and the accompanying prospectus. This prospectus supplement and the accompanying prospectus do not constitute an offer to sell or a solicitation of any offer to buy any shares of common stock offered by this prospectus supplement and the accompanying prospectuses in any jurisdiction in which such an offer or a solicitation is unlawful.

Our common stock trades on the Nasdaq National Market under the symbol "ALXN." On September 12, 2003, the last reported sale price of our common stock was \$15.11 per share.

A prospectus supplement and the accompanying prospectus in electronic format may be made available on the Internet site or through other online services maintained by the underwriters of this offering, or by their affiliates. Other than any prospectus supplement made available in electronic format as described above, the information on any web site containing the prospectus supplement is not part of this prospectus supplement, the accompanying prospectus or the registration statement of which this prospectus supplement and the accompanying prospectus form a part, has not been approved or endorsed by us or the underwriters in such capacity and should not be relied on by prospective investors.

In connection with the offering, the underwriters may purchase and sell shares of common stock in the open market. These transactions may include short sales, syndicate covering transactions and stabilizing transactions.

Short sales involve syndicate sales of common stock in excess of the number of shares to be purchased by the underwriters in the offering, which creates a syndicate short position. This is also known as "naked" short sale. Transactions to close out the covered syndicate short involve purchases of the common stock in the open market after the distribution has been completed. The underwriters must close out any naked short position by purchasing shares of common stock in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of bids for or purchases of shares in the open market while the offering is in progress.

Any of these activities may have the effect of preventing or retarding a decline in the market price of the common stock. They may also cause the price of the common stock to be higher than the price that would otherwise exist in the open market in the absence of these transactions. The underwriters may conduct these transactions on the Nasdaq National Market or otherwise. If the underwriters commence any of these transactions, the underwriters may discontinue them at any time.

The underwriters and certain of their affiliates may in the future provide investment banking and other financial and banking services to us for which they may in the future receive, customary fees.

LEGAL MATTERS

The validity of the issuance of the shares of common stock offered by this prospectus will be passed on for us by Fulbright & Jaworski L.L.P., New York, New York. Certain legal matters in connection with the offering will be passed on for the underwriters by Morrison & Foerster LLP, New York, New York.

EXPERTS

The consolidated financial statements as of July 31, 2002 and for the year ended July 31, 2002 incorporated in this prospectus supplement by reference to the Annual Report on Form 10-K for the year ended July 31, 2002 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

NOTICE REGARDING ARTHUR ANDERSEN LLP

Section 11(a) of the Securities Act provides that if any part of a registration statement at the time it becomes effective contains an untrue statement of a material fact or an omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, any person acquiring a security pursuant to such registration statement (unless it is proved that at the time of such acquisition such person knew of such untruth or omission) may sue, among others, every accountant who has consented to be named as having prepared or certified any part of the registration statement or as having prepared or certified any report or valuation which is used in connection with the registration statement with respect to the statement in such registration statement, report or valuation which purports to have been prepared or certified by the accountant. On May 29, 2002, we announced that we dismissed Arthur Andersen LLP as our independent accountants. As Arthur Andersen LLP has ceased operations, we have been unable to obtain Arthur Andersen's written consent to the incorporation by reference into this prospectus supplement of its audit reports with respect to our financial statements for the fiscal years ended July 31, 2001 and 2000. Under these circumstances, Rule 437a under the Securities Act permits us to file this prospectus supplement without a written consent from Arthur Andersen. Accordingly, Arthur Andersen will not be liable to you under Section 11(a) of the Securities Act because it has not consented to being named as an expert in the prospectus supplement.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission. Our SEC filings, and those of other companies which make electronic filings with the SEC, are available to the public over the Internet at the SEC's web site at http://www.sec.gov. You may also read and copy any document we file at the SEC's public reference room at 450 Fifth Street, N.W., Washington, D.C. 20549. You may obtain information on the operation of the SEC's public reference room in Washington, D.C. by calling the SEC at 1-800-SEC-0330.

We "incorporate by reference" the information we file with the SEC (File No. 0-27756), which means that we can disclose important information to you by referring you to another document we filed with the SEC. The information incorporated by reference is an important part of this prospectus supplement and accompanying prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, after the date of the prospectus but before the end of any offering made under this prospectus supplement and accompanying prospectus:

- our annual report on Form 10-K for the fiscal year ended July 31, 2002, filed on October 29, 2002;
- our quarterly reports on Form 10-Q for the fiscal quarters ended October 31, 2002, January 31, 2003 and April 30, 2003 filed on December 11, 2002, March 17, 2003 and June 13, 2003, respectively.
- 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 and Amendment No. 2 to Form 8-A filed on February 12, 2002; and
- our current reports on Form 8-K, filed on June 10, 2003, August 5, 2003 and September 12, 2003;
- our registration statement on Form 8-A, filed on February 12, 1996.

You should read the information relating to us in this prospectus supplement and accompanying prospectus together with the information in the documents incorporated by reference.

Any statement contained in a document incorporated by reference herein, unless otherwise indicated therein, speaks as of the date of that document. Statements contained in this prospectus may modify or replace statements contained in the documents incorporated by reference.

We will furnish without charge to you, upon written or oral request, a copy of any or all of the documents described above, except for exhibits to such documents, unless such exhibits are specifically incorporated by reference into such documents. Requests should be addressed to: Alexion Pharmaceuticals, Inc., 352 Knotter Drive, Cheshire, Connecticut 06410, (203) 272-2596, Attention: Thomas I.H. Dubin, Vice President and General Counsel.

3,600,000 Shares

Alexion Pharmaceuticals, Inc.

Common Stock



Bear, Stearns & Co. Inc.

SG Cowen

September 15, 2003