

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934

Alexion Pharmaceuticals, Inc.
(Name of Issuer)

Common Stock, \$0.0001 par value
(Title of Class of Securities)

015351109
(CUSIP Number)

February 24, 2006
(Date of Event Which Requires Filing of this Statement)

Check the following box to designate the rule pursuant to which the Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP NO. 015351109

1. NAMES OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)
D. E. Shaw Valence Portfolios, L.L.C.
13-4046559
2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)
(A)
(B)
3. SEC USE ONLY
4. CITIZENSHIP OR PLACE OF ORGANIZATION
Delaware

NUMBER OF
SHARES
BENEFICIALLY
OWNED BY
EACH
REPORTING
PERSON WITH

5. SOLE VOTING POWER
-0-
6. SHARED VOTING POWER
1,771,517
7. SOLE DISPOSITIVE POWER
-0-
8. SHARED DISPOSITIVE POWER
1,771,517

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
1,771,517
10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES
(SEE INSTRUCTIONS)
11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)
5.7%
12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)
00

CUSIP NO. 015351109

1. NAMES OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)
D. E. Shaw & Co., L.P.
13-3695715

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)
(A)
(B)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION
Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER
-0-

6. SHARED VOTING POWER
1,771,517

7. SOLE DISPOSITIVE POWER
-0-

8. SHARED DISPOSITIVE POWER
1,772,712

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
1,772,712

10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES
(SEE INSTRUCTIONS)

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)
5.7%

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)
IA, PN

CUSIP NO. 015351109

1. NAMES OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)
David E. Shaw
 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)
(A)
(B)
 3. SEC USE ONLY
 4. CITIZENSHIP OR PLACE OF ORGANIZATION
United States
- | | | |
|---|----------------------------------|--|
| NUMBER OF
SHARES
BENEFICIALLY
OWNED BY
EACH
REPORTING
PERSON WITH | 5. SOLE VOTING POWER
-0- | 6. SHARED VOTING POWER
1,771,517 |
| | 7. SOLE DISPOSITIVE POWER
-0- | 8. SHARED DISPOSITIVE POWER
1,772,712 |
9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
1,772,712
 10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES
(SEE INSTRUCTIONS)
 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)
5.7%
 12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)
IN

ITEM 1.

- (A) NAME OF ISSUER:
Alexion Pharmaceuticals, Inc.
- (B) ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES:
352 Knotter Drive
Cheshire, CT 06511

ITEM 2.

- (A) NAME OF PERSON FILING:
D. E. Shaw Valence Portfolios, L.L.C.
D. E. Shaw & Co., L.P.
David E. Shaw
- (B) ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE:
The business address for each reporting person is:
120 W. 45th Street,
Tower 45, 39th Floor
New York, NY 10036
- (C) CITIZENSHIP:
D. E. Shaw Valence Portfolios, L.L.C. is a limited liability company organized under the laws of the state of Delaware.
D. E. Shaw & Co., L.P. is a limited partnership organized under the laws of the state of Delaware.
David E. Shaw is a citizen of the United States of America.
- (D) TITLE OF CLASS OF SECURITIES:
Common Stock, \$0.0001 par value
- (E) CUSIP NUMBER:
015351109

ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULE 13D-1(B) OR 13D-2(B) OR (C), CHECK WHETHER THE PERSON FILING IS A:

Not applicable

ITEM 4. OWNERSHIP

As of March 3, 2006:

(a) Amount beneficially owned:

D. E. Shaw Valence Portfolios, L.L.C.	1,771,517 shares This is composed of (i) 623,317 shares in the name of D. E. Shaw Valence Portfolios, L.L.C. and (ii) 1,148,200 shares that D. E. Shaw Valence, L.L.C. has the right to acquire through the exercise of listed call options.
D. E. Shaw & Co., L.P.:	1,772,712 shares This is composed of (i) 623,317 shares in the name of D. E. Shaw Valence Portfolios, L.L.C., (ii) 1,148,200 shares that D. E. Shaw Valence, L.L.C. has the right to acquire through the exercise of listed call options, and (iii) 1,195 shares under the management of D. E. Shaw Investment Management, L.L.C.
David E. Shaw:	1,772,712 shares This is composed of (i) 623,317 shares in the name of D. E. Shaw Valence Portfolios, L.L.C., (ii) 1,148,200 shares that D. E. Shaw Valence, L.L.C. has the right to acquire through the exercise of listed call options, and (iii) 1,195 shares under the management of D. E. Shaw Investment Management, L.L.C.

- (b) Percent of class:
- | | |
|--|------|
| D. E. Shaw Valence Portfolios, L.L.C.: | 5.7% |
| D. E. Shaw & Co., L.P.: | 5.7% |
| David E. Shaw: | 5.7% |
- (c) Number of shares to which the person has:
- (i) Sole power to vote or to direct the vote:
- | | |
|--|------------|
| D. E. Shaw Valence Portfolios, L.L.C.: | -0- shares |
| D. E. Shaw & Co., L.P.: | -0- shares |
| David E. Shaw: | -0- shares |
- (ii) Shared power to vote or to direct the vote:
- | | |
|--|------------------|
| D. E. Shaw Valence Portfolios, L.L.C.: | 1,771,517 shares |
| D. E. Shaw & Co., L.P.: | 1,771,517 shares |
| David E. Shaw: | 1,771,517 shares |
- (iii) Sole power to dispose or to direct the disposition of:
- | | |
|--|------------|
| D. E. Shaw Valence Portfolios, L.L.C.: | -0- shares |
| D. E. Shaw & Co., L.P.: | -0- shares |
| David E. Shaw: | -0- shares |
- (iv) Shared power to dispose or to direct the disposition of:
- | | |
|--|------------------|
| D. E. Shaw Valence Portfolios, L.L.C.: | 1,771,517 shares |
| D. E. Shaw & Co., L.P.: | 1,772,712 shares |
| David E. Shaw: | 1,772,712 shares |

David E. Shaw does not own any shares directly. By virtue of David E. Shaw's position as President and sole shareholder of D. E. Shaw & Co., Inc., which is the general partner of D. E. Shaw & Co., L.P., which in turn is the managing member and investment adviser of D. E. Shaw Valence Portfolios, L.L.C., and the managing member of D. E. Shaw Valence, L.L.C. and D. E. Shaw Investment Management, L.L.C., David E. Shaw may be deemed to have the shared power to vote or direct the vote of 1,771,517 shares, and the shared power to dispose or direct the disposition of 1,772,712 shares, the 1,772,712 shares as described above constituting 5.7% of the outstanding shares and, therefore, David E. Shaw may be deemed to be the beneficial owner of such shares. David E. Shaw disclaims beneficial ownership of such 1,772,712 shares.

ITEM 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS
Not Applicable

ITEM 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON
Not Applicable

ITEM 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY OR CONTROL PERSON
Not Applicable

ITEM 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP
Not Applicable

ITEM 9. NOTICE OF DISSOLUTION OF GROUP
Not Applicable

ITEM 10. CERTIFICATION

By signing below, each of D. E. Shaw Valence Portfolios, L.L.C., D. E. Shaw & Co., L.P., and David E. Shaw certify that, to the best of such reporting person's knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having such purposes or effect.

SIGNATURE

After reasonable inquiry and to the best of their knowledge and belief, the undersigned certify that the information set forth in this statement is true, complete and correct. A Power of Attorney, dated February 24, 2004, granted by David E. Shaw in favor of Eric Wepsic, is attached hereto.

Dated: March 6, 2006

D. E. Shaw Valence Portfolios, L.L.C.
By: D. E. Shaw & Co., L.P., as managing member

By: /s/ Eric Wepsic

Eric Wepsic
Managing Director

D. E. Shaw & Co., L.P.

By: /s/ Eric Wepsic

Eric Wepsic
Managing Director

David E. Shaw

By: /s/ Eric Wepsic

Eric Wepsic
Attorney-in-Fact for David E. Shaw

EXHIBIT 1

POWER OF ATTORNEY
FOR CERTAIN FILINGS
UNDER THE SECURITIES EXCHANGE ACT OF 1934

I, David E. Shaw, hereby make, constitute and appoint each of:

Anne Dinning,

Julius Gaudio,

Lou Salkind,

Stuart Steckler, and

Eric Wepsic,

acting individually, as my agent and attorney-in-fact, with full power of substitution, for the purpose of, from time to time, executing in my name and/or my capacity as President of D. E. Shaw & Co., Inc. (acting for itself or as the general partner of D. E. Shaw & Co., L. P. and general partner or managing member of other entities, any which in turn may be acting for itself or other entities) all documents, certificates, instruments, statement, other filings, and amendments to the forgoing (collectively, "documents") determined by such person to be necessary or appropriate to comply with ownership or control-person reporting requirements imposed by any United States or non-United States governmental or regulatory authority, including without limitation Forms 3, 4, 5, 13D, 13F, and 13G required to be filed with the Securities and Exchange Commission; and delivering, furnishing or filing any such documents with the appropriate governmental or regulatory authority. Any such determination shall be conclusively evidenced by such person's execution, delivery, furnishing, and/or filing of the applicable document.

This power of attorney shall be valid from the date hereof and replaces the power granted on February 5, 2001, which is hereby cancelled.

IN WITNESS HEREOF, I have executed this instrument as of the date set forth below.

Date: February 24, 2004

DAVID E. SHAW, as President of
D. E. Shaw & Co., Inc.
/s/David E. Shaw
New York, New York

EXHIBIT 2

JOINT FILING AGREEMENT

In accordance with Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended, each of the undersigned Reporting Persons hereby agrees to the joint filing, along with all other such Reporting Persons, on behalf of each of them of a statement on Schedule 13G (including amendments thereto) with respect to the Common Stock, \$0.0001 par value, of Alexion Pharmaceuticals, Inc., and that this Agreement be included as an Exhibit to such joint filing. This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, each of the undersigned hereby executes this Agreement as of this 6th day of March, 2006.

D. E. Shaw Valence Portfolios, L.L.C.
By: D. E. Shaw & Co., L.P., as managing member

By: /s/ Eric Wepsic

Eric Wepsic
Managing Director

D. E. Shaw & Co., L.P.

By: /s/ Eric Wepsic

Eric Wepsic
Managing Director

David E. Shaw

By: /s/ Eric Wepsic

Eric Wepsic
Attorney-in-Fact for David E. Shaw