

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

(AMENDMENT NO. \_\_\_\_\_)\*

ALEXION PHARMACEUTICALS, INC.

-----  
(Name of Issuer)

Common Stock

-----  
(Title of Class of Securities)

015351-10-9

-----  
(CUSIP Number)

MARCH 17, 1998

-----  
(Date of Event Which Requires Filing This Statement)

Check the appropriate box to designate the rule pursuant to which this 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).

-----

1. Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).

BB Botech AG

2. Check the Appropriate Box if a Member of a Group  
(a)

(b)

3. SEC Use Only

4. Citizenship or Place of Organization

Switzerland

Number of  
Shares Bene-  
ficially by  
Owned by Each  
Reporting  
Person With:

5. Sole Voting Power

-0-

6. Shared Voting Power

1,824,113

7. Sole Dispositive Power

-0-

8. Shared Dispositive Power

1,824,113

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,824,113 shares of Common stock

10. Check if the Aggregate Amount in Row (11) Excludes Certain shares

11. Percent of Class Represented by amount in Row (11)

16.25%

12. Type of Reporting Person

HC, CO

Page 2 of 9 pages

3

CUSIP No. 015351-10-9

1. Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).

Biotech Target S.A.

2. Check the Appropriate Box if a Member of a Group  
(a)

(b)

3. SEC Use Only

4. Citizenship or Place of Organization

Panama

Number of  
Shares Bene-

5. Sole Voting Power

Beneficially by  
Owned by Each  
Reporting  
Person With:

-0-

6. Shared Voting Power

1,824,113

7. Sole Dispositive Power

-0-

8. Shared Dispositive Power

1,824,113

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,824,113 shares of Common Stock

10. Check if the Aggregate Amount in Row (11) Excludes Certain shares

11. Percent of Class Represented by amount in Row (11)

16.25%

12. Type of Reporting Person

CO

Page 3 of 9 pages

4

ITEM 1.

(a) Name of Issuer

Alexion Pharmaceuticals, Inc.

(b) Address of Issuer's Principal Executive Offices

25 Science Park  
Suite 360  
New Haven, CT 06511

ITEM 2.

(a) Name of Person Filing

BB Biotech AG ("BB Biotech")  
Biotech Target S.A. ("Biotech Target")

(b) Address of Principal Business Office or, if none, Residence

|                   |                     |
|-------------------|---------------------|
| BB Biotech AG     | Biotech Target S.A. |
| Vordergasse 3     | Swiss Bank Tower    |
| 8200 Schaffhausen | Panama 1            |
| CH/Switzerland    | Republic of Panama  |

(c) Citizenship

See Item No. 4 of cover pages.

(d) Title of Class of Securities

Common Stock

(e) CUSIP Number

015351-10-9

ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO SECTIONS 240.13d-1(b) OR 240.13d-2(b) OR (c), CHECK WHETHER THE PERSON FILING IS A:

- (a) [ ] Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).
- (b) [ ] Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).

Page 4 of 9 pages

5

- (c) [ ] Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d) [ ] Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e) [ ] An investment adviser in accordance with Section 240.13d-1(b)(1)(ii)(E);
- (f) [ ] An employee benefit plan or endowment fund in accordance with Section 240.13d-1(b)(1)(ii)(F);
- (g) [ ] A parent holding company or control person in accordance with Section 240.13d-1(b)(1)(ii)(G);
- (h) [ ] A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) [ ] A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j) [ ] Group, in accordance with Section 240.13d-1(b)(1)(ii)(J).

ITEM 4. OWNERSHIP

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

- (a) Amount beneficially owned:

1,824,113

- (b) Percent of class:

16.25%

- (c) Number of shares as to which the person has:

- (i) Sole power to vote or to direct the vote

-0-

Page 5 of 9 pages

6

- (ii) Shared power to vote or to direct the vote

1,824,113

- (iii) Sole power to dispose or to direct the disposition of

-0-

- (iv) Shared power to dispose or to direct the disposition of

1,824,113

ITEM 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following [ ].

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

This statement is filed jointly by BB Biotech AG and Biotech Target S.A. Biotech Target is a wholly-owned subsidiary of BB Biotech.

ITEM 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP

Not applicable.

ITEM 9.

Not applicable.

Page 6 of 9 pages

7

ITEM 10. CERTIFICATION

By signing below I certify that, to the best of my 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 that purpose or effect.

SIGNATURE

After reasonable inquiry and the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

BB BIOTECH AG

Date: March 26, 1998

By: /s/ Hans-Joerg Graf

Name: Hans-Joerg Graf

-----  
Signatory Authority

Date: March 26, 1998

By: /s/ Dr. Victor Bischoff

Name: Dr. Victor Bischoff

-----  
Vice Chairman and Director

BIOTECH TARGET, S.A.

Date: March 26, 1998

By: /s/ Dr. Andreas Bremer

Name: Dr. Andreas Bremer

-----  
Signatory Authority

Date: March 26, 1998

By: /s/ Dr. Anders Hove

-----  
Name: Dr. Anders Hove

-----  
Signatory Authority

The original statement shall be signed by each person on whose behalf the statement is filed or his authorized representative. If the statement is signed on behalf of a person by his authorized representative other than an executive officer or general partner of the filing person, evidence of the representative's authority to sign on behalf of such person shall be filed with the statement, provided however, that a power of attorney for this purpose which is already on file with the Commission may be incorporated by reference. The name and any title of each person who signs the statement

Page 7 of 9 pages

8  
shall be typed or printed beneath his signature.

Note. Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Section 240.13d-7 for other parties for whom copies are to be sent.

ATTENTION: INTENTIONAL MISSTATEMENTS OR OMISSIONS OF FACT CONSTITUTE FEDERAL CRIMINAL VIOLATIONS (SEE 18 U.S.C. 1001).

EXHIBIT INDEX

- Exhibit 1: Translation of minutes of the October 18, 1995, Board of Directors Meeting of Biotech Target (evidencing a power of attorney in favor of Dr. Andreas Bremer).\*
- Exhibit 2: Translation of minutes of the January 3, 1997 Board of Directors Meeting of Biotech Target (evidencing a power of attorney in favor of Dr. Anders Hove).\*
- Exhibit 3: Translation of evidence of a power of attorney in favor of Victor Bischoff and Hans-Joerg Graf on behalf of BB Biotech.\*\*
- Exhibit 4: Agreement by and between BB Biotech and Biotech Target with respect to the filing of this disclosure statement.

- -----  
\* See Powers of Attorney, previously filed as Exhibits 1 and 2 to the Schedule 13D related to Alexion Pharmaceuticals, Inc. filed with the Securities and Exchange Commission on September 18, 1997, which Exhibit is incorporated by reference herein.

\*\* See Power of Attorney, previously filed as an Exhibit 99.E to the Schedule 13D relating to Biogen, Inc. filed with the Securities and Exchange Commission on June 2, 1994, which Exhibit is incorporated by reference herein.

Page 8 of 9 pages

EXHIBIT 4

JOINT FILING AGREEMENT

We, the undersigned, hereby express our agreement that the attached Schedule 13G (including all amendments thereto) is filed on behalf of each of the undersigned.

BB BIOTECH AG

Date: March 26, 1998

By: /s/ Hans-Joerg Graf  
-----  
Name: Hans-Joerg Graf  
-----  
Signatory Authority

Date: March 26, 1998

By: /s/ Dr. Victor Bischoff  
-----  
Name: Dr. Victor Bischoff  
-----  
Vice Chairman and Director

BIOTECH TARGET, S.A.

Date: March 26, 1998

By: /s/ Dr. Andreas Bremer  
-----  
Name: Dr. Andreas Bremer  
-----  
Signatory Authority

Date: March 26, 1998

By: /s/ Dr. Anders Hove  
-----  
Name: Dr. Anders Hove  
-----  
Signatory Authority