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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Name and Address of Reporting Person* <u>Moriarty John B</u> (Last) (First) (Middle) <u>C/O ALEXION PHARMACEUTICALS, INC</u> <u>100 COLLEGE STREET</u> (Street) <u>NEW HAVEN CT 06510</u> (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>ALEXION PHARMACEUTICALS INC [ALXN]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>EVP & General Counsel</u> |
| | 3. Date of Earliest Transaction (Month/Day/Year) <u>02/06/2018</u> | |
| 4. If Amendment, Date of Original Filed (Month/Day/Year) | | |

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) | | | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|-------------------------------------------|--------------------------------------|----------------------------------------------------|--------------------------------|---|-------------------------------------------------------------------|------------|------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|
| | | | Code | V | Amount | (A) or (D) | Price | | | |
| Common Stock, par value \$.0001 per share | 02/06/2018 | | A | | 21,489 ⁽¹⁾ | A | \$0 | 71,400 | D | |
| Common Stock, par value \$.0001 per share | 02/06/2018 | | A | | 6,500 ⁽²⁾ | A | \$0 | 77,900 | D | |
| Common Stock, par value \$.0001 per share | 02/08/2018 | | S | | 2,163 ⁽³⁾ | D | \$115.7 ⁽⁴⁾ | 75,737 | D | |
| Common Stock, par value \$.0001 per share | 02/08/2018 | | S | | 1,200 ⁽³⁾ | D | \$115.7 ⁽⁵⁾ | 74,537 | D | |

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--------------------------------------------|--------------------------------------------------------|--------------------------------------|----------------------------------------------------|--------------------------------|---|----------------------------------------------------------------------------------------|-----|----------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------|
| | | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | | | | | |

Explanation of Responses:

- On February 6, 2018, the Leadership and Compensation Committee determined that the reporting person earned 21,489 Performance Share Units upon achievement of certain performance targets previously established by the Committee. 1/3 of such shares vested on February 6, 2018 and 1/3 vest on each subsequent anniversary.
- On February 6, 2018, the Leadership and Compensation Committee determined that the reporting person earned 6,500 Performance Share Units upon achievement of certain performance targets previously established by the Committee. 1/4 of such shares vested on February 6, 2018 and 1/4 vest on each subsequent anniversary.
- This sale was made to cover withholding taxes immediately following the vesting of previously granted Performance Stock Units.
- This transaction was executed in multiple trades through a broker-dealer at prices ranging from \$115.20 - \$116.20. The price reported in this column reflects the weighted average sales price. Upon request, the reporting person will provide to the SEC staff full information regarding the number of shares sold at each price.
- This transaction was executed in multiple trades through a broker-dealer at prices ranging from \$116.25 - \$117.25. The price reported in this column reflects the weighted average sales price. Upon request, the reporting person will provide to the SEC staff full information regarding the number of shares sold at each price.

Remarks:

/s/ Michael Greco, Attorney-in-Fact for John B. Moriarty 02/08/2018

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.