

| OMB APPROVAL | |
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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>Pelzer Robert</u> (Last) (First) (Middle) <u>C/O AQUINOX PHARMACEUTICALS, INC.</u> <u>450 - 887 GREAT NORTHERN WAY</u> (Street) <u>VANCOUVER A1 V5T 4T5</u> (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>AQUINOX PHARMACEUTICALS, INC [AQXP]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below) |
| | 3. Date of Earliest Transaction (Month/Day/Year) <u>03/06/2014</u> | |
| | 4. If Amendment, Date of Original Filed (Month/Day/Year) | 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person |

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 | | | |

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 | | | | | | Title |
| Stock Option (Right to Buy) | \$11 | 03/06/2014 | | A | | 8,333 | | (1) | 03/05/2024 | Common Stock | 8,333 | \$0.00 | 14,843 ⁽²⁾ | D | |

Explanation of Responses:

- The shares subject to this option shall vest in equal annual installments, at a rate of 1/3rd of the total number of shares on the one-year anniversary of the grant date, 1/3rd of the total number of shares on the second-year anniversary of the grant date, and 1/3rd of the total number of shares on the third-year anniversary of the grant date.
- Includes (i) 8,333 shares issuable upon exercise of an option grant pursuant to the issuer's 2014 Equity Incentive Plan (the "2014 Plan") and (ii) 6,510 option securities issuable upon exercise of an option granted pursuant to the issuer's Joint Canadian Stock Option Plan (the "2006 Plan"). Each option under the 2014 Plan is exercisable for shares of common stock. Each option security granted under the 2006 Plan is exercisable for an "option security". Prior to the closing of the issuer's initial public offering, an option security is comprised of one common exchangeable share and one special voting share of Aquinox Pharmaceuticals Inc., a corporation under the Canadian Business Corporations Act. Following the closing of the issuer's initial public offering, an option security will be comprised of one share of the issuer's common stock.

Remarks:

/s/ Mary E. Smith, Attorney-in-fact 03/10/2014

** 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.

LIMITED POWER OF ATTORNEY FOR
SECTION 16 REPORTING OBLIGATIONS

Know all by these presents, that the undersigned hereby makes, constitutes and appoints David Main and Kamran Alam of Aquinox Pharmaceuticals, Inc. and Mary E. Smith of Cooley LLP as the undersigned's true and lawful attorney-in-fact, with full power and authority as hereinafter described on behalf of and in the name, place and stead of the undersigned to:

(1) prepare, execute, acknowledge, deliver and file Forms 3, 4, and 5 (including any amendments thereto) with respect to the securities of Aquinox Pharmaceuticals, Inc., a Delaware corporation (the "Company"), with the SEC, any national securities exchanges and the Company, as considered necessary or advisable under Section 16(a) of the Exchange Act and the rules and regulations promulgated thereunder, as amended from time to time;

(2) seek or obtain, as the undersigned's representative and on the undersigned's behalf, information on transactions in the Company's securities from any third party, including brokers, employee benefit plan administrators and trustees, and the undersigned hereby authorizes any such person to release any such information to the undersigned and approves and ratifies any such release of information; and

(3) perform any and all other acts which in the discretion of such attorney-in-fact are necessary or desirable for and on behalf of the undersigned in connection with the foregoing.

The undersigned acknowledges that:

(1) this Power of Attorney authorizes, but does not require, such attorney-in-fact to act in their discretion on information provided to such attorney-in-fact without independent verification of such information;

(2) any documents prepared and/or executed by such attorney-in-fact on behalf of the undersigned pursuant to this Power of Attorney will be in such form and will contain such information and disclosure as such attorney-in-fact, in his or her discretion, deems necessary or desirable;

(3) neither the Company nor such attorney-in-fact assumes (i) any liability for the undersigned's responsibility to comply with the requirement of the Exchange Act, (ii) any liability of the undersigned for any failure to comply with such requirements, or (iii) any obligation or liability of the undersigned for profit disgorgement under Section 16(b) of the Exchange Act; and

(4) this Power of Attorney does not relieve the undersigned from responsibility for compliance with the undersigned's obligations under the Exchange Act, including without limitation the reporting requirements under Section 16 of the Exchange Act.

The undersigned hereby gives and grants the foregoing attorney-in-fact full power and authority to do and perform all and every act and thing whatsoever requisite, necessary or appropriate to be done in and about the foregoing matters as fully to all intents and purposes as the undersigned might or could do if present, hereby ratifying all that such attorney-in-fact of, for and on behalf of the undersigned, shall lawfully do or cause to be done by virtue of this Limited Power of Attorney.

This Power of Attorney shall remain in full force and effect until revoked by the undersigned in a signed writing delivered to such attorney-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 10th day of February, 2014.

/s/Robert Pelzer

Robert Pelzer

