Instruction 1(b)

FORM 4

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| - | OMB APPRO |
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| STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP | OMB Number: |

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

| OMB APPROVAL | | | | | | | | |
|--------------------------|-----|--|--|--|--|--|--|--|
| OMB Number: 3235-028 | | | | | | | | |
| Estimated average burden | | | | | | | | |
| hours per response: | 0.5 | | | | | | | |

| Name and Address of Reporting Person* Kirby John J. | | | | | ID | 2. Issuer Name and Ticker or Trading Symbol IDERA PHARMACEUTICALS, INC. [IDRA] | | | | | | | | (Che | 5. Relationship of Repo (Check all applicable) Director • Officer (give tit | | | son(s) to Iss 10% Ov Other (s | vner |
|--|--|--|---|--------|---|--|--------|--|--|---|---------------------------|---|---------------|---|--|---|---|-------------------------------------|---|
| (Last) C/O IDE | ` | irst) MACEUTICALS | (Middle) S, INC. | | | A below | | | | | | | | | below) | | ncial | below) | peony |
| 505 EAGLEVIEW BLVD., SUITE 212 | | | | 4 1 | If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | 6 In | 6. Individual or Joint/Group Filing (Check Applicable | | | | | |
| (Street) | P | A | 19341 | | 4. If Americanient, Date of O | | | | anonamong Date of Original Fried (Morial Pay) Teal) | | | | | Line |) K Form f Form f | | | | |
| (City) | (S | tate) | (Zip) | | | | | | | | | | | | | | | | |
| | Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned | | | | | | | | | | | | | | | | | | |
| 1. Title of Security (Instr. 3) 2. Transa Date (Month/D | | | | | ear) | 2A. Deemed Execution Date, if any (Month/Day/Year) | | 3. Transaction Code (Instr. 8) 4. Securiti Disposed 5) | | | | | | es Fo ally (D Following (I) | | n: Direct or Indirect nstr. 4) | 7. Nature of Indirect Beneficial Ownership | | |
| | | | | | | | | | Code | v | Amount | () | A) or D) | Price | Transaction(s) | | | (Instr. 4) | |
| Common Stock 01/1 | | | 01/10 | /202 | .0 | | | A | 20,000 ⁽¹⁾ A \$0 36,437 ⁽²⁾ | | 137 ⁽²⁾ | | D | | | | | | |
| | | - | Fable II - I | | | | | | | | osed of, onvertil | | | | Owned | | | | |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution I if any (Month/Day | ate, T | ransaction ode (Instr. | | of | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | | 7. Title and Amou of Securities Underlying Derivative Securi (Instr. 3 and 4) | | ecurity | 8. Price of Derivative Security (Instr. 5) | 9. Number derivative Securities Beneficial Owned Following Reported Transactio (Instr. 4) | Ownersh Form: Direct (D or Indire (I) (Instr. | Ownership | Beneficial Ownership t (Instr. 4) |
| | | | | c | ode | v | (A) | (D) | Date Exercisab | | Expiration Date | Title | OI N Of | umber | | | | | |
| Stock Option (Right to | \$1.79 | 01/10/2020 | | | A | | 50,000 | | (3) | 0 | 1/10/2030 | Comm | | 0,000 | \$0 | 50,000 |) | D | |

Explanation of Responses:

Buy)

- 1. Represents a restricted stock unit ("RSU") award granted under the Issuer's 2013 Stock Incentive Plan. Each RSU represents a right to receive one share of Issuer common stock. The RSU award vests over a four-year period commencing on January 10, 2020. Twenty-five percent (25%) of the shares subject to the RSU award shall vest on each one-year anniversary of the grant date of the award.
- 2. Securities beneficially owned totaling 36,437 includes 8,749 shares of Issuer common stock owned and 27,688 of unvested RSU's held by the reporting person.
- 3. The stock option award was granted under the Issuer's 2013 Stock Incentive Plan. The stock option vests and becomes exercisable over a four-year period commencing on January 10, 2020. Twenty-five percent (25%) of the stock option vests and becomes exercisable on January 10, 2021 (first anniversary of the date of grant) and the balance vests in twelve equal quarterly installments over the remaining three years of the four-year period, subject to continued service with the Issuer.

/s/ John J. Kirby

01/14/2020

** 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.