FORM 4

Section 16. Form 4 or Form 5 obligations may continue. See

Instruction 1(b)

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

IN BENEFICIAL OWNERSHIP

| Check this box if no longer subject to Section 16. Form 4 or Form 5 | STATEMENT OF CHANGES |
|--|----------------------|
| Section 10. Form 4 or Form 5 | |

OMB APPROVAL OMB Number: Estimated average burden hours per response: 0.5

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

| 1. Name and Address of Reporting Person* MITCHELL DEAN J | | | | | | 2. Issuer Name and Ticker or Trading Symbol INTREXON CORP [XON] | | | | | | | | elationship of the control of the co | , | | son(s) to Issi 10% Ow | | |
|---|--|--|---|---------------------------------|---|---|------|---|------|--------------------|-------------------|----------------------------|-------------------|--|---|--------------------|--|---|--|
| (Last) 20374 SI | , | irst) EADOWS PARk | (Middle) | | 3. Date of Earliest Transaction (Month/Day/Year) 03/23/2018 | | | | | | | | Officer below) | (give title | | Other (s below) | pecify | | |
| (Street) GERMA (City) | NTOWN M | | 20876 (Zip) | | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | Line | 6. Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person | | | | | |
| | | Tab | le I - Non- | Deriva | tive S | ecurities | s Ac | quired, | Dis | posed o | of, or E | Bene | ficially | y Owned | | | | | |
| Dat | | | | 2. Transad Date (Month/Da | | 2A. Deemed Execution Date, if any (Month/Day/Year) | | 3. Transaction Code (Instr. | | | | | | Securitie Beneficia | 5. Amount of Securities Beneficially Owned Following | | r Indirect 0 r Indirect 1 str. 4) | 7. Nature of Indirect Beneficial Ownership | |
| | | | | | | | | Code | v | Amount | Amount (A) or (D) | | Price | Transaction(s) (Instr. 3 and 4) | | | | Instr. 4) | |
| Common Stock 03 | | | | | 2018 | | | | | 3,575 | 5 | A | \$15.8(| 21. | ,678 | | 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 Da if any (Month/Day/\) | Co | ansaction ode (Instr | of I | | 6. Date Exercisal Expiration Date (Month/Day/Year | | of Securitie | | urities ying tive Se | ecurity | 8. Price of Derivative Security (Instr. 5) | 9. Number derivative Securities Beneficial Owned Following Reported Transactio (Instr. 4) | lly | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | Beneficial Ownership (Instr. 4) | |
| | | | | Co | ode V | (A) | (D) | Date Exercisal | | Expiration Date | Title | O N O | lumber | | | | | | |
| Restricted Stock Units | (2) | 03/23/2018 | | | A | 7,911 | | (3) | | (3) | Comm | | 7,911 | \$0 | 7,911 | | D | | |
| Option to Purchase Common Stock (Right to | \$15.8 | 03/23/2018 | | | A | 14,246 | | 03/23/201 | 18 0 | 03/23/2028 | Comm | | 4,246 | \$0 | 14,246 | 5 | D | | |

Explanation of Responses:

- 1. The shares were issued to the reporting person in lieu of an annual retainer of \$56,500.
- 2. Each restricted stock unit represents a contingent right to receive one share of XON common stock.
- 3. The restricted stock units vest in full one year from the grant date.

Remarks:

/s/Dean J. Mitchell, by Donald P. Lehr, Power of Attorney ** Signature of Reporting Person Date

03/29/2018

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.