

**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

OMB APPROVAL	
OMB Number:	3235-0287
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1. Name and Address of Reporting Person* <b>MITCHELL DEAN J</b>  (Last) (First) (Middle) <b>20374 SENECA MEADOWS PARKWAY</b>  (Street) <b>GERMANTOWN MD 20876</b>  (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <b>INTREXON CORP [ XON ]</b>	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) <b>03/20/2014</b>	
		6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> 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			
Common Stock	03/20/2014		A		2,278	A	\$30.72	6,355	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					
Option to Purchase Common Stock (Right to Buy)	\$30.72	03/20/2014		A		15,000		03/20/2014	03/20/2024	Common Stock 15,000	\$0	15,000	D	
Option to Purchase Common Stock (Right to Buy)	\$3.29							(1)	03/17/2019	Common Stock 8,571		8,571	D	
Option to Purchase Common Stock (Right to Buy)	\$3.29							(1)	06/30/2020	Common Stock 2,857		2,857	D	
Option to Purchase Common Stock (Right to Buy)	\$5.91							(2)	03/07/2021	Common Stock 2,857		2,857	D	
Option to Purchase Common Stock (Right to Buy)	\$7.12							(3)	12/02/2021	Common Stock 8,571		8,571	D	
Option to Purchase Common Stock (Right to Buy)	\$7.12							(4)	03/15/2022	Common Stock 2,857		2,857	D	
Option to Purchase Common Stock (Right to Buy)	\$9.67							(5)	05/28/2023	Common Stock 2,858		2,858	D	

**Explanation of Responses:**

1. These options are immediately exercisable.

2. 2,142 options are exercisable immediately; the remaining 715 options vest on January 1, 2015.
3. 4,285 options are exercisable immediately; the remaining options vest annually in increments of 2,143 on each of December 1, 2014 and 2015, respectively
4. 1,428 options are exercisable immediately; the remaining options vest annually in increments of 714 and 715 on each of January 1, 2015 and 2016, respectively.
5. 714 options are exercisable immediately; the remaining options vest annually in increments of 715, 714 and 715 on each of January 1, 2015, 2016 and 2017, respectively.

**Remarks:**

/s/ Dean J. Mitchell, by Donald  
P. Lehr, Power of Attorney      03/24/2014

\*\* 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.**