

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
Estimated average burden hours per response:	0.5

1. Name and Address of Reporting Person* <u>KIRK RANDAL J</u> (Last) (First) (Middle) <u>C/O THIRD SECURITY, LLC</u> <u>1881 GROVE AVENUE</u> (Street) <u>RADFORD VA 24141</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>ZIOPHARM ONCOLOGY INC [ZIOP]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)
	3. Date of Earliest Transaction (Month/Day/Year) <u>01/12/2011</u>	
		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	01/12/2011		A		25,000 ⁽¹⁾	A	\$0	25,000	D	
Common Shares	01/12/2011		P		2,426,235	A	\$4.8	2,426,235	I	By Intrexon Corporation ⁽²⁾
Common Stock	01/12/2011		P		3,636,926	A	⁽³⁾	6,063,161	I	By Intrexon Corporation ⁽²⁾

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
Option to Purchase Common Stock	\$5.21	01/12/2011		A		25,000		⁽⁴⁾	01/12/2021	Common Stock	25,000	\$0	25,000	D	

1. Name and Address of Reporting Person*
KIRK RANDAL J
 (Last) (First) (Middle)
C/O THIRD SECURITY, LLC
1881 GROVE AVENUE
 (Street)
RADFORD VA 24141
 (City) (State) (Zip)

1. Name and Address of Reporting Person*
INTREXON CORP
 (Last) (First) (Middle)
C/O LEGAL DEPARTMENT
20358 SENECA MEADOWS PARKWAY
 (Street)
GERMANTOWN MD 20876
 (City) (State) (Zip)

(City)

(State)

(Zip)

Explanation of Responses:

1. All restrictions related to the grant of restricted stock will lapse on January 12, 2012.
2. Randal J. Kirk, directly and through certain affiliates, has voting and dispositive power over a majority of the outstanding capital stock of Intrexon Corporation. Mr. Kirk may therefore be deemed to have voting and dispositive power over the shares of the issuer owned by Intrexon Corporation. Mr. Kirk disclaims beneficial ownership of such shares, except to the extent of any pecuniary interest therein.
3. Shares were issued as partial consideration in connection with the execution of an Exclusive Channel Partner Agreement dated January 6, 2011 between the issuer and Intrexon Corporation.
4. Option to purchase shares of common stock will vest over a three (3) year period as follows: 8,334 shares on January 12, 2012; 8,333 shares on January 12, 2013; and 8,333 shares on January 12, 2014.

Remarks:

/s/ Randal J. Kirk 01/14/2011

/s/ Randal J. Kirk, CEO of
Intrexon Corporation 01/14/2011

** 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.