

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549

**SCHEDULE 13D**

(Amendment No. 6)\*

Under the Securities Exchange Act of 1934

**ZIOPHARM ONCOLOGY, INC.**

(Name of Issuer)

Common Stock, par value \$0.01 per share

(Title of Class of Securities)

98973P101

(CUSIP Number)

Third Security, LLC  
1881 Grove Avenue  
Radford, Virginia 24141  
Attention: Marcus E. Smith, Esq.  
(540) 633-7900

(Name, Address and Telephone Number of Person  
Authorized to Receive Notices and Communications)

Copy to:  
Intrexon Corporation  
Attention: Legal  
20374 Seneca Meadows Parkway  
Germantown, Maryland 20876  
(301) 556-9809

February 9, 2015

(Date of Event which Requires Filing of this Statement )

If the filing person has previously filed a statement on Schedule 13G to report the acquisition which is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(b)(3) or (4), check the following box  r .

**NOTE:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

<b>1</b>	<b>NAMES OF REPORTING PERSONS</b> <b>I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)</b> Randal J. Kirk	
<b>2</b>	<b>CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP</b> (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
<b>3</b>	<b>SEC USE ONLY</b>	
<b>4</b>	<b>SOURCE OF FUNDS (SEE INSTRUCTIONS)</b> PF	
<b>5</b>	<b>CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E)</b> <input type="checkbox"/>	
<b>6</b>	<b>CITIZENSHIP OR PLACE OF ORGANIZATION</b> United States	
<b>NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH</b>	<b>7</b>	<b>SOLE VOTING POWER</b> 1,467,110
	<b>8</b>	<b>SHARED VOTING POWER</b> 17,830,305
	<b>9</b>	<b>SOLE DISPOSITIVE POWER</b> 1,467,110
	<b>10</b>	<b>SHARED DISPOSITIVE POWER</b> 17,830,305
<b>11</b>	<b>AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON</b> 19,297,415	
<b>12</b>	<b>CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)</b> <input type="checkbox"/>	
<b>13</b>	<b>PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)</b> 16.9%	
<b>14</b>	<b>TYPE OF REPORTING PERSON</b> IN	

<b>1</b>	<b>NAMES OF REPORTING PERSONS</b> <b>I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)</b>  <b>Intrexon Corporation</b> <b>I.R.S. IDENTIFICATION NO.: 26-0084895</b>	
<b>2</b>	<b>CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP</b> (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
<b>3</b>	<b>SEC USE ONLY</b>	
<b>4</b>	<b>SOURCE OF FUNDS (SEE INSTRUCTIONS)</b>  <b>WC</b>	
<b>5</b>	<b>CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E)</b> <input type="checkbox"/>	
<b>6</b>	<b>CITIZENSHIP OR PLACE OF ORGANIZATION</b>  <b>Virginia</b>	
<b>NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH</b>	<b>7</b>	<b>SOLE VOTING POWER</b>  <b>0</b>
	<b>8</b>	<b>SHARED VOTING POWER</b>  <b>17,830,305</b>
	<b>9</b>	<b>SOLE DISPOSITIVE POWER</b>  <b>0</b>
	<b>10</b>	<b>SHARED DISPOSITIVE POWER</b>  <b>17,830,305</b>
<b>11</b>	<b>AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON</b>  <b>17,830,305</b>	
<b>12</b>	<b>CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)</b> <input type="checkbox"/>	
<b>13</b>	<b>PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)</b>  <b>15.6%</b>	
<b>14</b>	<b>TYPE OF REPORTING PERSON</b>  <b>CO</b>	

This Amendment No. 6 (the "Amendment") amends and supplements the Statement on Schedule 13D, dated January 12, 2011 and filed on January 20, 2011, as amended by Amendment No. 1 dated February 3, 2011 and filed on February 11, 2011, Amendment No. 2 dated August 9, 2011 and filed on August 16, 2011, Amendment No. 3 dated January 20, 2012 and filed on January 25, 2012, Amendment No. 4 dated November 7, 2012 and filed November 9, 2012 and Amendment No. 5 dated October 29, 2013 and filed October 31, 2013 (the "Original Schedule 13D"), relating to the Common Stock, par value \$0.01 per share (the "Common Stock"), of ZIOPHARM Oncology, Inc., a Delaware corporation (the "Company"). Mr. Randal J. Kirk ("Mr. Kirk") and Intrexon Corporation, a Virginia corporation ("Intrexon" and, together with Mr. Kirk, the "Reporting Persons"), are filing this Amendment to disclose the purchase by Intrexon, an affiliate of Mr. Kirk, of 1,440,000 shares of Common Stock in an underwritten public offering of the Company on February 9, 2015. Mr. Kirk could be deemed to have indirect beneficial ownership of the shares of Common Stock directly beneficially owned by Intrexon and Kapital Joe, LLC ("Kapital Joe"), a Virginia limited liability company that is managed by Third Security, LLC, a Virginia limited liability company that is managed by Mr. Kirk.

Except as set forth below, there are no changes to the information set forth in the Original Schedule 13D.

**Item 3. Source and Amount of Funds or Other Consideration.**

Item 3 of the Original Schedule 13D is hereby amended and supplemented as follows:

On February 9, 2015, Intrexon utilized its working capital to purchase 1,440,000 shares of Common Stock in an underwritten public offering of the Company, for an aggregate purchase price of approximately \$12,600,000, or \$8.75 per share.

**Item 5. Interest in Securities of the Issuer.**

Items 5(a) and (b) of the Original Schedule 13D are hereby amended and restated to read in their entirety as follows:

(a) and (b) See Items 11 and 13 of the cover pages to this Statement for the aggregate number of shares and percentage of issued and outstanding shares of Common Stock of the Company owned by the Reporting Persons. The percentage ownership is calculated based on 104,428,495 shares of Common Stock issued and outstanding as of January 30, 2015, as disclosed by the Company in its Registration Statement on Form S-3 dated and filed on February 2, 2015, increased by (i) 10,000,000 shares of Common Stock issued in the underwritten public offering and (ii) 25,000 shares of Common Stock issuable upon exercise of stock options directly owned by Mr. Kirk that are currently exercisable.

<b>Reporting Person</b>	<b>Amount of Common Stock Beneficially Owned</b>	<b>Percent of Class</b>	<b>Sole Power to Vote or Direct the Vote</b>	<b>Shared Power to Vote or Direct the Vote</b>	<b>Sole Power to Dispose or to Direct the Disposition</b>	<b>Shared Power to Dispose or to Direct the Disposition</b>
Randal J. Kirk <sup>(1)</sup>	19,297,415	16.9%	1,467,110	17,830,305	1,467,110	17,830,305
Intrexon Corporation	17,830,305	15.6%	—	17,830,305	—	17,830,305

(1) Includes 1,346,462 shares of Common Stock held by Kapital Joe.

Mr. Kirk could be deemed to have indirect beneficial ownership of the shares of Common Stock directly beneficially owned by Intrexon and Kapital Joe.

**Item 7. Material to be Filed as Exhibits.**

Exhibit 1 Joint Filing Agreement, dated as of February 10, 2015, by and between Mr. Kirk and Intrexon

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**SIGNATURES**

After reasonable inquiry and to the best of their knowledge and belief, the undersigned certify that the information set forth in this statement is true, complete and correct.

Date: February 10, 2015

/s/ Randal J. Kirk

Randal J. Kirk

**INTREXON CORPORATION**

By: /s/ Randal J. Kirk

Randal J. Kirk

Chief Executive Officer

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**EXHIBIT INDEX**

Exhibit 1      Joint Filing Agreement, dated as of February 10, 2015, by and between Mr. Kirk and Intrexon

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**Exhibit 1**

**Joint Filing Agreement**

In accordance with Rule 13d-1(k) promulgated under the Securities Exchange Act of 1934, as amended, the persons named below agree to the joint filing on behalf of each of them a Statement on Schedule 13D (including amendments thereto) with regard to the common stock of ZIOPHARM Oncology, Inc., and further agree that this Joint Filing Agreement be included as an exhibit to such joint filings. In evidence thereof, the undersigned, being duly authorized, hereby execute this agreement as of the 10<sup>th</sup> day of February, 2015.

/s/ Randal J. Kirk

Randal J. Kirk

**INTREXON CORPORATION**

By: /s/ Randal J. Kirk

Randal J. Kirk

Chief Executive Officer

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