

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	
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1. Name and Address of Reporting Person * LEWIS JONATHAN (Last) (First) (Middle) 1180 AVENUE OF THE AMERICAS, 19TH FLOOR (Street) NEW YORK NY 10036 (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol ZIOPHARM ONCOLOGY INC [ZIOP]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <p style="text-align: center;">CEO</p>
	3. Date of Earliest Transaction (Month/Day/Year) 09/23/2010	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	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 Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock, \$.001 par value								450	I	By Children ⁽⁵⁾
Common Stock, \$.001 par value	09/23/2010		F ⁽⁶⁾		128,850	D	\$3.95	516,175	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						Title
Stock Option (right to buy)	\$0.08							01/08/2007	01/08/2014	Common Stock		25,674		D	
Stock Option (right to buy)	\$0.08							01/27/2007	01/27/2014	Common Stock		242,979		D	
Stock Option (right to buy)	\$4.31							01/27/2007	06/08/2015	Common Stock		87,789		D	
Stock Option (right to buy)	\$4.31							01/27/2007	09/13/2015	Common Stock		54,161		D	
Stock Option (right to buy)	\$5.01							04/26/2006	04/26/2016	Common Stock		139,315		D	
Stock Option (right to buy)	\$5.01							04/26/2006	04/26/2016	Common Stock		75,000		D	
Stock Option (right to buy)	\$6.49							(1)	12/13/2016	Common Stock		30,000		D	
Stock Option (right to buy)	\$4.85							(2)	06/18/2017	Common Stock		35,000		D	
Stock Option (right to buy)	\$2.73							(3)	12/12/2017	Common Stock		100,000		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)				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	Amount or Number of Shares				
Stock Option (right to buy)	\$0.7							(4)	05/13/2019	Common Stock	100,000		100,000	D	
Stock Option (right to buy)	\$2.85							(7)	12/31/2019	Common Stock	150,000		150,000	D	

Explanation of Responses:

- 10,000 shares vest on each of 12/13/07, 12/13/08 and 12/13/09.
- 11,667 shares vest on each of 6/18/08 and 6/18/09; 11,666 shares vest on 6/18/10.
- 33,334 shares vest on 12/12/08; 33,333 shares vest on each of 12/12/09 and 12/12/10.
- 25,000 shares vest immediately, 25,000 shares vest on each of 8/13/2009, 11/13/2009 and 2/13/2010.
- By the Reporting Person as custodian for his minor children under the Connecticut Uniform Gifts to Minors Act.
- Disposition represents shares forfeited to satisfy withholding tax obligations upon the vesting of a restricted stock grant.
- 50,000 shares vest on each of 12/31/2010, 12/31/2011 and 12/31/2012.

/s/ Jonathan Lewis

09/24/2010

** 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.