

**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* <b>BAGLEY RICHARD E</b>  (Last) (First) (Middle) <b>ONE FIRST AVE, BUILDING 34</b> <b>NAVY YARD PLAZA</b>  (Street) <b>BOSTON MA 02129</b>  (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <b>ZIOPHARM ONCOLOGY INC [ ZIOP ]</b>	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) <b>President, COO &amp; Treasurer</b>
	3. Date of Earliest Transaction (Month/Day/Year) <b>09/23/2010</b>	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	

**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, \$.001 par value	09/23/2010		F <sup>(10)</sup>		47,450	D	\$3.95	161,675	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					
Stock Option (right to buy)	\$1.7							(1)	07/01/2014	Common Stock	150,668	150,668	D	
Stock Option (right to buy)	\$4.31							(2)	06/08/2015	Common Stock	63,197	63,197	D	
Stock Option (right to buy)	\$4.31							(3)	09/13/2015	Common Stock	27,417	27,417	D	
Stock Option (right to buy)	\$5.01								04/26/2006 04/26/2016	Common Stock	54,873	54,873	D	
Stock Option (right to buy)	\$5.01							(4)	04/26/2016	Common Stock	40,000	40,000	D	
Stock Option (right to buy)	\$6.49							(5)	12/13/2016	Common Stock	20,000	20,000	D	
Stock Option (right to buy)	\$4.85							(6)	06/18/2017	Common Stock	25,000	25,000	D	
Stock Option (right to buy)	\$2.73							(7)	12/12/2017	Common Stock	75,000	75,000	D	
Stock Option (right to buy)	\$2.14							(8)	06/25/2018	Common Stock	60,000	60,000	D	
Stock Option (right to buy)	\$0.7							(9)	05/13/2019	Common Stock	100,000	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)		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	Amount or Number of Shares				
Stock Option (right to buy)	\$2.85							(11)	12/31/2019	Common Stock	50,000		50,000	D	

**Explanation of Responses:**

1. 50,223 shares vest on each of 7/1/05 and 7/1/06; 50,222 shares vest on 7/1/07.
2. 21,066 shares vest on each of 7/1/05 and 7/1/06; 21,065 shares vest on 7/1/07.
3. 9,139 shares vest on each of 9/13/05, 7/1/06 and 7/1/07.
4. 20,000 shares vest immediately; the remainder vest on 12/14/06.
5. 6,667 shares vest on each of 12/13/07 and 12/13/08; 6,666 shares vest on 12/13/09.
6. 8,334 shares vest on 6/18/08; 8,333 shares vest on each of 6/18/09 and 6/18/10.
7. 25,000 shares vest on each of 12/12/08, 12/12/09 and 12/12/10.
8. 20,000 shares vest on each of 6/25/2009, 6/25/2010 and 6/25/2011.
9. 25,000 shares vest immediately; 25,000 shares vest on each of 8/13/2009, 11/13/2009 and 2/13/2010.
10. Disposition represents shares forfeited to satisfy withholding tax obligations upon the vesting of a restricted stock grant.
11. 16,667 shares vest on each of 12/31/2010 and 12/31/2011 and 16,666 shares vest on 12/31/2012.

/s/ Richard E. Bagley

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.

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