

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* BENNETT C FRANK (Last) (First) (Middle) C/O ISIS PHARMACEUTICALS, INC. 1896 RUTHERFORD ROAD (Street) CARLSBAD CA 92008 (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol ISIS PHARMACEUTICALS INC [ISIS]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) Senior Vice President
	3. Date of Earliest Transaction (Month/Day/Year) 12/22/2010	
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	12/22/2010	12/22/2010	M ⁽¹⁾		6,200 ⁽¹⁾	A	\$9.625	6,761	D	
Common Stock	12/22/2010	12/22/2010	S ⁽²⁾		6,200 ⁽²⁾	D	\$10.52	561	D	
Common Stock	12/23/2010	12/23/2010	M ⁽¹⁾		1,500 ⁽¹⁾	A	\$9.625	2,061	D	
Common Stock	12/23/2010	12/23/2010	S ⁽²⁾		1,500 ⁽²⁾	D	\$10.525	561	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						Amount or Number of Shares
Employee Stock Option (right to buy)	\$9.625	12/22/2010	12/22/2010	M			6,200	01/02/2005	01/01/2011	Common Stock	6,200	\$0	13,800	D	
Employee Stock Option (right to buy)	\$9.625	12/23/2010	12/23/2010	M			1,500	01/02/2005	01/01/2011	Common Stock	1,500	\$0	12,300	D	

Explanation of Responses:

- Acquired as a result of exercising a stock option that was scheduled to expire on 1/1/11. The purchase reported on this Form 4 was effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on 4/16/10.
- The sale reported in this Form 4 was effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on 4/16/10.

By: /s/B. Lynne Parshall, 12/23/2010
Attorney-in-Fact

** 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.