FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

| l | OMB APPROVAL | | | | | | | | |
|---|--------------------------|-----------|--|--|--|--|--|--|--|
| | OMB Number: | 3235-0287 | | | | | | | |
| l | Estimated average burden | | | | | | | | |
| | hours per response: | 0.5 | | | | | | | |

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

| 1. Name and Address of Reporting Person* CROOKE STANLEY T | | | | | 2. Issuer Name and Ticker or Trading Symbol ISIS PHARMACEUTICALS INC [ISIS] | | | | | | (Che | eck all applic Directo | able) r | Person(s) to Iss | wner |
|---|--|---|---|------------------------------|---|--|-----------------|--|--------------------|---|--|--|---|---|---------------------------------------|
| (Last) (First) (Middle) C/O ISIS PHARMACEUTICALS, INC. 1896 RUTHERFORD ROAD | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 07/19/2010 | | | | | | 7 | X Officer (give title Other (specify below) Chairman, President, CEO | | | |
| (Street) CARLSBAD CA 92008 (City) (State) (Zip) | | | | _ 4. | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | Line | Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person 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. Transac Date (Month/Date) | | | | | Execution Date, | | Code (Instr. 5) | | | 5. Amour Securitie Beneficia Owned F Reported | s Folly (E | . Ownership orm: Direct D) or Indirect) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) | | |
| | | | | | | | Code V | Amount | (A) or (D) | Price | Transact (Instr. 3 a | | | | |
| | 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 | Exercise (Month/Day/Year) ice of rivative | te Execution Date, Tonth/Day/Year) if any C | 4. Transa Code (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 (Instr. 4) | Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | Beneficial Ownership (Instr. 4) |
| | | | | Code | v | (A) | (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares | | | | |
| Employee Stock Option (right to buy) | \$9.22 | 07/19/2010 | 07/19/2010 | A | | 18,750 | | 07/19/2011 ⁽¹⁾ | 07/18/2017 | Common Stock | 18,750 | \$0 | 18,750 | I | By wife |

Explanation of Responses:

1. Grant of 7-19-10 to reporting person's wife of stock options under the Isis Pharmaceuticals, Inc. 1989 Stock Option Plan in connection with her promotion. 25% of the shares subject to the option will vest and become exercisable on 7-19-11. Thereafter, the remaining shares subject to the option vest and become exercisable in 36 equal monthly installments, at the rate of 4,688 shares per year. The option is exercisable as to 0 shares on 7-19-10.

Remarks:

/s/B. Lynne Parshall, Attorneyin-Fact 07/21/2010

** 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.