FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

| OMB APPRO | OVAL |
|-------------------------|-----------|
| OMB Number: | 3235-0287 |
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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* BERTHELSEN SPENCER R | | | | | | 2. Issuer Name and Ticker or Trading Symbol ISIS PHARMACEUTICALS INC [ISIS] | | | | | | | 5. Relationship of Reporting Pers Check all applicable) X Director | | | ner | |
|--|--|--|---|-------------|---|---|-------------------|--|--------------------|---|--|---|--|--|--|--|--|
| (Last) (First) (Middle) C/O ISIS PHARMACEUTICALS, INC. | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 07/01/2011 | | | | | | | Officer below) | (give title | | Other (sp below) | ecify | |
| 1896 RUTHERFORD ROAD | | | | | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | 6. Individual or Joint/Group Filing (Check Applicable | | | | | |
| (Street) CARLSBAD CA 92008 | | | 92008 | | | | | | | | | X Form filed by One Reporting Person Form filed by More than One Reporting Person | | | | | |
| (City) | (S | tate) | (Zip) | | | | | | | | | | | | | | |
| | Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned | | | | | | | | | | | | | | | | |
| 1. Title of Security (Instr. 3) 2. Transac Date (Month/Da | | | | • | Execution Date, | | Code (Instr. 5) | | | 5. Amour Securitie Beneficia Owned F Reported | s ally ollowing | 6. Owner Form: D (D) or In (I) (Inst | Direct Ir ndirect B r. 4) O | 7. Nature of ndirect Beneficial Ownership (Instr. 4) | | | |
| | | | | | | | Code V | Amount | (A) or (D) | Price | Transact (Instr. 3 a | ion(s) | | | 11501. 4) | | |
| | 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) | Code (Instr | | | | 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 derivative Securities Beneficiall Owned Following Reported Transactio (Instr. 4) | i C F Iy C Q | 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 | | | | | | |
| Director Stock Option (right to buy) | \$9.3 | 07/01/2011 | 07/01/2011 | A | | 15,000 | | 07/01/2012 ⁽¹⁾ | 06/30/2021 | Common Stock | 15,000 | \$0 | 15,000 |) | D | | |

Explanation of Responses:

1. Grant of 7-1-11 to reporting person of stock options under the Isis Pharmaceuticals, Inc. 2002 Non-Employee Directors' Stock Option Plan. The option vests and becomes exercisable in four equal annual installments, with the first installment vesting on 7-1-12. The option shall be fully vested and exercisable on 7-1-15. The option is exercisable as to 0 shares on 7-1-11.

Remarks:

/s/B. Lynne Parshall, Attorneyin-Fact 07/01/2011

** 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.