FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

| OMB APPRO | VAL | | | | |
|------------------------|-----------|--|--|--|--|
| OMB Number: | 3235-0287 | | | | |
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| 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* REYNOLDS FRANCIS | | | | | | 2. Issuer Name and Ticker or Trading Symbol INVIVO THERAPEUTICS HOLDINGS CORP. [NVIV] | | | | | | | | | 5. Relationship of Reportin (Check all applicable) Director Officer (give title | | | | X 10% O | Owner | |
|--|--|--|---------------|--|-----------------------------|---|---|------------------|---|--------|--|-------|---------------|--------------|--|--|------------------------------|--|---------------------------------------|---|--|
| (Last) (First) (Middle) 81 LAKE SHORE RD. | | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 02/18/2014 | | | | | | | | | | belov | | | below) | specify | |
| (Street) SALEM (City) | NI (St | |)3079 Zip) | | 4. If | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | | 3. Indiv Line) X | • | | | | | |
| Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned | | | | | | | | | | | | | | | | | | | | | |
| Date | | | | | e | | 2A. Deemed Execution Date, if any (Month/Day/Year) | | 3. Transaction Code (Instr. 8) | | 4. Securities Acquired (A) Disposed Of (D) (Instr. 3, 4 5) | | | | 4 and Securi Benef Owner | | cially I Following | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | | 7. Nature of Indirect Beneficial Ownership | |
| | | | | | | | | | Code | v | Amount | | (A) or (D) | Pric | e | | ted action(s) 3 and 4) | | | (Instr. 4) | |
| Common Stock 02/18/ | | | | | | 2014 | | S ⁽¹⁾ | | 12,500 | 0 | D | \$2.26 | | 9,873,920 | | | D | | | |
| Common Stock 02/ | | | | | 9/2014 | /2014 | | | | | 12,500 | 0 | D | \$2 | .23 | 9,861,420 | | | D | | |
| Common Stock | | | | | | | | | | | | | | | 23,488 | | | I | 401K Plan | | |
| | 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) | e Conversion Date Execution Date, or Exercise (Month/Day/Year) if any | | | | Transaction Code (Instr. | | of | | xercis n Date ay/Ye | | Amount of Securities Underlying Derivative Security (Instr. and 4) | | ount | ıt | | 9. Number of derivative Securities Beneficially Owned Following Reported Transactions (Instr. 4) | | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | Beneficial Ownership (Instr. 4) | | |
| | | | | | Code | v | (A) | (D) | Date Exercisa | | Expiration Date | Title | of | nber ires | | | | | | | |

Explanation of Responses:

- 1. All sales between \$2.23 \$2.30.
- 2. All sales between \$2.20 \$2.24.

Remarks:

All Sold under 105B-1 Sales plan.

/s/ Francis Reynolds

02/19/2014

** 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.