FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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|                 | │ OMB APPROVAL |
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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* <u>Ulich Thomas R</u>                                  |  |            |                | <u> II</u>   | 2. Issuer Name <b>and</b> Ticker or Trading Symbol INVIVO THERAPEUTICS HOLDINGS CORP. [ NVIV ] |  |       |   |                    | (Che   | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable)  Director 10% Owner  Officer (give title Other (specify    |  |  |  |           |
|---|--|------------|----------------|--|--|--|-------|---|--------------------|--|--|--|--|--|-----------|
| (Last) (First) (Middle) C/O INVIVO THERAPEUTICS HOLDINGS CORP. ONE KENDALL SQUARE, SUITE B14402 |  |            |                |  | 3. Date of Earliest Transaction (Month/Day/Year) 01/18/2017                                    |  |       |   |                    |  | 2  | X Officer (give title Officer Scientific Officer                   |  |  |           |
| (Street) CAMBR (City)   |  |            | 02139<br>(Zip) | 4.   | 4. If Amendment, Date of Original Filed (Month/Day/Year)                                       |  |       |   |                    | 6. In Line   | ividual or Joint/Group Filing (Check Applicable  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   |            |                |  |  |  |       |   |                    |  |  |  |  |  |           |
| Date  |  |            |                | Transaction<br>te<br>onth/Day/   | Execution Date   |  | Date, | Code (Instr.  |                    |  | 5. Amoun<br>Securities<br>Beneficia<br>Owned Fo  | s Form<br>ally (D) or<br>following (I) (In                         | orm: Direct    <br> ) or Indirect    <br> (Instr. 4)   ( | 7. Nature of<br>ndirect<br>Beneficial<br>Ownership |           |
|   |  |            |                |  |  |  |       | Code V  | Amount             | (A) o<br>(D)   | r Price  | Transacti<br>(Instr. 3 a   | on(s)  |  | Instr. 4) |
|   | Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) |            |                |  |  |  |       |   |                    |  |  |  |  |  |           |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)   | erivative Conversion Date Execution Date, Trecurity or Exercise (Month/Day/Year) if any  |            | Code (         | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |  | Expiration Date of Securit (Month/Day/Year) Underlyin Derivative |       | 7. Title and Amount<br>of Securities<br>Underlying<br>Derivative Security<br>(Instr. 3 and 4) |                    | 9. Number of<br>derivative<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction(s) | Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4)  | 11. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |  |  |           |
|   |  |            |                | Code   | v  | (A)  | (D)   | Date<br>Exercisable   | Expiration<br>Date | Title  | Amount<br>or<br>Number<br>of Shares  |  | (Instr. 4)   | 5)   |           |
| Stock<br>Option<br>(Right to<br>Buy)  | \$4.35   | 01/18/2017 |                | A  |  | 150,000  |       | (1)   | 01/18/2027         | Common<br>Stock  | 150,000  | \$0  | 150,000  | D  |           |

## **Explanation of Responses:**

1. This option vests as to 25% of the shares on the first anniversary of the date of grant, and the remaining shares vest thereafter on a monthly basis in 36 equal monthly installments.

/s/ Tamara L. Joseph, as 01/20/2017 attorney-in-fact

\*\* Signature of Reporting Person

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.