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FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| Check this hav if no longer subject to |
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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). |

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| | JVAL |
|------------------------|-----------|
| OMB Number: | 3235-0287 |
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| hours per response: | 0.5 |

| 1. Name and Address of Reporting Person* LANGER ROBERT (Last) (First) (Middle) 98 MONTVALE ROAD | | | 2. Issuer Name and Ticker or Trading Symbol <u>INVIVO THERAPEUTICS HOLDINGS</u> <u>CORP.</u> [NVIV] 3. Date of Earliest Transaction (Month/Day/Year) 06/26/2012 | | ttionship of Reporting all applicable) Director Officer (give title below) | Perso X | n(s) to Issuer 10% Owner Other (specify below) |
|-------------------------------------------------------------------------------------------------|---------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------|------------|---------------------------------------------------------|
| (Street) NEWTON (City) | MA (State) | 02459 (Zip) | 4. If Amendment, Date of Original Filed (Month/Day/Year) | 6. Indiv Line) X | vidual or Joint/Group F Form filed by One I Form filed by More Person | Report | ing Person |

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | Execution Date, Transaction | | 4. Securities / Disposed Of (| | | 5. Amount of Securities Beneficially Owned Following Reported | 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 | Transaction(s) (Instr. 3 and 4) | | (11150.4) |
| COMMON STOCK, \$0.00001 PAR VALUE | 06/26/2012 | | S | | 126,550 | D | \$ 2.42 ⁽¹⁾ | 7,770,563 | D | |
| COMMON STOCK, \$0.00001 PAR VALUE | 06/27/2012 | | S | | 13,450 | D | \$2.4 | 7,757,113 | D | |
| COMMON STOCK, \$0.00001 PAR VALUE | 06/28/2012 | | s | | 15,000 | D | \$2.304 ⁽²⁾ | 7,742,113 | D | |

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

| (c.g., pr | | | | | uts, c | ans, | vvaiii | ants, | options, t | convertin | 10 300 | Junitesj | | | | |
|-----------|-----------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------------|------------------------------|------|--------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------|--------------------|--------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------|
| | 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. Transa Code (8) | | 5. Nu of Deriv Secu Acqu (A) or Dispo of (D) (Instr and 5 | ative rities ired osed | 6. Date Exerc Expiration Da (Month/Day/Y | ate | 7. Title Amour Securi Under Deriva Securi and 4) | nt of ties ying tive ty (Instr. 3 | 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 | Title | Amount or Number of Shares | | | | |

Explanation of Responses:

1. The price reported is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$2.40 to \$2.51, inclusive. The reporting person undertakes to provide InVivo Therapeutics Holdings Corp. ("InVivo"), any security holder of InVivo, or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the ranges set forth in footnote 1 and footnote 2.

2. The price reported is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$2.30 to \$2.31, inclusive.

/S/ ELIZABETH FRASER

06/28/2012

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.