

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF
SECURITIES

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

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|--|--|--|---|
| 1. Name and Address of Reporting Person* <u>MERRIFIELD C ANN</u> (Last) (First) (Middle) <u>C/O INVIVO THERAPEUTICS</u> <u>HOLDINGS CORP.</u> <u>ONE KENDALL SQUARE, SUITE B14402</u> (Street) <u>CAMBRIDGE MA</u> <u>02139</u> (City) (State) (Zip) | 2. Date of Event Requiring Statement (Month/Day/Year) <u>11/08/2014</u> | 3. Issuer Name and Ticker or Trading Symbol <u>INVIVO THERAPEUTICS HOLDINGS CORP. [NVIV]</u> | |
| | | 4. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below) | 5. If Amendment, Date of Original Filed (Month/Day/Year) |
| | | | 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person |

| Table I - Non-Derivative Securities Beneficially Owned | | | |
|--|--|---|--|
| 1. Title of Security (Instr. 4) | 2. Amount of Securities Beneficially Owned (Instr. 4) | 3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5) | 4. Nature of Indirect Beneficial Ownership (Instr. 5) |

| Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) | | | | | |
|---|--|--------------------|--|--|---|
| 1. Title of Derivative Security (Instr. 4) | 2. Date Exercisable and Expiration Date (Month/Day/Year) | | 3. Title and Amount of Securities Underlying Derivative Security (Instr. 4) | | 6. Nature of Indirect Beneficial Ownership (Instr. 5) |
| | Date Exercisable | Expiration Date | Title | Amount or Number of Shares | |

Explanation of Responses:

Remarks:

Exhibit 24 - Power of Attorney

No securities are beneficially owned.

/s/ Elizabeth W. Fraser,
Attorney-in-Fact
** Signature of Reporting Person 11/12/2014
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 5 (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.

Power of Attorney

I, C. Ann Merrifield, the undersigned, hereby constitute and appoint Steven McAllister, Mark D. Perrin, Bradley Jacobson and Elizabeth W. Fraser, and each of them individually, as my true and lawful attorney-in-fact to:

1. Complete and execute on my behalf, as a director of InVivo Therapeutics Holdings Corp., a Nevada corporation (the "Company"), Forms 3, 4, or 5 required to be filed by me under Section 16(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and the rules and regulations thereunder;

2. Do and perform any and all acts for and on my behalf which may be necessary or desirable to complete and execute any such Forms 3, 4 or 5 and timely file such forms with the U.S. Securities and Exchange Commission and any stock exchange or similar authority; and

3. Take any other action of any type whatsoever in connection with the foregoing, which in the opinion of such attorney-in-fact may be of benefit to, in the best interest of, or legally required of me, it being understood that the documents executed by such attorney-in-fact on my behalf pursuant to this Power of Attorney shall be in such form and shall contain such information as such attorney-in-fact may approve in such attorney-in-fact's discretion.

I hereby grant to each of such attorneys-in-fact full power and authority to do and perform all and every act which is necessary, proper or desirable to be done in the exercise of any of the rights, powers and authority granted in this Power of Attorney, with full power of substitution and revocation, and I ratify and confirm every act that such attorney-in-fact lawfully performs or causes to be done by virtue of this Power of Attorney and the powers and authority granted herein.

I acknowledge that the attorneys-in-fact appointed in this Power of Attorney, in serving in such capacity at my request, are not assuming, and the Company is not assuming, any of my responsibilities to comply with Section 16 of the Exchange Act or the rules or regulations thereunder.

This Power of Attorney shall remain in full force and effect until I am no longer required to file Forms 3, 4 or 5 with respect to my holdings or transactions in securities issued by the Company, unless I earlier revoke this Power of Attorney in a signed writing delivered to the foregoing attorneys-in-fact.

IN WITNESS WHEREOF, the undersigned has executed this Power of Attorney as of November 7, 2014.

/s/ C. Ann Merrifield

Print Name: C. Ann Merrifield