

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

**SCHEDULE TO
(Rule 14d-100)**

**TENDER OFFER STATEMENT UNDER SECTION 14(d)(1) OR 13(e)(1)
OF THE SECURITIES EXCHANGE ACT OF 1934
(Amendment No. 3)**

INVIVO THERAPEUTICS HOLDINGS CORP.

(Name of Subject Company (Issuer))

INVIVO THERAPEUTICS HOLDINGS CORP. (Issuer)

(Name of Filing Persons (Identifying status as offeror, issuer or other person))

Warrants to Purchase Common Stock dated October 26, 2010

Investor Warrants to Purchase Common Stock

Placement Agent Warrants to Purchase Common Stock

(Title of Class of Securities)

N/A

(CUSIP Number of Class of Securities)

Frank Reynolds

Chief Executive Officer

InVivo Therapeutics Holdings Corp.

One Kendall Square, Suite B14402

Cambridge, Massachusetts 02139

Phone: (617) 863-5500

(Name, address, and telephone numbers of person authorized to receive notices and communications on behalf of filing persons)

With copies to:

Bradley Jacobson, Esq.

Greenberg Traurig, LLP

One International Place

Boston, Massachusetts 02110

Phone: (617) 310-6205

Facsimile: (617)) 279-8402

CALCULATION OF FILING FEE

Transaction Valuation*	Amount of Filing Fee
\$14,284,044	\$1,948.35

* The transaction value is estimated solely for purposes of calculating the amount of the filing fee. The calculation assumes that all eligible warrants to purchase 15,009,608 shares of the Issuer's common stock subject to the offer will be exchanged for new warrants pursuant to the terms of the offer. The aggregate value of such warrants was calculated based on the Black-Scholes pricing model.

- ☒ Check the box if any part of the fee is offset as provided by Rule 0-11(a)(2) and identify the filing with which the offsetting fee was previously paid. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

Amount Previously Paid: \$1,948.35

Form or Registration No.: 005-85686

Filing Party: InVivo Therapeutics Holdings Corp.

Date Filed: April 8, 2013

- ☐ Check the box if the filing relates solely to preliminary communications made before the commencement of a tender offer.

Check the appropriate boxes below to designate any transactions to which the statement relates:

- ☐ third-party tender offer subject to Rule 14d-1.
☒ issuer tender offer subject to Rule 13e-4.
☐ going-private transaction subject to Rule 13e-3.
☐ amendment to Schedule 13D under Rule 13d-2.

Check the following box if the filing is a final amendment reporting the results of the tender offer: ☐

This Amendment No. 3 (this “Amendment”) amends and supplements the Tender Offer Statement on Schedule TO originally filed with the U.S. Securities and Exchange Commission (the “SEC”) by InVivo Therapeutics Holdings Corp., a Nevada corporation (the “Company” or “InVivo”), on April 8, 2013, as amended by Amendment No. 1 to Schedule TO filed with the SEC on April 26, 2013 and Amendment No. 2 to Schedule TO filed with the SEC on May 3, 2013 (as amended, the “Schedule TO”), in connection with the offer by the Company to exchange certain of its outstanding warrants to purchase common stock (the “Original Warrants”) for new warrants (the “New Warrants”) with the same terms except (i) the expiration date of the New Warrants will be extended two years and (ii) weighted average anti-dilution provisions will be removed from the New Warrants. The offer is subject to the terms and conditions set forth in the Offer to Exchange, dated April 8, 2013, a copy of which was filed with the Schedule TO as Exhibit (a)(1)(A) (the “Offer to Exchange”), and in the Election to Participate, a copy of which was filed with the Schedule TO as Exhibit (a)(1)(B) (the “Election to Participate”), which together with the Offer to Exchange, as each may be amended and supplemented from time to time, constitute the Offer (the “Offer”).

On May 3, 2013, the Offer was terminated solely with respect to the Investor Warrants (as defined in the Offer to Exchange) and was extended with respect to the remaining eligible warrants until 11:59 p.m. (Eastern Time) on May 17, 2013. This Amendment No. 3 is being filed to provide information regarding the number of Merger Warrants and Placement Agent Warrants (each as defined in the Offer to Exchange), which are the only warrants still eligible to participate in the Offer, tendered as of May 3, 2013.

The information contained in the Offer to Exchange and the Election to Participate is incorporated herein by reference, except that such information is hereby amended and supplemented to the extent specifically provided herein.

Items 1 through 11

The information set forth in the Offer to Exchange is hereby amended and supplemented as follows:

On May 3, 2013, the Company extended the Offer period with respect to the Merger Warrants and Placement Agent Warrants, the remaining eligible warrants, until 11:59 p.m. (Eastern Time) on May 17, 2013. As of May 3, 2013, (i) holders of Merger Warrants exercisable to purchase approximately 175,000 shares of the Company’s common stock had tendered such warrants for exchange and (ii) holders of Placement Agent Warrants exercisable to purchase approximately 1,434,894 shares of the Company’s common stock had tendered such warrants for exchange. As of May 9, 2013, (i) holders of Merger Warrants exercisable to purchase approximately 215,000 shares of the Company’s common stock had tendered such warrants for exchange and (ii) holders of Placement Agent Warrants exercisable to purchase approximately 1,808,524 shares of the Company’s common stock had tendered such warrants for exchange.

Item 12. Exhibits.

- (a)(1)(A) * Offer to Exchange, dated April 8, 2013, as amended on April 26, 2013 as reflected in Amendment No. 1 filed with the SEC on April 26, 2013 and on May 3, 2013 as reflected in Amendment No. 1 filed with the SEC on May 3, 2013
- (a)(1)(B) * Election to Participate, as amended on April 26, 2013 as reflected in Amendment No. 1 filed with the SEC on April 26, 2013
- (a)(1)(C) * Notice of Withdrawal
- (a)(1)(D) * Form of New Warrants to be Exchanged for Eligible Warrants
- (a)(1)(E) * Letter from Frank Reynolds, Chairman, Chief Executive Officer and Chief Financial Officer of the Company, to Holders of Eligible Warrants dated April 8, 2013
- (a)(1)(F) * Press release dated April 8, 2013
- (a)(1)(G) * Transcript of Company Webcast dated April 8, 2013
- (a)(1)(H) * Press release dated May 3, 2013 announcing termination of Offer with respect to Investor Warrants
- (d)(1)(A) Form of Investor Warrant of InVivo Therapeutics Holdings Corp. (incorporated by reference from Exhibit 4.3 to the Company's Current Report on Form 8-K, as filed with the SEC on November 1, 2010)
- (d)(1)(B) Form of Warrant of InVivo Therapeutics Holdings Corp. issued to Bridge Lenders (incorporated by reference from Exhibit 4.5 to the Company's Current Report on Form 8-K, as filed with the SEC on November 1, 2010)
- (d)(1)(C) Form of Warrant of InVivo Therapeutics Holdings Corp. (\$1.00 exercise price) issued to Placement Agent (incorporated by reference from Exhibit 4.2 to the Company's Current Report on Form 8-K, as filed with the SEC on December 9, 2010)
- (d)(1)(D) Form of Warrant of InVivo Therapeutics Holdings Corp. (\$1.40 exercise price) issued to Placement Agent (incorporated by reference from Exhibit 4.3 to the Company's Current Report on Form 8-K, as filed with the SEC on December 9, 2010)
- (d)(1)(E) Form of Registration Rights Agreement, by and between InVivo Therapeutics Holdings Corp. and the investors in the offering (incorporated by reference from Exhibit 10.4 to the Company's Current Report on Form 8-K, as filed with the SEC on November 1, 2010)
- (d)(1)(F) Placement Agent Agreement dated October 4, 2010, between InVivo Therapeutics Corp. and Placement Agent (incorporated by reference from Exhibit 10.4 to the Company's Current Report on Form 8-K, as filed with the SEC on December 9, 2010)

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| (d)(1)(E) | Form of Registration Rights Agreement, by and between InVivo Therapeutics Holdings Corp. and the investors in the offering (incorporated by reference from Exhibit 10.4 to the Company's Current Report on Form 8-K, as filed with the SEC on November 1, 2010) |
| (d)(1)(G) | Placement Agent Agreement dated October 4, 2010, between InVivo Therapeutics Corp. and Placement Agent (incorporated by reference from Exhibit 10.4 to the Company's Current Report on Form 8-K, as filed with the SEC on December 9, 2010) |

* Previously filed.

SIGNATURE

After due inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

INVIVO THERAPEUTICS HOLDINGS CORP.

By: /s/ Frank M. Reynolds

Name: Frank M. Reynolds

Title: Chief Executive Officer

Date: May 10, 2013