

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

**POST-EFFECTIVE AMENDMENT NO. 1
TO**

FORM S-8

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

INVIVO THERAPEUTICS HOLDINGS CORP.

(Exact name of registrant as specified in its charter)

Nevada
(State or other jurisdiction of
incorporation or organization)

36-4528166
(I.R.S. Employer Identification No.)

**One Kendall Square, Suite B14402
Cambridge, Massachusetts 02139**
(Address of Principal Executive Offices)(Zip Code)

InVivo Therapeutics Holdings Corp. 2010 Equity Incentive Plan
(Full title of the plan)

**Steven McAllister
Chief Financial Officer
InVivo Therapeutics Holdings Corp.
One Kendall Square, Suite B14402
Cambridge, Massachusetts 02139**
(Name and address of agent for service)

(617) 863-5500
(Telephone number, including area code, of agent for service)

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	<input type="radio"/>	Accelerated filer	<input checked="" type="radio"/>
Non-accelerated filer	<input type="radio"/> (Do not check if a smaller reporting company)	Smaller Reporting Company	<input type="radio"/>

EXPLANATORY NOTE

On May 31, 2013, the Registrant filed Registration Statement on Form S-8 (File No.: 333-189002) (the "Form S-8") registering 1,125,000 shares (on a post-split basis) of the Registrant's common stock, \$0.00001 par value per share (the "Shares"), to be issued to participants under the Registrant's 2010 Equity Incentive Plan (the "2010 Plan").

On June 16, 2015, the Registrant's stockholders approved the InVivo Therapeutics Holdings Corp. 2015 Equity Incentive Plan (the "2015 Plan"). Pursuant to the 2015 Plan, any shares of Common Stock that remain available for issuance under the 2010 Plan as of June 16, 2015 are to be included in the number of shares of Common Stock available for issuance under the 2015 Plan. No future grants will be made under the 2010 Plan.

This Post-Effective Amendment No. 1 to the Registration Statements on Form S-8 is being filed in order to deregister all Shares that were registered under the Form S-8 and remain unissued under the Plan.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Post-Effective Amendment No. 1 to be signed on its behalf by the undersigned, thereunto duly

authorized, in the city of Cambridge, Commonwealth of Massachusetts, on July 2, 2015.

INVIVO THERAPEUTICS HOLDINGS CORP.

By: /s/ Steven F. McAllister
Steven F. McAllister
Chief Financial Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the date indicated:

Signature	Title	Date
<u>/s/ Mark D. Perrin</u> Mark D. Perrin	Chief Executive Officer and Chairman of the Board (Principal Executive Officer)	July 2, 2015
<u>/s/ Steven F. McAllister</u> Steven F. McAllister	Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)	July 2, 2015
<u>/s/ Kenneth DiPietro</u> Kenneth DiPietro	Director	July 2, 2015
<u>/s/ Daniel R. Marshak</u> Daniel R. Marshak	Director	July 2, 2015
<u>/s/ John A. McCarthy, Jr.</u> John A. McCarthy, Jr.	Director	July 2, 2015
<u>s/ C. Ann Merrifield</u> C. Ann Merrifield	Director	July 2, 2015
<u>/s/ Richard J. Roberts</u> Richard J. Roberts	Director	July 2, 2015