

PROSPECTUS SUPPLEMENT NO. 1 DATED AUGUST 5, 2011
TO PROSPECTUS DATED JULY 29, 2011

INVIVO THERAPEUTICS HOLDINGS CORP.

26,047,200 Shares of Common Stock

This Prospectus Supplement No. 1 supplements and amends the prospectus dated July 29, 2011 filed pursuant to Rule 424(b)(3), which we refer to as the Prospectus. This prospectus supplement relates to the offer and sale of up to 26,047,200 shares of our common stock by certain selling securityholders.

On August 4, 2011, we filed with the Securities and Exchange Commission a Current Report on Form 8-K. A copy of such Current Report on Form 8-K is attached to and constitutes an integral part of this Prospectus Supplement No. 1.

This Prospectus Supplement No. 1 should be read in conjunction with the Prospectus, which is to be delivered with this Prospectus Supplement No. 1. This Prospectus Supplement No. 1 is qualified by reference to the Prospectus except to the extent that the information in this Prospectus Supplement No. 1 supersedes the information contained in the Prospectus.

In reviewing the Prospectus and this Prospectus Supplement No. 1, you should carefully consider the risks under “Risk Factors” beginning on page 6 of the Prospectus.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THE PROSPECTUS OR THIS PROSPECTUS SUPPLEMENT NO. 1. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this Prospectus Supplement No. 1 is August 5, 2011.

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

**Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): August 3, 2011

INVIVO THERAPEUTICS HOLDINGS CORP.

(Exact name of registrant as specified in its charter)

Nevada
(State or other jurisdiction
of incorporation)

000-52089
(Commission
File No.)

36-4528166
(IRS Employer
Identification No.)

**One Broadway, 14th Floor
Cambridge, Massachusetts**
(Address of principal executive offices)

02142
(Zip Code)

(617) 475-1520
(Registrant's telephone number, including area code)

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

(e) On August 3, 2011, at the Annual Meeting of Shareholders of InVivo Therapeutics Holdings Corp. (the “Company”), the Company’s shareholders adopted the Company’s 2010 Equity Incentive Plan and Amendment No. 1 to the 2010 Equity Incentive Plan (collectively, the “2010 Plan”). The 2010 Plan, which is administered by the Governance, Nominating and Compensation Committee of the Board of Directors, allows the Company to make grants of incentive stock options, non-statutory stock options, restricted stock, restricted stock units, stock appreciation rights, performance units, performance shares and other stock or cash awards to the Company’s employees, directors and consultants.

The 2010 Plan allows for the issuance of up to 3,500,000 shares of common stock, par value \$0.00001 per share (the “Common Stock”), of the Company. Under the 2010 Plan, no more than 2,000,000 shares may be granted as awards to any one individual during any calendar year. As of August 3, 2011, there were options to purchase an aggregate of 910,000 shares of Common Stock outstanding under the 2010 Plan and 2,590,000 shares available for future grants under the 2010 Plan.

A more complete description of the terms of the 2010 Plan can be found in “Proposal No. 4 – Approval of Our 2010 Equity Incentive Plan” (pages 9 through 14) in the Company’s definitive proxy statement on Schedule 14A filed with the Securities and Exchange Commission on July 19, 2011. The foregoing descriptions are qualified in their entirety by reference to the 2010 Plan filed as an exhibit hereto, which exhibit is incorporated herein by reference.

Item 5.07 Submission of Matters to a Vote of Security Holders.

As stated above in Item 5.02, the 2011 Annual Meeting of Shareholders of the Company (the “Meeting”) was held on August 3, 2011. At the Meeting, the shareholders took the following actions: (i) approved an amendment of the Company’s Articles of Incorporation to provide for a classified Board of Directors; (ii) approved an amendment of the Company’s Articles of Incorporation to increase the number of authorized shares of Common Stock from 100,000,000 to 200,000,000; (iii) elected each of Christi M. Pedra and Richard J. Roberts to serve as a Class I director until the 2012 Annual Meeting of Shareholders; (iv) elected each of George Nolen and Adam K. Stern to serve as a Class II director until the 2013 Annual Meeting of Shareholders; (v) elected Frank M. Reynolds to serve as a Class III director until the 2014 Annual Meeting of Shareholders; (vi) adopted the Company’s 2010 Equity Incentive Plan, as amended; and (vii) ratified the appointment of Wolf & Company, P.C. as the Company’s independent registered public accounting firm for the current fiscal year.

The Company’s independent inspector of election certified the following vote tabulations:

1. Amendment of Articles of Incorporation to provide for a classified Board of Directors:

<u>For</u>	<u>Against</u>	<u>Abstained</u>
33,577,173	507	139,466

2. Amendment of Articles of Incorporation to increase the number of authorized shares of Common Stock to 200,000,000:

<u>For</u>	<u>Against</u>	<u>Abstained</u>
33,500,699	216,090	357

3. Election of Class I directors, whose terms expire at the 2012 Annual Meeting of Shareholders:

<u>Nominee</u>	<u>For</u>	<u>Withheld</u>
Christi M. Pedra	33,667,146	50,000
Richard J. Roberts	33,667,146	50,000

4. Election of Class II directors, whose terms expire at the 2013 Annual Meeting of Shareholders:

<u>Nominee</u>	<u>For</u>	<u>Withheld</u>
George Nolen	33,667,146	50,000
Adam K. Stern	33,667,146	50,000

5. Election of Class III director, whose term expires at the 2014 Annual Meeting of Shareholders:

<u>Nominee</u>	<u>For</u>	<u>Withheld</u>
Frank M. Reynolds	33,667,146	50,000

6. Adoption of 2010 Equity Incentive Plan:

<u>For</u>	<u>Against</u>	<u>Abstained</u>
32,997,399	176,424	543,323

7. Ratification of appointment of Wolf & Company, P.C.:

<u>For</u>	<u>Against</u>	<u>Abstained</u>
33,577,323	0	139,823

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The exhibits listed in the Exhibit Index below are filed with this report.

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

InVivo Therapeutics Holdings Corp.

Date: August 4, 2011

By: /s/ Frank M. Reynolds

Frank M. Reynolds
Chief Executive Officer

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
10.1	InVivo Therapeutics Holdings Corp. 2010 Equity Incentive Plan (incorporated by reference to Appendix III to the Company's Definitive Schedule 14A filed July 19, 2011).
10.2	Amendment No. 1 to the InVivo Therapeutics Holdings Corp. 2010 Equity Incentive Plan (incorporated by reference to Appendix IV to the Company's Definitive Schedule 14A filed July 19, 2011).
10.3	Form of Incentive Stock Option Agreement by and between InVivo Therapeutics Holdings Corp. and participants under the 2010 Equity Incentive Plan (incorporated by reference from Exhibit 10.12(i) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010).
10.4	Form of Non-Qualified Stock Option Agreement by and between InVivo Therapeutics Holdings Corp. and participants under the 2010 Equity Incentive Plan (incorporated by reference from Exhibit 10.12(ii) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010).