



DIVISION OF
CORPORATION FINANCE

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

August 19, 2013

Via E-mail

Frank M. Reynolds
Chief Executive Officer
Invivo Therapeutics Holdings Corp.
One Kendall Square
Suite B14402
Cambridge, MA 02139

**Re: Invivo Therapeutics Holdings Corp.
Form 10-K for the Fiscal Year Ended December 31, 2012
Filed March 12, 2013
File No. 000-52089**

Dear Mr. Reynolds:

We have reviewed your filings and have the following comment. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filings, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filings and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2012

Item 8. Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm, page 38

1. We note that Wolf & Company, P.C. did not opine on the company's financial statements for the period from November 28, 2005 (inception) to December 31, 2012, even though the firm indicated that it had audited the periods in the first paragraph. Please amend your Form 10-K to include an audit report that opines on all of the periods presented in your filing, consistent with Rule 2-02 of Regulation S-X. This comment also relates to your Form 10-K for the year ended December 31, 2011.

Frank M. Reynolds
Invivo Therapeutics Holdings Corp.
August 19, 2013
Page 2

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Kevin Kuhar, Accountant, at (202) 551-3662 or Kate Tillan, Assistant Chief Accountant, at (202) 551-3604 if you have questions regarding comments on the financial statements and related matters. In this regard, do not hesitate to contact me at (202) 551-3671 with any other questions.

Sincerely,

/s/ Kate Tillan for

Martin James
Senior Assistant Chief Accountant