



DIVISION OF
CORPORATION FINANCE

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

July 15, 2011

Via E-mail

Frank M. Reynolds
Chief Executive Officer
Invivo Therapeutics Holdings Corp.
One Broadway, 14th Floor
Cambridge, MA 02142

**Re: Invivo Therapeutics Holdings Corp
Amended Registration Statement on Form S-1
Filed June 30, 2011
File No. 333-171998
Amended Annual Report on Form 10-K
File June 30, 2011
File No. 000-52089**

Dear Mr. Reynolds:

We have reviewed your amended filings and have the following comments. 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 by amending your filings and providing the requested information. 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.

Audited Financial Statements, page F-1

Note 18. Restatement, page F-23

1. We see your disclosure in the last sentence on page F-23 indicating that while you believe your original accounting complied with GAAP, after discussions with the SEC staff you concluded that your allocation method was not consistent with current practice. On the call with the company on June 23, 2011, we also questioned whether the allocation method you previously applied was consistent with the allocation concepts provided in GAAP as demonstrated in the guidance provided in several areas of GAAP which have consistently restricted the amounts allocated to the amount of proceeds. To avoid providing investors with incomplete and confusing information, please revise this note in this filing, and any further amendments to your Form 10-K, to also disclose that

information. Otherwise, revise the note to simply describe the accounting you previously applied and the new accounting you adopted to comply with GAAP.

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 Act of 1933 and the Securities Exchange Act 1934 and all applicable Securities Act and 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

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You may contact Kevin Kuhar, Staff Accountant, at (202) 551-3662 or Jeffery Jaramillo, Accounting Branch Chief, at (202) 551-3212 if you have questions regarding comments on the financial statements and related matters. Please contact Ruairi Regan, Staff Attorney, at (202) 551-3269 or me at (202) 551-3528 with any other questions.

Sincerely,

/s/ Amanda Ravitz

Amanda Ravitz
Assistant Director

cc (via E-mail): Thomas B. Rosedale, Esq.