



DIVISION OF
CORPORATION FINANCE

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

April 22, 2011

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

**Re: Invivo Therapeutics Holdings Corp.
Proxy Statement on Schedule 14A
Filed April 14, 2011
File No. 000-52089**

Dear Mr. Reynolds:

We have limited our review of your filing to those issues we have addressed in our 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 within ten business days by amending your filing, 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 filing and the information you provide in response to these comments, we may have additional comments.

1. You appear to disclose different voting standards for approval of proposals 1 and 2, regarding the amendments to your articles of incorporation, in the second and third paragraphs on page 2. Please reconcile.
2. Please tell us how and where you have addressed each of the outstanding comments in our letter to you dated February 28, 2011 that are applicable to your reports filed under the Securities Exchange Act 1934.

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.

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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 Ruairi Regan at (202) 551-3269 or me at (202) 551-3528 if you have any questions.

Sincerely,

Amanda Ravitz
Assistant Director

cc (by facsimile): Thomas B. Rosedale, Esq. (617) 399-6930