



DIVISION OF
CORPORATION FINANCE

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

August 30, 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.
Form 10-K for the Fiscal Year Ended December 31, 2010
Filed March 24, 2011
File No. 000-52089**

Dear Mr. Reynolds:

We completed our review of your filing on July 29, 2011. We remind you that our comments or changes to disclosure in response to our comments do not foreclose the Commission from taking any action with respect to the company or 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. 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 rules require.

Sincerely,

/s/ Amanda Ravitz

Amanda Ravitz
Assistant Director

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