Via Facsimile and U.S. Mail Mail Stop 4720

March 16, 2010

Mr. Thomas R. Staab, II Treasurer & Chief Financial Officer Inspire Pharmaceuticals, Inc. 4222 Emperor Boulevard, Suite 200 Durham, NC 27703-8466

Re: Inspire Pharmaceuticals, Inc.

Form 10-K for the Fiscal Year Ended December 31, 2008

**DEF 14A filed March 26, 2009** 

File No. 1-31577

Dear Mr. Staab:

We have completed our review of your Form 10-K and related filings and have no further comments at this time.

Sincerely,

Gus Rodriguez Accounting Branch Chief