



DIVISION OF
CORPORATION FINANCE

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

October 1, 2012

Via E-mail

Mr. Scott A. Holmes
Chief Accounting Officer, Vice President and Controller
AMAG Pharmaceuticals, Inc.
100 Hayden Avenue
Lexington, MA 02421

Re: AMAG Pharmaceuticals, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2011
Filed March 8, 2012
File No. 001-10865

Dear Mr. Holmes:

We have completed our review of your filing. 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/ Gus Rodriguez

Gus Rodriguez
Accounting Branch Chief