



DIVISION OF
CORPORATION FINANCE

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

August 10, 2010

Dr. Brian J.G. Pereira, M.D.
President and Chief Executive Officer
AMAG Pharmaceuticals, Inc.
100 Hayden Avenue
Lexington, MA 02421

**Re: AMAG Pharmaceuticals, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2009
Filed February 26, 2010
Schedule 14A
Filed April 19, 2010
File No. 001-10865**

Dear Dr. Pereira:

We have reviewed your filing 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 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.

Form 10-K for the Fiscal Year Ended 12/31/2009

Item 1. Business

Raw Materials, page 10

1. We note your disclosure on page 10 that “[c]ertain raw materials used in Feraheme are procured from a single source without a qualified alternative supplier.” We also note that on page 29, your risk factor indicates that any difficulty in obtaining raw materials for ferumoxytol would have a “material adverse impact” on the company’s ability to generate additional revenues and achieve profitability. We note that in correspondence to the Staff dated July 9, 2008, you indicated that you were not materially dependent upon this sole supplier because, among other things, your requirements for the raw material were limited prior to Feraheme’s commercial launch, and you believed that you will have

Dr. Brian J.G. Pereira, MD
AMAG Pharmaceuticals, Inc.
August 10, 2010
Page 2

multiple alternatives for the manufacture of such ferumoxytol raw material as necessary, post-launch. Given that you have launched Feraheme and have not identified an alternative supplier for the single source, it appears you are materially dependent on the provider of these raw materials. Please identify the sole source provider, describe the material terms of related agreements, if any, and file such agreement as an exhibit to your Form 10-K.

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.

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 Rose Zukin at (202) 551-3239 or me at (202) 551-3715 if you have questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director