



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

DIVISION OF  
CORPORATION FINANCE

August 26, 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 completed our review of your filings and do not have any further comments at this time.

Sincerely,

Jeffrey P. Riedler  
Assistant Director