

Mail Stop 6010

April 28, 2009

Mr. Vikas Sinha  
Senior Vice President and Chief Financial Officer  
Alexion Pharmaceuticals, Inc.  
352 Knotter Drive  
Cheshire, Connecticut 06410

**Re: Alexion Pharmaceuticals, Inc.**  
**Form 10-K for the Year Ended December 31, 2007**  
**Filed February 29, 2008**  
**Form DEF 14A**  
**Filed April 4, 2008**  
**File No. 000-27756**

Dear Mr. Sinha:

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

Sincerely,

Jeffrey P. Riedler  
Assistant Director