

Via Facsimile and U.S. Mail  
Mail Stop 6010

February 25, 2008

Arthur T. Sands, M.D., Ph.D.  
President and Chief Executive Officer  
Lexicon Pharmaceuticals, Inc.  
8800 Technology Forest Place  
The Woodlands, TX 77381

**Re: Lexicon Pharmaceuticals, Inc.  
Form 10-K for the Fiscal Year Ended December 31, 2006  
File No. 0-30111**

Dear Dr. Sands:

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

Sincerely,

Carlton E. Tartar  
Branch Chief