

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