

Via Facsimile and U.S. Mail
Mail Stop 4720

March 11, 2010

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

**Re: Lexicon Pharmaceuticals, Inc.
Form 10-K for the Year Ended December 31, 2008
Filed March 6, 2009
File No. 000-30111
DEF14A
Filed March 13, 2009
File No. 000-30111**

Dear Dr. Sands:

We have completed our review of your filings and have no further comments at this time.

Sincerely,

Jeffrey P. Riedler
Assistant Director