Filed pursuant to Rule 433 Registration No.: 333-161696 October 8, 2009

Lexicon Pharmaceuticals, Inc. \$50,000,000 33,333,333 Shares of Common Stock

Issuer:	Lexicon Pharmaceuticals, Inc.
Symbol:	LXRX
Size:	\$50,000,000.00
Total Shares Offered:	33,333,333 Shares of Common Stock
Greenshoe Offered by Issuer:	2,984,111 Shares of Common Stock
Price to Public:	\$1.50 per share
Trade Date:	October 8, 2009
Closing Date:	October 14, 2009

528872104

CUSIP No:

Underwriters:

Invus, L.P., the largest shareholder of Lexicon Pharmaceuticals, Inc., has agreed to purchase 13,439,257 of the 33,333,333 shares of Common Stock offered directly from Lexicon Pharmaceuticals, Inc. at the per share price to the public set forth above.

Morgan Stanley & Co. Incorporated

Thomas Weisel Partners LLC

The issuer has filed a registration statement (including a prospectus) with the SEC for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement and other documents the issuer has filed with the SEC for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC Web site at www.sec.gov. Alternatively, the issuer, any underwriter or any dealer participating in the offering will arrange to send you the prospectus if you request it by calling toll-free 1-(866) 718-1649, or by emailing prospectus@morganstanley.com.