

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC. 20549

SCHEDULE 14A
(Rule 14A-101)

INFORMATION REQUIRED IN PROXY STATEMENT
SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to Rule 14a-11(c) or Rule 14a-12
- Confidential, for Use of the Commission Only
(as permitted by Rule 14a-6(e)(2))

LEXICON PHARMACEUTICALS, INC.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if Other Than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

- (1) Title of each class of securities to which transaction applies: N/A
- (2) Aggregate number of securities to which transaction applies: N/A
- (3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined): N/A
- (4) Proposed maximum aggregate value of transaction: N/A
- (5) Total fee paid: \$0

Fee paid previously with preliminary materials: N/A

Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

- (1) Amount Previously Paid:
- (2) Form, Schedule or Registration Statement No.:
- (3) Filing Party:
- (4) Date Filed
-

LEXICON PHARMACEUTICALS, INC.

****IMPORTANT NOTICE****

Regarding the Availability of Proxy Materials

You are receiving this communication because you hold shares in the above company, and the materials you should review before you cast your vote are now available.

This communication presents only an overview of the more complete proxy materials that are available to you on the Internet. We encourage you to access and review all of the important information contained in the proxy materials before voting.

LEXICON PHARMACEUTICALS, INC.
8800 TECHNOLOGY FOREST PLACE
THE WOODLANDS, TX 77381-4287

Shareholder Meeting to be held on 04/23/09

Proxy Materials Available

- * Notice and Proxy Statement
- * Annual Report

PROXY MATERIALS - VIEW OR RECEIVE

You can choose to view the materials online or receive a paper or e-mail copy. There is **NO** charge for requesting a copy. Requests, instructions and other inquiries will **NOT** be forwarded to your investment advisor.

To facilitate timely delivery please make the request as instructed below on or before **04/09/09**.

HOW TO VIEW MATERIALS VIA THE INTERNET

Have the 12 Digit Control Number available and visit:
www.proxyvote.com

HOW TO REQUEST A COPY OF MATERIALS

- 1) BY INTERNET – www.proxyvote.com
- 2) BY TELEPHONE – 1-800-579-1639
- 3) BY E-MAIL* – sendmaterial@proxyvote.com

*If requesting materials by e-mail, please send a blank e-mail with the 12 Digit Control Number (located on the following page) in the subject line.

See the Reverse Side for Meeting Information and Instructions on How to Vote

MEETING INFORMATION

Meeting Type: Annual
Meeting Date: 04/23/09
Meeting Time: 1:30 PM CDT
For holders as of: 02/23/09

MEETING LOCATION:

THE MARRIOTT WOODLANDS WATERWAY &
CONVENTION CENTER
1601 LAKE ROBBINS DRIVE
THE WOODLANDS, TX 77381



HOW TO VOTE

Vote In Person

Many stockholder meetings have attendance requirements including, but not limited to, the possession of an attendance ticket issued by the entity holding the meeting. Please check the meeting materials for any special requirements for meeting attendance. At the Meeting you will need to request a ballot to vote these shares.

Vote By Internet



To vote *now* by Internet, go to WWW.PROXYVOTE.COM. Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your notice in hand when you access the web site and follow the instructions.

Voting items

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" ITEMS 1, 2, 3 and 4.

1. ELECTION OF CLASS III DIRECTORS

Nominees:

- 01) Arthur T. Sands, M.D., Ph.D.
- 02) Philippe J. Amouyal
- 03) Frank P. Palantoni

- 2. Approval of the Company's Equity Incentive Plan, amending and restating the Company's existing 2000 Equity Incentive Plan
- 3. Approval of the Company's Non-Employee Directors' Stock Option Plan, amending and restating the Company's existing 2000 Non-Employee Directors' Stock Option Plan
- 4. Ratification and approval of the appointment of Ernst & Young LLP as the Company's independent auditors for the fiscal year ending December 31, 2009.
- 5. In their discretion, upon such other matters that may properly come before the meeting or any adjournment of adjournments thereof.

