FORM 4

## **UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

| STATEMENT | OF CHANGES   | IN BENEFICIAL   | OWNERSHIP    |
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**OMB APPROVAL** OMB Number: Estimated average burden hours per response: 0.5

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| 1. Name and Address of Reporting Person*  BARKER SAM L   |   |            |   | LE                                      | 2. Issuer Name and Ticker or Trading Symbol LEXICON PHARMACEUTICALS, INC./DE [ LXRX ] |  |        |   |                     |                              |   |  |                                   | k all applic<br>Directo  | 10% Owner  |                    | ner       |   |  |
|--|---|------------|---|---|---|--|--------|---|---------------------|------------------------------|---|--|-----------------------------------|--|--|--------------------|-----------|---|--|
| (Last) (First) (Middle)<br>8800 TECHNOLOGY FOREST PLACE  |   |            | 3. Date of Earliest Transaction (Month/Day/Year) 04/29/2011 |   |   |  |        |   |                     |                              |   |  | below)                            | (give title  |  | Other (s<br>below) | респу     |   |  |
| (Street) THE WOODL   | ANDS T  | x          | 77381   |   | 4. If <i>i</i>  | 4. If Amendment, Date of Original Filed (Month/Day/Year)       |        |   |                     |                              |   |  | 6. Indi<br>Line)<br>X             | Form fi  | al or Joint/Group Filing (Check Applicable form filed by One Reporting Person form filed by More than One Reporting Person |                    |           |   |  |
| (City)   | (S  | tate)      | (Zip)   |   |   |  |        |   |                     |                              |   |  |                                   |  |  |                    |           |   |  |
| Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned   |   |            |   |   |   |  |        |   |                     |                              |   |  |                                   |  |  |                    |           |   |  |
| 1. Title of Security (Instr. 3)  2. Transac Date (Month/Date)  |   |            | Execution Date,   |   | Code (In:   | Transaction Disposed Of (D) (Instr. 3, 4                       |        |   |                     | 4 and Securitie<br>Beneficia |   | es For<br>ally (D)<br>Following (I) (  |                                   | orm: Direct<br>) or Indirect<br>(Instr. 4)                               | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4)  |                    |           |   |  |
|  |   |            |   |   |   |  | Code   | ,   | Amount              | (A) or<br>(D)                | Pric  | e  | Transact<br>(Instr. 3 a           | tion(s)  |  |                    | iiisu. 4) |   |  |
| Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) |   |            |   |   |   |  |        |   |                     |                              |   |  |                                   |  |  |                    |           |   |  |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)  | Derivative Conversion Date Execution Date, Gecurity or Exercise (Month/Day/Year) if any |            | Co  | ransaction of<br>ode (Instr. Derivative |   | 6. Date Exercisable and<br>Expiration Date<br>(Month/Day/Year) |        | 7. Title and Amount<br>of Securities<br>Underlying<br>Derivative Security<br>(Instr. 3 and 4) |                     | E                            | Price of<br>Perivative<br>Security<br>Instr. 5) | 9. Number of<br>derivative<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction(s)<br>(Instr. 4) |                                   | 10.<br>Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4) | 11. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4)   |                    |           |   |  |
|  |   |            |   | Co                                      | ode \   | v  | (A)    | (D)   | Date<br>Exercisable |                              | xpiration<br>ate                                | Title  | Amou<br>or<br>Numb<br>of<br>Share | er   |  |                    |           |   |  |
| Stock<br>Option<br>(Right to<br>Buy)   | \$1.69  | 04/29/2011 |   |   | A   |  | 20,000 |   | (1)                 | 04                           | 4/29/2021                                       | Common<br>Stock  | 20,00                             | 00   | \$0  | 20,000             | )         | D |  |

## **Explanation of Responses:**

1. Option vests with respect to 1/12th of the shares subject to the option for each month of service following the date of grant.

04/29/2011 /s/ Samuel L. Barker

\*\* Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- \* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.