

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

**SCHEDULE 13D**

Under the Securities Exchange Act of 1934  
(Amendment No. 1)\*

**Lexicon Pharmaceuticals, Inc.**

(Name of Issuer)

**Common Stock, par value \$0.001 per share**

(Title of Class of Securities)

**528872104**

(CUSIP Number)

**Raymond Debbane**  
c/o Ulys, L.L.C.  
750 Lexington Avenue  
30<sup>th</sup> Floor  
New York, New York 10022  
(212) 371-1717

*Copies to:*

**Robert Spatt, Esq.**  
**Peter Malloy, Esq.**  
**Simpson Thacher & Bartlett LLP**  
425 Lexington Avenue  
New York, NY 10017  
(212) 455-2000

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(Name, Address and Telephone Number of Person Authorized to  
Receive Notices and Communications)

**August 23, 2007**

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(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

**Note:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP No. 528872104

1. Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only).

Invus, L.P.  
I.R.S. Identification No. 83-0359143

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b) 

3. SEC Use Only

4. Source of Funds (See Instructions)

OO

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization

Bermuda

7. Sole Voting Power

Number of Shares 50,824,986

Beneficially Owned by 8. Shared Voting Power

Each Reporting Person 0

9. Sole Dispositive Power

With 50,824,986

10. Shared Dispositive Power

0

11. Aggregate Amount Beneficially Owned by Each Reporting Person

50,824,986

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13. Percent of Class Represented by Amount in Row (11)

37.16%\*

14. Type of Reporting Person (See Instructions)

PN

\* Based on 85,965,249 shares of Issuer Common Stock outstanding as of August 23, 2007, as provided by the Issuer, plus an estimated 50,824,986 shares expected to be issued to Invus, L.P. pursuant to a securities purchase agreement with the Issuer, as described below.

CUSIP No. 528872104

1. Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only).

Invus Advisors, L.L.C.  
I.R.S. Identification No. 83-0359142

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b) 

3. SEC Use Only

4. Source of Funds (See Instructions)

OO

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization

Delaware

7. Sole Voting Power

Number of Shares 50,824,986

Beneficially Owned by 8. Shared Voting Power

Each Reporting Person 0

9. Sole Dispositive Power

With 50,824,986

10. Shared Dispositive Power

0

11. Aggregate Amount Beneficially Owned by Each Reporting Person

50,824,986

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13. Percent of Class Represented by Amount in Row (11)

37.16%\*

14. Type of Reporting Person (See Instructions)

OO

\* Based on 85,965,249 shares of Issuer Common Stock outstanding as of August 23, 2007, as provided by the Issuer, plus an estimated 50,824,986 shares expected to be issued to Invus, L.P. pursuant to a securities purchase agreement with the Issuer, as described below.

CUSIP No. 528872104

1. Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only).

Invus Public Equities, L.P.  
I.R.S. Identification No. 98-0420215

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b) 

3. SEC Use Only

4. Source of Funds (See Instructions)

OO

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization

Bermuda

7. Sole Voting Power

Number of Shares 3,891,108

8. Shared Voting Power

Beneficially  
Owned by0Each  
Reporting

9. Sole Dispositive Power

Person 3,891,108

With

10. Shared Dispositive Power

0

11. Aggregate Amount Beneficially Owned by Each Reporting Person

3,891,108

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13. Percent of Class Represented by Amount in Row (11)

4.53%\*

14. Type of Reporting Person (See Instructions)

PN

\* Based on 85,965,249 shares of Issuer Common Stock outstanding as of August 23, 2007, as provided by the Issuer.

CUSIP No. 528872104

1. Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only).

Invus Public Equities Advisors, LLC  
I.R.S. Identification No. 98-04220201

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b) 

3. SEC Use Only

4. Source of Funds (See Instructions)

OO

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization

Delaware

7. Sole Voting Power

Number of Shares 3,891,108

8. Shared Voting Power

Beneficially  
Owned by0

9. Sole Dispositive Power

Each  
Reporting  
Person3,891,108

10. Shared Dispositive Power

With

0

11. Aggregate Amount Beneficially Owned by Each Reporting Person

3,891,108

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13. Percent of Class Represented by Amount in Row (11)

4.53%\*

14. Type of Reporting Person (See Instructions)

OO

\* Based on 85,965,249 shares of Issuer Common Stock outstanding as of August 23, 2007, as provided by the Issuer.

CUSIP No. 528872104

1. Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only).

Ulys, L.L.C.  
I.R.S. Identification No. 83-0359139

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b) 

3. SEC Use Only

4. Source of Funds (See Instructions)

OO

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization

Delaware

7. Sole Voting Power

Number of Shares 54,716,094

Beneficially Owned by 8. Shared Voting Power

Each Reporting Person 0

9. Sole Dispositive Power

With 54,716,094

10. Shared Dispositive Power

0

11. Aggregate Amount Beneficially Owned by Each Reporting Person

54,716,094

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13. Percent of Class Represented by Amount in Row (11)

40.0%\*

14. Type of Reporting Person (See Instructions)

OO

\* Based on 85,965,249 shares of Issuer Common Stock outstanding as of August 23, 2007, as provided by the Issuer, plus an estimated 50,824,986 shares expected to be issued to Invus, L.P. pursuant to a securities purchase agreement with the Issuer, as described below.

CUSIP No. 528872104

1. Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only).

Raymond Debbane

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b) 

3. SEC Use Only

4. Source of Funds (See Instructions)

OO

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization

Panama

7. Sole Voting Power

Number of Shares

54,716,094

Beneficially Owned by

8. Shared Voting Power

0

Each Reporting Person

9. Sole Dispositive Power

54,716,094

With

10. Shared Dispositive Power

0

11. Aggregate Amount Beneficially Owned by Each Reporting Person

54,716,094

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13. Percent of Class Represented by Amount in Row (11)

40.0%\*

14. Type of Reporting Person (See Instructions)

IN

\* Based on 85,965,249 shares of Issuer Common Stock outstanding as of August 23, 2007, as provided by the Issuer, plus an estimated 50,824,986 shares expected to be issued to Invus, L.P. pursuant to a securities purchase agreement with the Issuer, as described below.

This Amendment No. 1 hereby amends and supplements the statement of beneficial ownership on Schedule 13D, relating to the common stock, \$0.001 par value per share (the "Issuer Common Stock"), of Lexicon Pharmaceuticals, Inc., a Delaware corporation (the "Issuer" or "Lexicon"), initially filed on June 27, 2007 (the "Statement"). All capitalized terms not otherwise defined herein have the meaning assigned to them in the Statement.

**Item 3. Source and Amount of Funds or Other Consideration**

Item 3 of the Statement is hereby amended and supplemented by replacing the second paragraph thereof with the following:

The purchase of additional shares of Issuer Common Stock by Invus, L.P. up to an aggregate of approximately \$205,472,250, as contemplated by the Securities Purchase Agreement (as defined below), was subject to stockholder approval, which was obtained on August 23, 2007. Invus, L.P. intends to use funds obtained from a capital call to its limited partners in respect of previously made commitments for the payment of the purchase price for any such additional shares of Issuer Common Stock.

**Item 4. Purpose of Transaction**

Item 4 of the Statement is hereby amended and supplemented by inserting the following immediately after the first paragraph thereof:

On August 23, 2007, at the special meeting of stockholders of the Issuer, the Issuer's stockholders voted to approve the transactions contemplated by the Securities Purchase Agreement, the Warrant Agreement, the Registration Rights Agreement and the Stockholders' Agreement. At the special meeting, the Issuer's stockholders also voted to approve an amendment to the Issuer's certificate of incorporation to increase the number of authorized shares of common stock from 120 million to 300 million.

Pursuant to the Securities Purchase Agreement, at the closing of the Initial Investment, Lexicon will issue and sell to Invus, L.P. a number of shares of Issuer Common Stock that will result in Invus, L.P. owning 40% of the Issuer Common Stock outstanding on the date of such closing. Based on the number of shares of Issuer Common Stock outstanding as of August 23, 2007, the date of the special meeting of stockholders of the Issuer, the number of shares to be purchased by Invus, L.P. in the Initial Investment is estimated to be 50,824,986. The number of shares actually issued at the closing may deviate from this estimate based on changes in the number of outstanding shares of Issuer Common Stock between August 23, 2007, and the closing of the Initial Investment, which is expected to occur on August 28, 2007, subject to the satisfaction of the closing conditions contained in the Securities Purchase Agreement.

**Item 5. Interest in Securities of the Issuer**

Item 5 of the Statement is hereby amended and supplemented by replacing the first, second and third paragraphs of clause (a) thereof with the following:



As of August 23, 2007, Invus Public Equities, L.P. was the record and beneficial owner of 3,891,108 shares of Issuer Common Stock, representing approximately 4.53% of the outstanding shares of Issuer Common Stock (not taking into account the shares of Issuer Common Stock issuable upon the exercise of the Warrants or to be issued to Invus, L.P. in the Initial Investment). Invus Public Equities Advisors, LLC, as the general partner of Invus Public Equities, L.P., controls Invus Public Equities, L.P. and, accordingly, may be deemed to beneficially own the shares of Issuer Common Stock held by Invus Public Equities, L.P. Invus Public Equities Advisors, LLC disclaims such beneficial ownership, except to the extent of its pecuniary interest in such shares.

As of August 23, 2007, Invus, L.P. may be deemed to beneficially own 50,824,986 shares of Issuer Common Stock estimated to be issued to it in the Initial Investment, representing approximately 37.16% of the outstanding shares of Issuer Common Stock (taking into account the shares of Issuer Common Stock to be issued to Invus, L.P. in the Initial Investment). This number does not include the 16,498,353 shares of Issuer Common Stock subject to the Warrants. Although the Warrants will remain outstanding and exercisable until the occurrence of the closing of the Initial Investment, purchases of shares of Issuer Common Stock upon the exercise of Warrants will reduce the number of shares to be purchased by Invus, L.P. in the Initial Investment and will not change the number of shares of Issuer Common Stock to be beneficially owned by Invus, L.P. as of the closing of the Initial Investment.

Invus Advisors, L.L.C., as the general partner of Invus, L.P., controls Invus, L.P. and, accordingly, may be deemed to beneficially own the shares of Issuer Common Stock held by Invus, L.P. Invus Advisors, L.L.C. disclaims such beneficial ownership, except to the extent of its pecuniary interest in such shares. Invus, L.P. has certain rights to acquire additional shares of Issuer Common Stock, as described in Item 6.

Ulys, L.L.C., as the managing member of each of Invus Public Equities Advisors, LLC and Invus Advisors, L.L.C., controls each of these two entities and, accordingly, may be deemed to beneficially own the shares of Issuer Common Stock held by them. Ulys, L.L.C. disclaims such beneficial ownership, except to the extent of its pecuniary interest in such shares. As the sole member of Ulys, L.L.C., Mr. Raymond Debbane controls Ulys, L.L.C. and, accordingly, may be deemed to beneficially own the shares of Issuer Common Stock held by Ulys, L.L.C. Mr. Raymond Debbane disclaims such beneficial ownership, except to the extent of his pecuniary interest in such shares.

**Item 6. Contracts, Arrangements or Understandings with Respect to Securities of the Issuer**

Item 6 of the Statement is hereby amended and supplemented by adding the following at the end of the first paragraph under the heading "Securities Purchase Agreement—Stockholder Approval" in such Item:

Such stockholder approval was obtained on August 23, 2007.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

**INVUS, L.P.**

By: INVUS ADVISORS, L.L.C.,  
its general partner

By: /s/ Raymond Debbane

Name: Raymond Debbane

Title: President

**INVUS PUBLIC EQUITIES, L.P.**

By: INVUS PUBLIC EQUITIES ADVISORS, LLC,  
its general partner

By: /s/ Raymond Debbane

Name: Raymond Debbane

Title: President

**INVUS ADVISORS, L.L.C.**

By: /s/ Raymond Debbane

Name: Raymond Debbane

Title: President

**INVUS PUBLIC EQUITIES ADVISORS, LLC**

By: /s/ Raymond Debbane

Name: Raymond Debbane

Title: President

**ULYS, L.L.C.**

By: /s/ Raymond Debbane

Name: Raymond Debbane

Title: President

**RAYMOND DEBBANE**

/s/ Raymond Debbane

Dated: August 24, 2007