

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

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of the Securities
Exchange Act of 1934 (Amendment No.)

Filed by the Registrant
Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to §240.14a-12

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:

(2) Aggregate number of securities to which transaction applies:

(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):

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

Fee paid previously with preliminary materials.

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:



**Building a Major
Biopharmaceutical Company**

June 2007



Forward-looking Statements

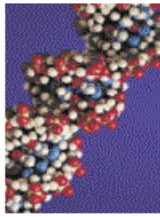
This presentation contains “forward-looking statements,” including statements about Lexicon’s plans for the development of and the timing of regulatory filings for its drug candidates and assessments of their therapeutic and commercial potential, drug discovery and research programs, growth and future operating results, strategic alliances, and intellectual property, as well as other matters that are not historical facts or information. These forward-looking statements are based on management’s current assumptions and expectations and involve risks, uncertainties and other important factors that may cause Lexicon’s actual results to be materially different from any future results expressed or implied by such forward-looking statements. Information identifying such important factors is contained in our reports filed with the Securities and Exchange Commission. Lexicon undertakes no obligation to update or revise any such forward-looking statements, whether as a result of new information, future events or otherwise.



Our Strategy



Building an Integrated Biopharmaceutical Company



From Genetics to
Drug Development



- Broad understanding of gene function without equal in the industry
 - Over 100 new, selective and potent targets
- Extensive pipeline of new drug candidates
- World-class medicinal chemistry and antibody discovery capabilities
- Strength in clinical development and regulatory process
- Major corporate collaborations





Lexicon Has Unique Insights into the Genome

- Unparalleled understanding of “drug-able” gene function
 - Large-scale evaluation of the medical potential of Genome5000
 - Approximately 4,100 genes evaluated to date
- Understanding drug action using gene knockouts has already resulted in over 100 novel, selective and potent targets
- Knowledge of target function improves ability to select programs with biomarkers to guide development
- Drug programs feature novel mechanisms of action that address major medical needs
- Far-reaching intellectual property portfolio and know-how

Lexicon Has an Extensive Pipeline of New Drugs

- Lexicon's 10 to 10 program is dedicated to bringing 10 new drug candidates into clinical trials through 2010
- The Genome5000 discovery capabilities have fueled the evolution from a genetics platform to drug discovery and development
- Both small molecule and antibody therapeutics are currently under development for major disease categories
- Robust pipeline requires long-term financing and corporate collaboration strategies to develop and commercialize novel drugs
- Established collaborations validate Lexicon's gene to drug capabilities

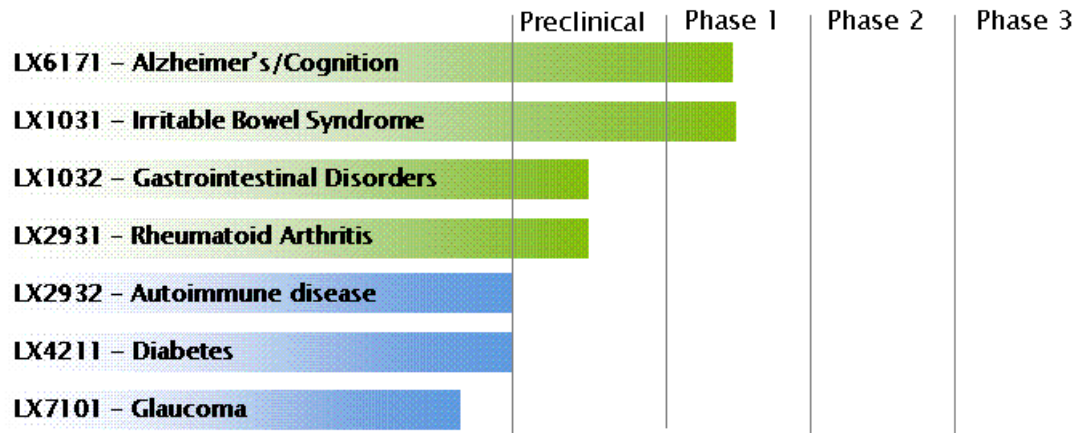
Capabilities Validated by Established Alliances

 <p>Genentech IN BUSINESS FOR LIFE</p>	<ul style="list-style-type: none"> - Biologic drug target alliance initiated at the end of 2002 and expanded at the end of 2005 to include biotherapeutic drug discovery and development - Several promising candidates in preclinical research
	<ul style="list-style-type: none"> - Alliance to discover, develop, and commercialize novel biotherapeutics - Preclinical research ongoing on LG106
	<ul style="list-style-type: none"> - Small molecule drug discovery alliance in neuropsychiatric disease, initiated in 2003 and extended in 2006 - Over 10 targets selected for drug discovery
	<ul style="list-style-type: none"> - Alliance established in 2004 to discover new hypertension targets for small molecule drug development - Target selected for therapeutic development in 2006

New Drug Discoveries are in Clinical Development

Lexicon is advancing its substantial pipeline of internal clinical and preclinical programs across a full range of therapeutic areas

10_T10 program: selecting the best from our unique portfolio of drug targets to advance 10 drugs into human clinical trials by the end of 2010



...
Corporate alliances are also moving programs forward

Drug-Based Collaborations Will Play a Key Role, Yet Best Value Creation Requires Substantial Investment

- Collaborations and Alliances will help maximize the potential of extensive pipeline
- Our strategy is to select collaborators based on:
 - Commitment to the project
 - Relevant expertise/focus in therapeutic area
 - Clinical know-how
 - Manufacturing capabilities
 - Commercial infrastructure
 - ... NOT on short and mid-term cash needs
- Even with corporate collaborations, our strategy of becoming an integrated biopharmaceutical company requires significantly more capital than we have today



Overview of Invus and Symphony Transactions

June 2007



The Strategic Impact of These Transactions

- Provide \$265 million in financing (common stock with a significant premium built in)
 - Front portion of our drug pipeline is approaching Phase 2
 - Corporate partnering strategy can be optimized for drug development success without short-term financing pressure
 - Establishes a shareholder-friendly financial framework for future funding that may provide up to an additional \$345 million
- Bring anchor investor with strategic expertise, deep pockets and proven track record
- Enhances our internal clinical and regulatory capabilities

The Invus Transaction Represents a Significant Financial Commitment

- At closing, Invus to purchase \$205MM in common stock
 - \$51MM at \$3.09 per share (10-day volume weighted average as of 6/14)
 - \$154MM at \$4.50 per share, a 46% premium to 6/15 closing price
- Financing framework may provide up to cumulative \$550MM while enabling broad shareholder participation
 - Within 27 months after closing, Lexicon can raise money above \$4.50 per share
 - Driven by value-enhancing clinical milestones
 - Invus may pre-specify participation based on pro-rata ownership position
 - At 27 months after closing (with some flexibility), Invus can trigger Rights Offering
 - Up to \$172.5MM (minus any money raised by Lexicon above \$4.50)
 - Invus required to purchase any stock shareholders choose not to purchase
 - Invus has same option 12 months after first trigger for the balance
- As an anchor investor with a long-term strategy mindset Invus will have 3 board seats

Invus Overview

- Invus is a 22 year-old equity investment firm with an impressive track record
- A strategy-focused, long-term investor
- Manages in excess of \$4Bn of capital with investments in a broad range of industries
- Select investments have included:
 - Keebler Foods Company
 - Weight Watchers International, and
 - Investments in biotech companies such as: Alexion, Elan, Tularik, Vicuron and XenoPort

The Symphony Collaboration Will Further Advance our First Three Drug Candidates

- Funding collaboration for the clinical development of LX1031, LX1032 and LX6171 through Phase 2
 - Symphony funds \$60 million
 - Lexicon licenses IP of programs to Symphony Icon, a newly formed company funded by Symphony
 - Lexicon has exclusive purchase option to acquire the programs at predetermined prices
- Lexicon remains IND holder and executes development programs with enhanced capabilities
 - Governance provides world-class expertise in clinical development for gastrointestinal disease and cognitive disorders
 - Symphony Icon's 50/50 Development Committee, chaired by Lexicon, oversees trial design and execution

Symphony Overview

- Symphony manages \$315 million in capital dedicated to investments in clinical development programs
- Alliance with RRD International brings significant clinical development resources
 - Global regulatory, preclinical and clinical support for biotechnology and pharmaceutical companies
 - Contributed to more than 100 FDA approved products and indications
- Established agreements with Exelixis, Isis Pharmaceuticals, Dynavax and Alexza

Process and Timing Going Forward

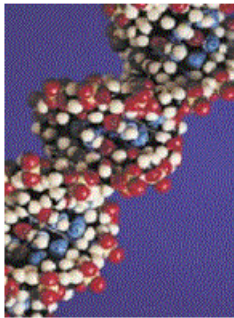
- Symphony
 - Transaction closed on June 15, 2007
- Invus
 - Proxy expected to be distributed mid-summer
 - Shareholder vote expected to take place in fiscal third quarter

Proxy Statement

Lexicon will file a proxy statement and other documents with the Securities and Exchange Commission relating to the approval of the Invus transactions. **Stockholders are urged to carefully read the proxy statement when it becomes available, because it will contain important information regarding Lexicon and the Invus transactions.** A definitive proxy statement will be sent to stockholders seeking their approval of the Invus transactions. Stockholders may obtain a free copy of the proxy statement (when it is available) and other documents containing information about Lexicon, without charge, at the SEC's web site at www.sec.gov. Copies of the definitive proxy statement and the SEC filings that will be incorporated by reference in the proxy statement may also be obtained for free by directing a request to Lexicon Pharmaceuticals, Inc. 8800 Technology Forest Place, The Woodlands, Texas 77381, Attention: Corporate Communications

Lexicon and its officers and directors may be deemed to be participants in the solicitation of proxies from the stockholders. Information about these persons can be found in Lexicon's Annual Report on Form 10-K filed with the SEC, and additional information about such persons may be obtained from the proxy statement when it becomes available.

Lexicon is Focused on Discovering and Developing Breakthrough Treatments for Human Disease



From Genetics to
Drug Development



- Selecting the best targets
- Selecting the best therapeutics

