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

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

DATE OF REPORT (DATE OF EARLIEST EVENT REPORTED): MAY 16, 2005

LEXICON GENETICS INCORPORATED
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE (STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)	000-30111 (COMMISSION FILE NUMBER)	76-0474169 (I.R.S. EMPLOYER IDENTIFICATION NUMBER)
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8800 TECHNOLOGY FOREST PLACE
THE WOODLANDS, TEXAS 77381
(ADDRESS OF PRINCIPAL EXECUTIVE
OFFICES AND ZIP CODE)

(281) 863-3000
(REGISTRANT'S TELEPHONE NUMBER,
INCLUDING AREA CODE)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligations of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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ITEM 1.01 ENTRY INTO A MATERIAL DEFINITIVE AGREEMENT

On May 16, 2005, we entered into a Collaboration and License Agreement (the "Collaboration Agreement") with N.V. Organon for the joint discovery, development and commercialization of novel biotherapeutics. In the collaboration, we will create and analyze mouse knockouts for up to 300 genes selected by the parties that encode secreted proteins or potential antibody targets, including two of our existing drug discovery programs. The parties will jointly select targets for further research and development and will equally share costs and responsibility for research, preclinical and clinical activities. The parties will jointly determine the manner in which collaboration products will be commercialized and will equally benefit from product revenue. If fewer than five development candidates are designated under the collaboration, our share of costs and product revenue will be proportionally reduced. We will receive a milestone payment for each development candidate in excess of five. Either party may decline to participate in further research or development efforts with respect to a collaboration product, in which case such party will receive royalty payments on sales of such collaboration product rather than sharing in revenue. Organon will have principal responsibility for manufacturing biotherapeutic products resulting from the collaboration for use in clinical trials and for worldwide sales.

We will receive an upfront payment of \$22.5 million from Organon in exchange for access to our drug target discovery capabilities and the exclusive right to co-develop biotherapeutic products that modulate the 300 genes selected for the collaboration. Organon will also provide us with annual research funding totaling up to \$50 million for its 50% share of the collaboration's costs during the four-year target function discovery portion of the alliance.

Intervet Inc., an affiliate of Organon, is also a party to the Collaboration Agreement with respect to the development and commercialization of products in the veterinary field.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

LEXICON GENETICS INCORPORATED

Date: May 17, 2005

By: /s/ JEFFREY L. WADE

Jeffrey L. Wade
Executive Vice President and
General Counsel