

FORM 6-K
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Report of Foreign Issuer

**Pursuant to Rule 13a-16 or 15d-16 of
the Securities Exchange Act of 1934**

For the Month of March, 2009

Commission File Number 1-32001

Lorus Therapeutics Inc.

(Translation of registrant's name into English)

2 Meridian Road, Toronto, Ontario M9W 4Z7

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F ☒

Form 40-F ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ____

Note: Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders.

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ____

Note: Regulation S-T Rule 101(b)(7) only permits the submission in paper of a Form 6-K if submitted to furnish a report or other document that the registrant foreign private issuer must furnish and make public under the laws of the jurisdiction in which the registrant is incorporated, domiciled or legally organized (the registrant's "home country"), or under the rules of the home country exchange on which the registrant's securities are traded, as long as the report or other document is not a press release, is not required to be and has not been distributed to the registrant's security holders, and, if discussing a material event, has already been the subject of a Form 6-K submission or other Commission filing on EDGAR.

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes ☐

No ☒

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b):82-_____.

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.

Lorus Therapeutics Inc.

Date: March 24, 2009

By: /s/ "Elizabeth Williams"

Elizabeth Williams

Director of Finance and Controller

EXHIBIT INDEX

- 99.1 News Release Dated March 24, 2009 - Lorus Therapeutics Announces Ohio State University Received a \$2 Million US National Institutes of Health grant to Evaluate Novel Nanoparticle Delivery Technology with Lorus' Oncology Drugs



NEWS RELEASE

**Lorus Therapeutics Announces Ohio State University Received a \$2 Million
US National Institutes of Health grant to Evaluate Novel Nanoparticle
Delivery Technology with Lorus' Oncology Drugs**

TORONTO, CANADA - March 24, 2009 - Lorus Therapeutics Inc. (TSX: LOR) ("Lorus" or the "Corporation"), a biopharmaceutical company specializing in the research and development of pharmaceutical products and technologies for the management of cancer, today announced that researchers at the Ohio State University (OSU) have received a grant of approximately US \$2 million to explore the potential for applying OSU's proprietary tumor-targeted nanoparticle drug delivery technology with ribonucleotide reductase (RNR) targeted RNA-based drugs.

LOR-1284, an siRNA drug candidate targeting the R2 component of ribonucleotide reductase (RNR), has been chosen by OSU as the lead compound for this study. Lorus agreed to supply LOR-1284 along with other developmental compounds that target R1 and R2, all of which have shown strong preclinical or clinical activity against a variety of cancers. Although in published reports LOR-1284 has shown significant *in vivo* anti-tumor activity on its own, the novel nanotechnology approach in development by OSU has the potential to enhance uptake of the drug in tissues and to provide a selective affinity for specific tumors.

Research to optimize delivery of siRNA *in vivo* is expected to be the key to the future therapeutic promise of siRNA therapeutics to effectively target specific genes associated with cancer.

Development of nanomedicines has been a strong area of growth in innovative technologies at OSU, and leverages expertise at the OSU College of Pharmacy, the Nanoscale Science and Engineering Center (NSEC), and Comprehensive Cancer Center (CCC). Dr. Robert Lee, Associate Professor of Pharmaceutics in the CCC and NSEC, is providing overall direction of this experimental program in collaboration with Dr. James Lee, Professor in the Department of Chemical and Biomolecular Engineering and Director of NSEC, and Dr. Guido Marcucci, Professor of Medicine and Human Genetics in the CCC.

"Coupling novel lipid-based nanocarriers with tumor-specific molecular targeting agents, is a rational and promising approach for concentrating the activity of RNA-based drugs, and combines two complementary technologies already in development at OSU", said Dr. Robert Lee. "OSU has ongoing research experience with a number of siRNA and oligonucleotide drugs. This includes an ongoing program with Lorus' LOR-2040 drug in Acute Myeloid Leukemia that is presently in an advanced Phase II clinical study".

"Lorus is very pleased to provide our compounds targeting ribonucleotide reductase R1 and R2 and supporting information to explore a novel way of delivering these drugs", said Lorus' CEO Dr. Aiping Young. "This research exploits the broad spectrum of antitumor activity of these compounds to identify additional development opportunities for specific tumors.

Lorus is supplying the drugs under a Materials Transfer Agreement.

About Lorus

Lorus is a biopharmaceutical company focused on the research and development of novel therapeutics in cancer. Lorus' goal is to capitalize on its research, preclinical, clinical and regulatory expertise by developing new drug candidates that can be used, either alone, or in combination with other drugs, to successfully manage cancer. Through its own discovery efforts and an acquisition and in-licensing program, Lorus is building a portfolio of promising anticancer drugs. Lorus Therapeutics Inc. is listed on the Toronto Stock Exchange under the symbol LOR.

Forward Looking Statements

This press release contains forward-looking statements within the meaning of Canadian and U.S. securities laws. Such statements include, but are not limited to, statements relating to: financings and corporate reorganizations, the establishment of corporate alliances, the Company's plans, objectives, expectations and intentions and other statements including words such as "continue", "expect", "intend", "will", "should", "would", "may", and other similar expressions. Such statements reflect our current views with respect to future events and are subject to risks and uncertainties and are necessarily based upon a number of estimates and assumptions that, while considered reasonable by us are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause our actual results, performance or achievements to be materially different from any future results, performance or achievements described in this press release. Such expressed or implied forward looking statements could include, among others: our ability to continue as a going concern, our ability to repay or refinance the convertible debentures by October 2009, the actual number of shares to be issued in the future as a result of warrant exercised; use of proceeds of the Rights Offering; the inherent risks in early stage drug development including demonstrating efficacy; development time/cost and the regulatory approval process; the progress of our clinical trials; our ability to find and enter into agreements with potential partners; our ability to attract and retain key personnel; changing market conditions; and other risks detailed from time-to-time in our ongoing quarterly filings, annual information forms, annual reports and annual filings with Canadian securities regulators and the United States Securities and Exchange Commission.

Should one or more of these risks or uncertainties materialize, or should the assumptions set out in the section entitled "Risk Factors" in our filings with Canadian securities regulators and the United States Securities and Exchange Commission underlying those forward-looking statements prove incorrect, actual results may vary materially from those described herein. These forward-looking statements are made as of the date of this press release and we do not intend, and do not assume any obligation, to update these forward-looking statements, except as required by law. We cannot assure you that such statements will prove to be accurate as actual results and future events could differ materially from those anticipated in such statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and accordingly investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

Lorus Therapeutics Inc.'s recent press releases are available through the Company's website at www.lorusthera.com. For Lorus' regulatory filings on SEDAR, please go to www.Sedar.com. For SEDAR filings prior to July 10, 2007 you will find these under the company profile for Global Summit Real Estate Inc. (Old Lorus).

Enquiries:

For further information, please contact:

Lorus Therapeutics Inc.

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