

**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 August, 2008

Commission File Number 1-32001

**Lorus Therapeutics Inc.**

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(Translation of registrant's name into English)

**2 Meridian Road, Toronto, Ontario M9W 4Z7**

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(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-\_\_\_\_\_.

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**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: August 20, 2008

By: /s/ "Elizabeth Williams"  
Elizabeth Williams  
Director of Finance and Controller

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**EXHIBIT INDEX**

- 99.1 News Release dated August 20, 2008 - Lorus Therapeutics Announces the Identification of a Potential Novel Biomarker in Patient Samples from a Clinical Trial of LOR-2040 Combined with Capecitabine in Breast Cancer



**NEWS RELEASE**

**Lorus Therapeutics Announces the Identification of a Potential Novel Biomarker in Patient Samples from a Clinical Trial of LOR-2040 Combined with Capecitabine in Breast Cancer**

**- Link found between Skp2 and the target of LOR-2040, R2 -**

**TORONTO, CANADA - August 20, 2008** -Lorus Therapeutics Inc, (TSX: LOR, AMEX: LRP) ("Lorus"), a biopharmaceutical company specializing in the research and development of pharmaceutical products and technologies for the management of cancer, today announced publication by the California Cancer Consortium of a paper entitled "Identification of F-box/LLR-repeated Protein 17 a Potential Useful Biomarker for Breast Cancer Therapy" (Xiao et al. Cancer Genomics and Proteomics 2008; 5: 151-160). This presents results of proteomics studies from a clinical trial of LOR-2040 in combination with Capecitabine in patients with advanced metastatic breast cancer.

"This study identified a relationship between the activity of the investigational anticancer drug LOR-2040 and its target, RRM2, also known as R2, and a protein identified now as Skp2, or FBXL17. Skp2 serves as a possible determinant of drug activity and resistance, which may present significant interest for future breast cancer research", said Dr. Yen, who is Associate Director for Translational Research and Director of Clinical and Molecular Pharmacology at the Comprehensive Cancer Center at City of Hope. "This proteomics analysis approach represents a valuable new tool for identifying useful biomarkers to help explain the activity of specific cancer drugs".

The primary author, Dr. Gary Guishan Xiao, and Dr. Yun Yen who directed these proteomics studies, carried out this research at City of Hope National Medical Center in Duarte California as part of the ongoing exploratory clinical investigation led by Dr. Helen Chew of the same institution with the sponsorship of the National Cancer Institute (NCI) Cancer Therapy Evaluation Program (CTEP). Lorus is collaborating in this program with the Division of Cancer Treatment and Diagnosis, NCI on the development of LOR-2040 under a Clinical Trials Agreement.

**About LOR-2040**

LOR-2040 (formerly GTI-2040) is an RNA-targeted drug that specifically targets the R2 component of ribonucleotide reductase, which is required for DNA synthesis and cell proliferation. Through downregulation of R2, LOR-2040 has demonstrated strong antitumor and antimetastatic activity in a variety of tumor types in both *in vivo* and *in vitro* models and is under study in a multiple Phase I/II clinical program, including an advanced Phase II clinical trial with LOR-2040 and high dose Ara-C (HiDAC) in refractory and relapsed Acute Myeloid Leukemia (AML). The R2 target has been described as a malignant determinant that is elevated in a wide range of tumors, which can cooperate with a variety of cellular cancer causing genes known as oncogenes to enhance tumor growth and metastatic potential.

**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, and on the American Stock Exchange under the symbol LRP.

## **Forward Looking Statements**

This press release may contain forward-looking statements within the meaning of Canadian and U.S. securities laws. Such statements include, but are not limited to, statements relating to: our research program plans, our plans to conduct clinical trials, the successful and timely completion of clinical studies and the regulatory approval process, our ability to fund future research, our plans to obtain partners to assist in the further development of our product candidates, the establishment of corporate alliances, the Company's plans, objectives, expectations and intentions and other statements including words such as "continue", "believe", "plan", "expect", "intend", "will", "should", "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 that may be expressed or implied by such forward-looking statements, including, among others: our ability to obtain the capital required for research and operations, 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 Annual Information Form 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](http://www.lorusthera.com). For Lorus' regulatory filings on SEDAR, please go to [www.Sedar.com](http://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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