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 June, 2010

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: June 14, 2010

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

EXHIBIT INDEX

99.1	News Release dated June 14, 2010 - Lorus Therapeutics Announces Presentation of Phase II Clinical Trial Data for LOR-2040 in Acute Myeloid Leukemia

NEWS RELEASE

Lorus Therapeutics Announces Presentation of Phase II Clinical Trial Data for LOR-2040 in Acute Myeloid Leukemia

- Presentation at the 15th Annual European Hematology Association Congress supports proceeding to larger trial -

TORONTO, CANADA, June 14, 2010 - Lorus Therapeutics Inc. (TSX: LOR; OTCBB: LRUSF) ("Lorus"), a biopharmaceutical company specializing in the research and development of pharmaceutical products and technologies for the management of cancer, today announced the presentation of Phase II clinical trial data for LOR-2040 (formerly known as GTI-2040) in combination with high dose cytarabine in the treatment of Acute Myeloid Leukemia. The presentation was given at the 15th Annual Congress of the European Hematology Association (EHA) in Barcelona, Spain.

The presentation, entitled "A Phase II Study of GTI-2040, an Antisense to Ribonucleotide Reductase (RNR), in Combination with High-Dose Cytarabine (HiDAC) in Relapsed and Refractory Acute Myeloid Leukemia (AML)", assessed the safety and efficacy data from the recently completed Phase II clinical trial. This Phase II study was conducted at six major US cancer centers under the overall direction of Principal Investigator Dr. Klisovic at the Arthur G. James Cancer Hospital, Ohio State University.

In the Phase II study, 25 patients under 60 years of age with relapsed or refractory AML were treated with HiDAC and LOR-2040. Overall, 28% achieved complete remission (CR) or CR with incomplete blood count recovery (CRi). Additionally 1 patient (4%) achieved partial remission. The investigators noted that the observed CR/CRi rate compared favorably to the expected historical CR rate of approximately 14% in this high risk AML patient group, when risk-matched by prior first response to therapy. The LOR-2040 and HiDAC combination was well tolerated by AML patients in the Phase II study, with toxicity similar to that expected with HiDAC alone.

In addition, analysis of survival data showed that patients had a 12-month overall survival of 41% with a median overall survival time of 10.3 months, assessed as favorable in this predominantly high-risk population. The investigators concluded that the favorable safety and efficacy demonstrated in the Phase II clinical study, and in the prior Phase Ib clinical trial in similar high risk AML patients, merits further development of LOR-2040 in combination with HiDAC in a larger randomized clinical trial.

About LOR-2040
LOR-2040 is an RNA-targeted drug that specifically targets the R2 component of ribonucleotide reductase, which is required for DNA synthesis and cell proliferation. The R2 target has been described as a malignant determinant that is elevated in a wide range of tumor types, which can cooperate with a variety of cellular cancer causing genes known as oncogenes to enhance tumor growth and metastatic potential. Through downregulation of R2, LOR-2040 has demonstrated strong antitumor and antimetastatic activity in a variety of tumor types in both *in vitro* and *in vivo* models, and has been explored 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).

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. The Company also has expertise in antimicrobial drug discovery. Lorus Therapeutics Inc. is listed on the Toronto Stock Exchange under the symbol LOR and on the OTCBB under the symbol LRUSF.

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 continue as a going concern, 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. 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).

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