
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 April, 2013

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-_____.

SIGNATURE

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: April 10, 2013

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

EXHIBIT INDEX

99.1 News Release Dated April 10, 2013 - Lorus Therapeutics Announces Presentation of Biomarker Data for LOR-253 at 2013 AACR Annual Meeting



NEWS RELEASE

Lorus Therapeutics Announces Presentation of Biomarker Data for LOR-253 at 2013 AACR Annual Meeting

TORONTO, CANADA, April 10, 2013 - Lorus Therapeutics Inc. (TSX: LOR) ("Lorus"), a biopharmaceutical company specializing in the discovery, research and development of pharmaceutical products and technologies for the management of cancer, today announced the presentation of novel biomarker data for its lead cancer therapy LOR-253 at the 2013 Annual Meeting of the American Association for Cancer Research (AACR), held in Washington, DC from April 6 - 10, 2013.

The poster presentation titled "Utilization of KLF4 as a pharmacodynamic biomarker for in vivo anticancer activity of a novel small molecule drug LOR-253" will be presented today in the Biomarkers of Drug Response session of the meeting. The abstract for the presentation (Abstract Number: 4649) is available online on the AACR website (<http://www.aacr.org>). The poster will be available on the Lorus website following the presentation (<http://www.lorusthera.com>).

The presentation covers data from preclinical studies on anticancer activity and tumor biomarker analysis for LOR-253 in animal models of human non-small cell lung cancer (NSCLC). The studies show that LOR-253 has a significant antitumor activity with a dose-response effect in NSCLC that is associated with a dose dependent increase of the tumor suppressor Krüppel-like Factor 4 (KLF4). When tumors are analyzed at different time points following treatment with the same dosing schedule being used in the LOR-253 clinical study, KLF4 protein is significantly increased after eight doses of LOR-253, which corresponds to two treatment cycles in the clinical study.

"These data represent an important part of our biomarker strategy for LOR-253, which we believe will translate into the clinic when we examine KLF4 expression in tumor biopsies from patients in the biomarker study," said Dr. Aiping Young, Lorus' President and CEO. "Biomarkers for LOR-253 will be valuable for the interpretation of our clinical data and for optimization of dosing in patients. The findings provide strong evidence to support the use of KLF4 as a biomarker for LOR-253 anticancer activity, and we look forward to sharing these exciting results with the cancer research community at the AACR."

In January 2013, Lorus announced a biomarker clinical investigation focused on NSCLC and colon cancer to further explore the effects of the LOR-253 at relevant doses, and to evaluate KLF4 as a tumor biomarker in patient biopsies.

About LOR-253

LOR-253 represents a new class of anticancer agent, which we believe may offer a competitive advantage over conventional drugs. This drug candidate has shown selective and potent antitumor activity in preclinical investigations with a variety of human cancers, including colon cancer and non-small cell lung cancer, and has demonstrated an excellent therapeutic window due to its low toxicity. LOR-253 is a first-in-class small molecule that has been optimized to induce the novel tumor suppressor Krüppel-like factor 4 (KLF4), leading to cancer cell cycle arrest and apoptosis as well as inhibition of metastasis.

About Lorus

Lorus is a biopharmaceutical company focused on the discovery, 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.

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 continue as a going concern, our ability to fund future research, 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.

Enquiries:

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