# 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 January, 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: January 7, 2013

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

**EXHIBIT INDEX**

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|---|---|
| 99.1 | News Release Dated January 7, 2013 - Lorus Therapeutics Announces Successful Dose Escalation of its Phase I Clinical Trial of LOR-253 and Initiation of a Biomarker Clinical Study in Cancer Patients |

**Lorus Therapeutics Announces Successful Dose Escalation of its Phase I Clinical Trial of LOR-253 and Initiation of a Biomarker Clinical Study in Cancer Patients**

**TORONTO, CANADA, January 7, 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 that its Phase I clinical study of LOR-253 has successfully escalated to the target dose level based on predicted and observed clinical effects without limitation by toxicity. The success of this study allows Lorus to initiate a biomarker clinical investigation to further explore the effects of the drug at relevant doses determined in the clinical trial.

This Phase I clinical study program, conducted at Memorial Sloan Kettering Cancer Center in New York and the MD Anderson Cancer Center in Houston, has enrolled 27 patients in escalating doses who had advanced or metastatic solid tumors that were unresponsive to conventional therapy or for which no effective therapy is available. The drug has shown excellent safety characteristics since it has safely escalated to more than 10-fold the starting dose. Further information on the safety, pharmacokinetic and anticancer properties of LOR-253 will be reported in a future scientific congress following audited analysis of the data.

"We are very pleased with the positive dose escalation clinical results and achieving the important milestone of moving ahead with the biomarker study", said Lorus President and CEO, Dr Aiping Young. "The biomarker investigation will provide valuable knowledge to guide further clinical development strategies. We look forward to further auditing and evaluation of Phase I clinical data over the next few weeks including further followup of ongoing patients".

The biomarker study will enroll 10 patients eligible for pre- and on-treatment biopsies who have specific cancers prioritized for further clinical development of LOR-253. Lorus anticipates the further analysis and reporting of the biomarker findings in the second half of the year.

The intratumoral biomarker evaluations in the biomarker study will include the KLF4 target of LOR-253. KLF4 is believed to play an important tumor suppressor function in the cell, which is depressed in major cancers but expected to be restored or upregulated by the action of LOR-253. Non-small cell lung and colorectal cancers have shown excellent KLF4 target-related activity in previous studies and are priority indications for the biomarker study.

Lorus expects the biomarker study to provide insights into the relationship of intratumoral and circulating cancer biomarkers to indicators of treatment benefit or response now that the relevant target dose level has been reached.

**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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