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 financial year ended May 31, 2006

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 Form 20-F or Form 40-F.]

Form 20-F ___X___ Form 40-F __X__

[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 ____X___

[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: September 9, 2005

By: "Shane Ellis"
Shane Ellis
Vice President, Legal Affairs &
Corporate Secretary

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LORUS IDENTIFIES NOVEL CLASS OF LEAD DRUG CANDIDATES FROM SMALL MOLECULE ANTICANCER PROGRAM

- ML-133 and LT-253 chosen for further development -

TSX: LOR
AMEX: LRP

TORONTO, CANADA, August 23, 2005 – Lorus Therapeutics Inc. ('Lorus'), a biopharmaceutical company specializing in the development and commercialization of pharmaceutical products and technologies for the management of cancer, announced the continued success in the development of its small molecule anticancer program today with the selection of a sub-class of lead molecules from the Company's small molecule program. Two molecules from this sub-class, ML-133 and LT-253, have been chosen as lead candidates for further development as novel anticancer drugs, based on the results of preclinical studies.

ML-133 and LT-253 are part of the ML-series, which is a group of novel low molecular weight compounds that shows significant anti-proliferative activity against many human cancer cell lines. In the *in vitro* anticancer screening program of the U.S. National Cancer Institute (NCI), which includes 60 human cancer cell lines representing nine cancer types, ML-133 exhibited potent activity against colon carcinoma, leukemia, non-small cell lung cancer, and prostate cancer cell lines.

Because of its activity against several cancer types as well as its novel mechanism of action, the NCI selected ML-133 for testing in the Hollow Fiber Assay to assess *in vivo* anticancer activity and systemic availability. This makes ML-133 one of a small percentage of compounds selected by the NCI for testing in this assay. In the Hollow Fiber Assay, ML-133 demonstrated antitumor efficacy towards several human cancers. LT-253, which is related in chemical structure to ML-133, has also shown promising antitumor

activity *in vivo*. Like ML-133, LT-253 demonstrates potent growth inhibition in xenograft models of various human cancers, including colon carcinoma and non-small cell lung cancer.

Lorus and collaborators at the University of Toronto are currently in the process of developing formulations of ML-133 and LT-253 to characterize pharmacokinetic properties. The goal of these studies is to advance drug candidates into clinical trials as quickly as possible.

"We are excited about the continued success of our small molecule anticancer program. It is Lorus' strategy to develop a broad diversified technology base in the cancer area, for the benefit of cancer patients, to add further value to Lorus' drug development program, and to mitigate risks inherent in the drug development process. The antitumor properties of ML-133 and LT-253 contribute significantly to this strategy."

About Lorus

Lorus is a biopharmaceutical company focused on the development and commercialization of cancer therapies. 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, 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. Late-stage clinical development and marketing may be done in cooperation with strategic pharmaceutical partners. Lorus currently has three products in human clinical trials with a pipeline of eight clinical trials in Phase II clinical trial programs and one Phase III registration clinical trial. Lorus Therapeutics Inc. is a public company listed on the Toronto Stock Exchange under the symbol LOR, and on the American Stock Exchange under the symbol LRP. Virulizin® is a registered trademark of Lorus Therapeutics Inc.

Forward Looking Statements

Except for historical information, this press release contains forward-looking statements, which reflect the Company's current expectation and assumptions, and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated. These forward-looking statements involve risks and uncertainties, including, but not limited to, changing market conditions, the Company's ability to obtain patent protection and protect its intellectual property rights, commercialization limitations imposed by intellectual property rights owned or controlled by third parties, intellectual property liability rights and liability claims asserted against the Company, the successful and timely completion of clinical studies, the establishment of corporate alliances, the impact of competitive products and pricing, new product development, uncertainties related to the regulatory approval process, product development delays, the Company's ability to attract and retain business partners and key personnel, future levels of government funding, the Company's ability to obtain the capital required for research, operations and marketing and other risks detailed from time-to-time in the Company's ongoing quarterly filings, annual information form, annual reports and 40-F filings. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Lorus Therapeutics Inc.'s press releases are available through the Company's Internet site: http://www.lorusthera.com.