

Lorus Therapeutics Announces Successful Production of First Clinical Batch of Anticancer Compound LOR-253

TORONTO, CANADA, April 12, 2010 – 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 the production of the first clinical batch of its novel anticancer drug candidate LOR-253 has been successfully completed.

The clinical batch of LOR-253 was manufactured in full compliance with current Good Manufacturing Practice (cGMP) and is to be used in a first-in-man study of LOR-253. An Investigational New Drug (IND) application for LOR-253 is being finalized for filing with the U.S. FDA for a Phase I dose escalation trial in selected solid tumors.

“Production of our first cGMP-compliant clinical batch of LOR-253 is a significant milestone in the development of this novel compound, and demonstrates our commitment to advance LOR-253 into the clinic”, said Dr. Aiping Young, Lorus' President and CEO.

About LOR-253

LOR-253 is a small molecule compound that has shown selective and potent antitumor activity in a variety of human cancers, including colon cancer and non-small cell lung cancer, and has an excellent therapeutic window due to its low toxicity. LOR-253 is a first-in-class inhibitor of the novel cancer target Metal-Responsive Transcription Factor 1 (MTF-1). The mode of action of LOR-253 involves the downregulation of cyclin D1, an important regulator of cell cycle progression and cell proliferation, and decreased expression of genes involved in tumor hypoxia (low oxygen content) and angiogenesis. Increased angiogenesis and alterations in the cyclin D1 regulatory pathway have been linked to the development of cancer.

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.

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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