

## **Lorus Therapeutics Announces FDA Approval to Initiate Phase I Clinical Trial for First-in-Class Cancer Drug LOR-253**

**TORONTO, CANADA, July 19, 2010** – Lorus Therapeutics Inc. (TSX: LOR; OTCBB: LRUSF) (“Lorus”), a biopharmaceutical company specializing in the discovery and development of pharmaceutical products and technologies for the management of cancer, today announced the approval of the Investigational New Drug (IND) application for its anticancer drug candidate LOR-253 by the U.S. Food & Drug Administration (FDA).

Based on the approval of the IND by the FDA, Lorus plans to proceed with a first-in-man Phase I dose escalation trial with LOR-253 in advanced or metastatic solid tumors. The trial will assess the safety profile, tolerability, and antitumor activity of LOR-253 in cancer patients, as well as pharmacokinetic and pharmacodynamic properties of LOR-253. The Phase I trial will be conducted at Memorial Sloan-Kettering Cancer Center in New York, NY.

### **About LOR-253**

LOR-253 represents a new class of anticancer agent, which we believe may offer a competitive advantage over classical drugs. LOR-253 represents the first molecule among Lorus’ portfolio of compounds with distinct and rational profiles selective for these targets. The drug 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 inhibit a novel cancer target Metal-Responsive Transcription Factor 1 (MTF-1). MTF-1 is overexpressed in selective cancer indications and its downregulation by LOR-253 results in induction of the novel tumor suppressor called Krüppel-like factor 4 (KLF-4), leading to the downregulation of cyclin D1, an important regulator of cell cycle progression and cell proliferation. MTF-1 downregulation also results in decreased expression of genes involved in the adaptation of tumors to 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. 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; 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](http://www.lorusthera.com). For Lorus' regulatory filings on SEDAR, please go to [www.Sedar.com](http://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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