

Lorus Therapeutics Announces Allowance of Patent for LOR-2040 in the Treatment of Acute Myeloid Leukemia

TORONTO, CANADA, May 3, 2010 – Lorus Therapeutics Inc. (TSX: LOR; OTCBB: LRUSF) (“Lorus”), a biopharmaceutical company specializing in the research and development of pharmaceutical products and technologies for the management of cancer, today announced the allowance of a new patent in Australia for its clinical-stage drug LOR-2040 in the treatment of Acute Myeloid Leukemia (AML).

The Australian patent protects LOR-2040 as a single agent therapy and in combination therapies with cytarabine for treatment of AML, which is the lead oncology indication for LOR-2040. This is Lorus’ first patent specific for treatment of AML with the combination of LOR-2040 and cytarabine, and extends the patent life for LOR-2040 in Australia to 2024. Similar patents for LOR-2040 combination therapies in AML are pending in several countries, including the U.S., Canada, Europe, and Japan.

Lorus recently announced positive results from its Phase II clinical study in refractory and relapsed AML with LOR-2040 in combination with cytarabine and indicated the plan to advance to a definitive comparative trial as a strategy to support registration. LOR-2040 is also being tested as a single agent in a Phase I trial in acute leukemias and high-grade myelodysplastic syndrome. Lorus has also recently completed a series of U.S. NCI-sponsored clinical studies in AML as well as in solid tumor indications, including prostate, non-small cell lung, and breast cancers.

“This patent is a significant addition to our strong, worldwide protection for LOR-2040”, said Dr. Aiping Young, Lorus’ President and CEO. “Extending patent life for LOR-2040 in AML is an important strategy in the development and commercialization of this drug and should facilitate new partnerships”.

About LOR-2040

LOR-2040 is an RNA-targeted drug that specifically targets the R2 component of ribonucleotide reductase, which is required for DNA synthesis and cell proliferation. Through downregulation of R2, LOR-2040 has demonstrated strong antitumor and antimetastatic activity in a variety of tumor types in both *in vitro* and *in vivo* models and has been explored in multiple Phase I/II clinical program, including an advanced Phase II clinical trial with LOR-2040 and high dose Ara-C (HiDAC) in refractory and relapsed Acute Myeloid Leukemia (AML). The R2 target has been described as a malignant determinant that is elevated in a wide range of tumor types, which can cooperate with a variety of cellular cancer causing genes known as oncogenes to enhance tumor growth and metastatic potential.

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 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; 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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