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**First Candidate from Esperance's Targeted Anti-cancer Platform, EP-100,  
Establishes Preclinical Proof of Concept**

***--Company plans initiation of clinical studies; Data to be presented at AACR--***

Baton Rouge, LA (April 21, 2009) – Drug discovery and development company Esperance Pharmaceuticals today presented positive results from the Company's preclinical program that support the initiation of clinical trials in cancer. EP-100 is the first candidate from the Company's Cationic Lytic Peptide (CLYP™) platform technology. EP-100 is a targeted membrane-disrupting peptide and is designed to selectively target luteinizing hormone releasing hormone (LHRH) receptors, which are overexpressed in a wide range of cancers. Results from preclinical *in vitro* and *in vivo* studies of EP-100 in ovarian cancer cell lines and ovarian xenograft models were presented in a poster presentation entitled, "Targeted Oncolytic Peptide for Treatment of Ovarian Cancers" at the American Association for Cancer Research (AACR) Annual Meeting in Denver, CO.

Esperance is using its CLYP™ technology to develop a robust portfolio of small, novel oncolytic peptides to selectively destroy cancer cells that express target receptors. In addition to EP-100, the Company is developing several other drug candidates, all of which have a unique targeting mechanism of action whereby candidates bind specifically and exclusively to cancer cells that express the target receptors on their surfaces. The positively charged peptides disrupt the negatively charged membranes of the cancer cells, causing rapid cell death by lysis.

"These data not only support the continued development of EP-100, but also validate our core membrane-disrupting peptide platform technology," said Carola Leuschner, PhD, Director of Biology for Esperance and lead author of the study.

“Importantly, results of this study demonstrate that this novel mechanism does not harm normal cells, which we believe may lead to an improved safety profile for drugs emerging from this platform compared to existing cancer therapies such as radiation or chemotherapy.”

“Based on the results observed in these studies, Esperance is actively planning the initiation of a Phase 1 clinical trial of EP-100 in patients with solid cancerous tumors later this year,” said Hector Alila, PhD, President of Esperance. “We believe EP-100 and future candidates arising from our platform technology hold significant potential to more effectively treat multiple indications across oncology, including aggressive cancers known to be resistant to the current standards of care.”

**Study results:**

EP-100 consists of an LHRH receptor-targeting ligand conjugated to a novel membrane-disrupting peptide called CLIP 71. The drug candidate was tested *in vitro* and *in vivo* for activity in LHRH receptor over-expressing and multi-drug resistant ovarian cancer cells (OVCAR-3). As a negative control, the study utilized LHRH receptor negative SKOV-3 ovarian cancer cells. In *in vitro* studies designed to test the cytotoxicity of EP-100 in ovarian cancer cell lines, cells were cultured in the presence of various concentrations of EP-100 or unconjugated CLIP 71 for one to 24 hours. Results demonstrated that EP-100 was fast-acting, destroying LHRH receptor over-expressing OVCAR-3 cells within an hour compared to the unconjugated CLIP 71 which was less cytotoxic and was slow-acting ( $p < 0.005$ ). LHRH receptor negative SKOV-3 cells were significantly less sensitive to EP-100 than OVCAR-3 cells and the effects of EP-100 and unconjugated CLIP 71 were similar in this cell line demonstrating that EP-100 is specific for cells that over-express LHRH receptors.

In *in vivo* studies, the efficacy of EP-100 in comparison to saline or unconjugated CLIP 71 or cisplatin in an ovarian cancer xenograft model (OVCAR-3) was studied. EP-100 regressed established OVCAR-3 xenografts in weekly injections

at doses as low as 0.2 mg/kg bodyweight ( $p < 0.03$  vs. baseline). In comparison, tumor growth was observed across the saline control, unconjugated CLIP 71 and cisplatin arms. In addition, in the EP-100 arm tumor volumes, weights and CA125 (a clinical biomarker for ovarian cancer) were reduced. LHRH receptor levels were also reduced and PET imaging revealed that EP-100 treated tumors became necrotic, lacking viable tumor cells after treatment. EP-100 was well tolerated in all treated groups.

### **About Esperance Pharmaceuticals**

Esperance Pharmaceuticals, Inc. is developing a new class of targeted anticancer drugs using its Cationic Lytic Peptide (CLYP™) platform technology. These drug candidates, called membrane-disrupting peptides (MDPs), selectively kill cancer cells, including cells known to be resistant to chemotherapeutic drugs, without harming normal cells. Targeting occurs through binding to specific receptors on the cell's surface. The Company was founded on patented technology discovered by scientists at Louisiana State University. Founding investors include the Louisiana Fund I, Themelios Venture Partners and Research Corporation Technologies. Additional investors include Louisiana Technology Fund and private investors.