



**Press Release**  
**Embargoed until 8:00 AM EDT, June 3, 2007**

**Constab Pharmaceutical Develops New Tool to Treat Metastatic Colorectal and Other Cancers**

*Chicago, Illinois* – In seeking to: 1) maximize efficient delivery of a cytotoxic agent directly to cancer cells, and 2) reduce or eliminate the side effect burden on patients, Constab Pharmaceutical has developed a new, targeted drug-delivery technology aptly named, Oncoshuttle™. With this technology in hand, Constab has further developed a drug candidate named Aimpila™, that combines the Oncoshuttle™ platform with a direct apoptosis inducer (AI) capable of targeting and destroying cancer cells.

Aimpila™ has been investigated in animal models and in human pilot studies with various solid tumours. Preliminary study results released today at the 43<sup>rd</sup> annual meeting of the American Society of Clinical Oncology (ASCO), show single agent Aimpila™ was well-tolerated and produced major objective responses in patients with liver metastatic colorectal cancer (mCRC).

**Study Outcomes**

This study investigated the single agent activity of Aimpila™, a glycoside/alpha-fetoprotein (AFP) complex, in patients with documented late-stage liver mCRC. Patients received low dose Aimpila™ in an oral capsule, twice daily for 8 weeks, and were examined using CT scans before and after treatment.

Fifty percent (50%) of the 12 patients studied responded positively to treatment with Aimpila™. Overall, 2 patients achieved a complete response, 1 achieved partial response, and 3 achieved stabilization of their disease, which in two cases lasted for two months or more. Of the remaining patients, 3 individuals experienced disease progression, and 3 were non-evaluable using study standards. One non-evaluable patient experienced nausea and vomiting.

**Quote**

“These are encouraging outcomes,” remarks Dr. Mark Vincent, Medical Oncologist with the London Health Sciences Centre, in London, Ontario.

“People with metastatic colorectal cancer, despite the treatment advances already made, still face a limited life span. With an estimated 8,500 colorectal cancer deaths annually in Canada, and a staggering 56,000 in the U.S. – the SECOND LEADING cause



of cancer death in the States – it is clear that effective treatment options constitute an ongoing unmet need.”

“Aimpila™ appears to be well tolerated; at the same time the AFP receptor seems to be associated with a wide range of cancers, but not normal adult tissues. It is reasonable to suggest that quality of life could be maintained or improved with Aimpila™. This drug complex certainly deserves further pre-clinical and bioavailability studies, followed by studies of larger patient groups in standardized, early phase clinical trials.”

### **Current Therapeutic Limitations**

Some of the current anticancer drug therapies for the treatment of metastatic colorectal cancer offer improvements in survival time or median time to disease progression, yet remain encumbered by:

- A lack of specificity to cancer cells, resulting in unwanted side effects and damage to healthy tissues;
- A low ability to destroy cancer cells that are already resistant to existing drug therapies; and/or
- A mode-of-action that prevents cell growth or proliferation, rather than focusing on triggering direct cell death.

### **The Aimpila™ Difference**

“Aimpila™ combines two different mechanisms meeting the characteristics of an ideal drug: one of direct delivery through the Oncoshuttle™ technology, and the second of efficient killing,” states Vladimir Pak, PhD, VP Scientific Affairs and CSO of Constab Pharmaceutical, who is pioneering this innovation. He explains:

The Oncoshuttle™ direct delivery system is a protein (porcine alpha-fetoprotein, or PAFP), that naturally binds to cells with alpha-fetoprotein (AFP) receptors. In humans, AFP receptors are concentrated in embryo cells during pregnancy, and in cancer cells. AFP receptors are absent or present in insufficient amounts on the surface of normal cells, such that anticancer drugs delivered via the Oncoshuttle™ would avoid healthy tissues and potentially eliminate or reduce side effects for patients.

In terms of “perfect killing”, Aimpila™ is a complex of both PAFP and an apoptosis inducer (AI). The Oncoshuttle™ (PAFP) releases the AI load directly into a cancer cell, causing cell death.



## Looking Ahead

“The next step will be to find investors to fund the comprehensive pre-clinical program with Aimpila™,” reports Stéphane Gagné, President and CEO of Constab Pharmaceutical. He adds, “In addition to testing Aimpila™ in other cancers expressing AFP receptors, there is indication that Aimpila™ could be used to kill cancer stem cells. Considering the impact this may have on cancer patients facing drug resistance with current treatment options, we plan to perform studies that will investigate this potential mechanism of action.”

## About Constab Pharmaceutical Inc.

Constab Pharmaceutical Inc. is a Canadian biotech company with offices in Toronto, Ontario, and laboratory facilities in the MaRS Centre, renowned as the heart of Toronto’s “Discovery District”. Constab Pharmaceutical Inc. has developed a novel targeted-delivery platform involving alpha-fetoprotein (AFP) as a carrier for anticancer agents. Since most cancers express AFP receptors (AFPR), this technology could be used to treat the majority of cancers and improve quality of life. The company is seeking collaboration and financing opportunities in order to commence its pre-clinical and clinical program, as well as licensing partners for its anticancer drug delivery technology. Partners may include biotech and pharmaceutical companies seeking to improve the efficacy or toxicology profile of their drugs, extend their patents, or bring new small molecules to market.

Animations and further information on both the Oncoshuttle™ drug delivery platform and Aimpila™, are available at: [www.constabpharma.com](http://www.constabpharma.com).

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