



## **Manhattan Pharmaceuticals Acquires Tarpan Therapeutics Douglas Abel Becomes Chief Executive Officer**

### **Development Portfolio Now Includes Therapeutics for Psoriasis, Obesity and a Lingual Spray for Pre-Procedural Sedation**

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New York NY, April 4, 2005 -- Manhattan Pharmaceuticals, Inc. ("Manhattan" OTCBB: MHTT), has acquired Tarpan Therapeutics, Inc. ("Tarpan"), a privately-held, New York-based pharmaceutical company, in an all stock transaction that resulted in Tarpan shareholders owning approximately 20% of the shares of Manhattan on a fully-diluted basis.

Douglas Abel, formerly CEO of Tarpan, has been named President and Chief Executive Officer of Manhattan as of the completion of the transaction. Abel is a biotech and specialty pharmaceutical veteran with more than 15 years of high-level experience in the field. He has also been appointed to Manhattan's board of directors.

Manhattan's corporate development strategy is to address various large, underserved medical markets. Towards that goal, Manhattan now has three product candidates:

PTH (1-34), which was being developed by Tarpan, is a peptide under development for psoriasis and other dermatological conditions believed to be a regulator of epidermal cell growth. An initial Phase I/II has been completed; Company initiation of a Phase II trial is anticipated in 2005.

Oleoyl estrone (OE) is an orally administered small molecule in Phase I trials that has been shown in extensive preclinical animal studies to cause significant weight loss, without the need for dietary modifications. On February 3, 2005, under a U.S. Investigational New Drug application (IND), Manhattan began dosing patients in its first Phase I clinical trial being conducted in Basel, Switzerland to evaluate the safety and tolerability of defined doses of orally administered OE in obese adults.

Propofol Lingual Spray (Propofol LS) is a fast-acting, quick-recovery sedative for use during diagnostic and therapeutic procedures that is being jointly developed with Novadel Pharma Inc. (AMEX: NVD). On January 27, 2005, the U. S. Food and Drug Administration (FDA) accepted an IND from Manhattan for the initiation of the Phase I human clinical trials.

"Manhattan is now well positioned with an advancing and diversified product pipeline," said Doug Abel, new CEO of Manhattan. "Our products have tremendous potential in their respective markets. I am fully committed to driving shareholder value by assembling and deploying a world-class development team to guide our ongoing clinical trials towards commercialization."

#### **Background on Doug Abel**

Prior to becoming President and CEO of Tarpan, Mr. Abel served as Vice President of the Dermatology Business Unit at Biogen Idec where he worked from August 2000 to November 2004. While at Biogen, he led the creation of the U.S. dermatology commercial operation, building the team from two to more than 100 employees to support the launch of AMEVIVE?. Before that, Mr. Abel was at Allergan Pharmaceuticals from December 1987 to August of 2000, with his most recent position being Director of BOTOX? Marketing. Mr. Abel received his A.B. in chemistry from Lafayette College and an M.B.A. from Temple University.

#### **Background on PTH (1-34)**

Researchers, led by Michael Holick, MD, PhD, Professor of Medicine, Physiology, and Biophysics at Boston University Medical Center, recently reported positive results from a U.S. Phase I/II clinical trial evaluating the safety and efficacy of PTH (1-34) as a topical treatment for psoriasis. This double-blinded, controlled trial in 15 patients comparing PTH (1-34) formulated in the Novasome? technology versus the Novasome? vehicle alone, showed PTH (1-34) to be a potentially safe and effective treatment for plaque psoriasis. Following eight weeks of treatment, the application of PTH (1-34) resulted in complete clearing of the treated lesion in 60% of patients and partial clearing in 85% of patients. Additionally, there was a statistically significant improvement in the global severity score. Ten patients continued into an open label extension study in which the Psoriasis Area and Severity Index (PASI) was measured. In this study, PASI improvement across all ten patients achieved statistically significant improvement compared to baseline. No patients experienced any significant adverse events.

Due to the high response rate seen in psoriasis patients in the initial trial, PTH (1-34) may have an important clinical advantage

over current topical psoriasis treatments. Manhattan intends to initiate additional clinical activities with PTH (1-34) in 2005. Manhattan has the rights to issued and pending patents for all topical uses of PTH (1-34) as well as access to the Novasome? technology and patents for these applications. Novasome? is a registered trademark of IGI, Inc., Buena, NJ (Amex: IG).

### **Background on Oleoyl estrone**

Oleoyl estrone is an orally administered form of a naturally occurring molecule shown, in extensive preclinical animal studies, to cause significant weight loss without the need for dietary modifications. In such studies, OE appears to be safe and effective with no evidence of rebound weight gain after treatment has been discontinued. OE may prove to be a safe and effective treatment for obesity, representing a significant improvement over currently available anti-obesity medications. On February 3, 2005, following permission from the FDA, the first dosing of patients in a Phase I clinical trial began in Basel, Switzerland.

### **Background on Propofol LS**

Propofol Lingual Spray is being developed as a safe and convenient, non-invasive formulation of propofol, the world's best selling intravenous general anesthetic. Manhattan believes that the delivery of propofol via a lingual spray will provide many advantages over currently formulated sedatives, to the benefit of patients undergoing innumerable diagnostic and therapeutic procedures each year. In particular, clinicians would have the ability to tightly control the onset, duration, and depth of sedation, with a level of reliability and accuracy previously unknown, promoting improved procedural outcomes as well as patient comfort and satisfaction.

Manhattan's pilot Phase I study of Propofol LS, conducted in the United Kingdom, was a single-center, randomized, double-blind, placebo-controlled dose-escalating study of propofol lingual spray in twelve healthy adult volunteers. The study was conducted using a formulation of Propofol LS packaged in single-dose actuators designed to deliver the formulation in a fine mist to the oral mucous membranes. Propofol LS was detectable in blood as early as four minutes following spray administration and resulted in a mean time to maximum blood concentration of approximately 30 minutes across all doses. The mean maximum blood concentrations plateaued at the highest of the three doses tested, with mean bioavailability of the current spray formulation up to 18% of that of the intravenous formulation. No serious adverse events, nor dose-dependent changes in laboratory parameters or vital signs, occurred in any group.

Physical characteristics and stability data for the formulation of Propofol LS used in this trial were recently presented by Manhattan at the 79th Clinical and Scientific Congress of the International Anesthesia Research Society, in Honolulu in March 2005.

On January 27, 2005, the FDA accepted an IND from Manhattan for the initiation of the human clinical trials that will be required for FDA approval of Propofol LS.

Propofol LS is being jointly developed with Novadel Pharma Inc (Amex: NVD).

### **About Manhattan Pharmaceuticals, Inc.**

Manhattan Pharmaceuticals, Inc. (<http://www.manhattanpharma.com/>), a development-stage pharmaceutical company, acquires and develops proprietary prescription drugs for large, underserved patient populations.

### **About NovaDel Pharma Inc.**

NovaDel Pharma, Inc. is a specialty pharmaceutical company engaged in the development of novel drug delivery systems for prescription and over-the-counter drugs. The company's proprietary lingual spray technology delivery system offers the patient the potential for (i) fast onset of action; (ii) improved drug safety by reducing the required drug dosage and reducing side effects; (iii) improved patient convenience and compliance; and (iv) enhanced dosage reliability. The company plans to develop such products independently and through collaborative arrangements with major pharmaceutical and biotech companies. More information about NovaDel can be found on its website at <http://www.NovaDel.com>.

### **About IGI, Inc.**

IGI is a company committed to growth by applying proprietary technologies to achieve cost-effective solutions for varied customer needs. IGI offers the patented Novasome? nano-vesicular, transdermal delivery technology which contributes value-added qualities to cosmetics, skin care products, dermatological formulations and other consumer products, providing improved dermal absorption, controlled and sustained release as well as improved stability and greater ease of formulation. IGI has licensed Novasome? nano-vesicular delivery technology to leading global dermatological and skin care companies including Johnson & Johnson Consumer Products, Inc., Estee Lauder Corporation, Chattem Inc., Genesis Pharmaceutical, Inc. and Apollo Pharmaceutical, Inc., and recently sub-licensed the rights to obtain FDA approval for and market IGI's PTH (1-34) compound using Novasome? nano-vesicular delivery technology for psoriasis, which is slated for Phase II clinical trials, to Tarpan Pharmaceuticals, Inc. IGI is also exploring the licensing of the topical PTH (7-34) compound for the prevention/treatment of chemotherapy induced alopecia in patients undergoing chemotherapy.