

Titan Pharmaceuticals Licenses Exclusive Probuphine(R) Commercialization Rights in U.S. and Canada to Braeburn Pharmaceuticals

Titan Receives \$15.75 Million Up-Front Payment, up to \$215 Million in Potential Milestones Plus Tiered Royalties; Titan to Host Conference Call Today at 4:05pm ET

SOUTH SAN FRANCISCO, CA -- (Marketwire) -- 12/17/12 -- <u>Titan Pharmaceuticals, Inc.</u> (OTCBB: TTNP) today announced the signing of a license agreement with Braeburn Pharmaceuticals Sprl, wholly owned by Apple Tree Partners IV, L.P., a partnership affiliated with <u>Apple Tree Partners</u>. The license grants Braeburn exclusive commercialization rights in the United States and Canada to the investigational product Probuphine®, a novel, subdermal implant and the first long-acting product designed to deliver six months of the drug buprenorphine hydrochloride following a single treatment. On October 29, 2012, Titan announced the submission of a New Drug Application (NDA) to the U.S. Food and Drug Administration (FDA) for Probuphine for the maintenance treatment of opioid dependence in adult patients.

Titan has received a non-refundable \$15.75 million up-front payment and will receive up to \$50 million upon the approval of Probuphine by the FDA for the treatment of opioid dependence. Additionally, Titan will be eligible to receive up to \$130 million upon achievement of sales milestones and up to \$35 million in regulatory milestones for additional contemplated indications, including chronic pain. Titan will receive tiered, double digit percentage royalties on net sales of Probuphine within a range that is customary for products at this stage. In addition to the potential milestone payments, Apple Tree Partners IV has allocated in excess of \$75 million to launch, commercialize and continue the development of Probuphine.

Apple Tree Partners, founded in 1999, creates life sciences companies. Through two predecessor partnerships, Apple Tree founded and built Aileron Therapeutics, Gloucester Pharmaceuticals (acquired by Celgene), HeartWare International and Tokai Pharmaceuticals. The firm intends to use the entirety of its recently closed partnership, Apple Tree Partners IV, to build Apple Tree Consolidated SprI, a holding company that will create and own complementary life sciences businesses (pharmaceuticals, medical devices, and technology-enabled healthcare services). Braeburn Pharmaceuticals will become a division of Apple Tree Consolidated.

Braeburn Pharmaceuticals is led by a strong, highly experienced team that includes Rose

Crane, former Company Group Chair OTC, Specialty and Nutritionals at Johnson & Johnson, and President, Primary Care at Bristol Myers Squibb, and Garry Neil, M.D., former Group President Pharmaceutical R&D at Johnson & Johnson.

"We believe this agreement with Braeburn Pharmaceuticals offers a tremendous opportunity to accelerate the commercialization of Probuphine and provides Titan with the financial resources to further advance our technology and pipeline," said Sunil Bhonsle, president of Titan. "While a broad range of pharmaceutical companies expressed interest in Probuphine, we found that the innovative model of the new company established by Apple Tree not only provides us with a value-driven transaction for Titan shareholders, but also brings to the process a seasoned team of industry veterans with proven track records of launching and commercializing important therapies, including controlled substances. The North American Probuphine franchise will be launched and developed by a top notch commercialization team, maximizing the potential for its rapid acceptance in the medical and patient community and a successful commercial launch for both companies."

"The Board of Titan is extremely pleased with this strategic partnering outcome and the path forward for Probuphine," said Marc Rubin, M.D., executive chairman of Titan Pharmaceuticals. "It is our ultimate goal to rapidly and efficiently advance Probuphine to the market and the patients and clinicians who can benefit from safe and effective treatments for opioid addiction. Braeburn Pharmaceuticals has been formed with that same goal and we look forward to working with their team to achieve it."

Under the terms of the agreement, Titan will remain responsible for any expenses associated with the support of the current NDA review process. Upon completion of the FDA review process, Braeburn Pharmaceuticals will assume all responsibility for commercialization and further clinical development of Probuphine in the U.S. and Canada. The Titan team is already interacting routinely with the Braeburn team and will continue to assist through product launch as needed. Titan and Braeburn Pharmaceuticals will also have a joint development committee to oversee the overall strategic objectives and plans relating to the development of Probuphine, including regulatory strategy with respect to any Phase IV clinical trials, communications with regulatory authorities and clinical programs for chronic pain and any other potential indications.

"The leadership team of Braeburn Pharmaceuticals combines the entrepreneurial success of Apple Tree Partners with a proven track record in pharmaceutical development and commercialization," said Ms. Crane, partner at Apple Tree Partners and head of pharmaceutical commercialization at Apple Tree Consolidated. "We are excited by the Probuphine opportunity and look forward to working with the Titan team to drive the successful commercial launch following FDA approval."

"Probuphine is an exciting new product with the potential to change the lives of patients suffering from opiate dependence," said Dr. Neil, partner at Apple Tree Partners and head of pharmaceutical research and development at Apple Tree Consolidated.

Titan Conference Call

Members of the Titan and Braeburn Pharmaceuticals management teams will host a conference call to discuss the deal today at 4:05 pm ET. Participating on the call will be Mr. Bhonsle, Dr. Rubin, Katherine Beebe, Ph.D., executive vice president and chief development officer of Titan, Ms. Crane and Dr. Neil. The live webcast of the call may be accessed by visiting the Titan website at <u>www.titanpharm.com</u>. The call can also be accessed by dialing

888-221-3887, Participant Code: 7422088 five minutes prior to the start time. A replay of the call will be available on the Titan website approximately two hours after completion of the call and will be archived for two weeks.

About Opioid Addiction

It is estimated that there are 2.3 million opioid addicts in the U.S. Approximately 20 percent of this potential patient population is addicted to illicit opioids, such as heroin, and the other 80 percent to prescription drugs, such as oxycontin, methadone, and codeine. Until recently, medication-assisted therapies for opioid addiction had been sanctioned to a limited number of facilities in the U.S. Today, physicians can be certified to prescribe certain opioid addiction medications in an office setting, which has greatly expanded patient access to opioid addiction pharmaceutical therapies. As a result, it is estimated that there are approximately 750,000 people in the U.S. receiving medicinal treatment for opioid addiction.

About Probuphine®

Probuphine is an investigational subcutaneous implant capable of delivering continuous and persistent, around the clock blood levels of buprenorphine for six months following a single treatment, enhancing patient compliance and retention. The NDA for Probuphine was submitted to the FDA in October 2012 including a request for Priority Review. Buprenorphine, an approved agent for the treatment of opioid dependence, is currently available in the form of daily dosed sublingual tablets and film formulations, with reported 2011 sales of \$1.3 billion in the United States. The efficacy and safety of Probuphine has been studied in several clinical trials, including a 163-patient, placebo-controlled study that demonstrated clinically meaningful and statistically significant treatment benefits with Probuphine over a 24-week period (published in the Journal of the American Medical Association (JAMA)), and a confirmatory study of 287 patients that showed statistically significant efficacy versus placebo and non-inferiority with a currently marketed sublingual formulation of buprenorphine.

Probuphine was developed using ProNeura[™], Titan's continuous drug delivery system that consists of a small, solid rod made from a mixture of ethylene-vinyl acetate (EVA) and a drug substance. The resulting construct is a solid matrix that is placed subcutaneously, normally in the upper arm in a simple office procedure, and removed in a similar manner at the end of the treatment period. The drug substance is released slowly, at continuous levels, through the process of diffusion. This results in a constant rate of release similar to intravenous administration.

About Apple Tree

For more information please visit the company's website at:<u>www.appletreepartners.com</u>.

About Titan Pharmaceuticals

For information concerning Titan Pharmaceuticals, Inc., please visit the company's website at <u>www.titanpharm.com</u>.

Safe Harbor Statement

The press release may contain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Such statements include, but are not limited to, any statements relating to the Company's development program and any other statements that are not historical facts. Such statements involve risks and uncertainties, including, but not limited to, those risks and

uncertainties relating to difficulties or delays in development, testing, regulatory approval, production and marketing of the Company's drug candidates, adverse side effects or inadequate therapeutic efficacy of the Company's drug candidates that could slow or prevent product development or commercialization, the uncertainty of patent protection for the Company's intellectual property or trade secrets, the Company's ability to establish corporate partnerships to support the development and commercialization of its products and the Company's ability to obtain additional financing. Such statements are based on management's current expectations, but actual results may differ materially due to various factors, including those risks and uncertainties mentioned or referred to in this press release

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Source: Titan Pharmaceuticals, Inc.