



Titan Pharmaceuticals, Inc.

Company:
Alison R. Lehanski
Director, Corporate Communications
650-244-4993

Media:
Mark Padgett
GCI Group
212-537-8082

Investors:
Robert Ferris
GCI Group
212-537-8025

FOR IMMEDIATE RELEASE

TITAN ANNOUNCES SPHERAMINE® DEMONSTRATES SUSTAINED BENEFIT TWO YEARS AFTER TREATMENT IN PILOT CLINICAL STUDY

New Long-Term Data Presented at American Academy of Neurology

South San Francisco, CA – April 2, 2003 – Titan Pharmaceuticals, Inc. (ASE:TTP) today announce that two years after receiving treatment with Spheramine®, patients with advanced Parkinson’s disease (PD) demonstrate sustained, significant improvements in motor function. New results from Titan’s pilot clinical study that has followed six patients for more than 24 months showed that Spheramine produced an average 41 percent improvement in motor function.

Spheramine is a novel cell therapy in development that utilizes normal human cells attached to microcarriers, and is designed to enhance brain levels of dopamine, the neurotransmitter deficient in Parkinson’s disease.

“Parkinson’s disease is a progressive disorder, so the fact that these patients experience significant improvement that is maintained two years after treatment with Spheramine is very encouraging,” said Ray L. Watts, M.D., Professor and Vice Chairman, Department of Neurology, Emory University School of Medicine and principal investigator of the study. “These results are promising and warrant moving on to a blinded, controlled trial of this cell therapy approach for patients with advanced Parkinson’s disease.” Dr. Watts presented the new long-term results at the 55th annual meeting of the American Academy of Neurology.

The cells used in Spheramine, called retinal pigment epithelial (RPE) cells, produce L-DOPA, the natural precursor of dopamine. RPE cells can be grown in large numbers using cell culture manufacturing methods to produce thousands of standardized doses of Spheramine from a single starting sample. The microcarriers, to which the RPE cells are attached to create Spheramine, enable long-term cell survival and function in the brain without the need for immunosuppression. Spheramine is injected into the brain regions lacking dopamine, using a surgical technique called stereotactic injection.

In the pilot study, six patients with late-stage Parkinson’s disease (Hoehn & Yahr Stage III & IV) were treated with a fixed dose of Spheramine (325,000 RPE cells) implanted unilaterally into the most affected side of the brain. Patients were evaluated pre- and post-treatment, both ‘on’ and ‘off’ their normal medication, using the Unified Parkinson’s Disease Rating Scale (UPDRS), a standard measure of Parkinson’s disease severity. All patients demonstrated significant improvements in their condition that have been sustained through 24 months. Patients at two years post treatment demonstrated:

- 41 percent average improvement (range 29-58 percent) in motor UPDRS scores, off their

PD medications overnight

- 48 percent average improvement in motor UPDRS scores, while on other PD medications
- 39 percent average improvement in quality of life

In addition, Spheramine was found to be safe and well tolerated.

“Cell therapy is an important area of research that offers hope for patients suffering from PD, and the mounting preclinical and clinical evidence supporting the therapeutic potential of Spheramine is quite promising,” commented Warren Olanow, M.D., Chairman, Department of Neurology, Mount Sinai School of Medicine.

Based on the positive results of the pilot study, Titan and Schering AG, Germany, Titan’s corporate partner for worldwide development and commercialization of Spheramine, have already initiated a randomized, blinded, controlled Phase IIb clinical study to further evaluate the safety and efficacy of Spheramine. This study will enroll 68 patients with late-stage Parkinson’s disease.

“We are very pleased by the excellent results of the Spheramine pilot study,” said Louis R. Bucalo, M.D., Chairman, President and CEO of Titan. “We look forward to advancing the randomized Phase IIb study and further evaluating the safety and efficacy of Spheramine.”

Parkinson’s disease affects more than one million people in the United States and an estimated four million people worldwide.

About Titan Pharmaceuticals

Titan Pharmaceuticals, Inc. (ASE: TTP) is a biopharmaceutical company focused on the development and commercialization of novel treatments for central nervous system (CNS) disorders, cancer and other serious and life-threatening diseases. Titan’s numerous products in development utilize novel technologies that have the potential to significantly improve the treatment of these diseases. Titan also establishes partnerships with multinational pharmaceutical companies and government institutions for the development of its products.

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, unexpected 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 and the Company’s ability to obtain additional financing if necessary. 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.

###