

**For Immediate Release**

**Orphagen Pharmaceuticals Awarded \$460,339  
from the National Institutes of Health  
to Investigate of Novel Drugs  
for Treatment of Sleep Disorders**

San Diego, September 23, 2005-- Orphagen Pharmaceuticals announced today that it had been awarded a two-year federal grant for \$460,339 to initiate discovery and characterization of novel drugs for sleep disorders. The small business innovative research (SBIR) grant was awarded by the National Institute of Mental Health, one of the component institutes of the National Institutes of Health (NIH), following competitive scientific review.

“We consider this an important step forward in our strategy to develop Orphagen into a successful business in the area of new leads discovery. The target of interest to us is highly concentrated in areas of the brain that regulate the body’s daily sleep cycle or circadian rhythm. The target appears to have a direct impact on timekeeping by the body’s central molecular clock. We are now in a position to apply our drug discovery technology to characterize potential therapeutic small molecules for sleep disorders,” said Scott Thacher, CEO and founder of Orphagen.

Orphagen discovers drug candidates for potential drug targets for which small molecule ligands--potential drug-like molecules--have yet to be identified. Its goal is to identify, characterize, and position a new class of drug so that pre-clinical and clinical development can be initiated with partners and/or outside sources of funding. These targets come from the nuclear receptor family of drug targets. On a per target basis, the nuclear receptors are one of the most successful target classes known to the pharmaceutical industry. Targets of interest to Orphagen encompass several of the so-called orphan nuclear receptors--potential therapeutic receptors that have yet to be exploited by the pharma industry.

The description of the proposed research reads in part:

“Insomnia and sleep disturbance contribute to occupational injuries, heart disease, and mental illness. Loss of synchrony between the body’s internal clock and the environment, or a reduction in the amplitude of the body’s normal circadian rhythm, is a major cause of sleep disorders. Current therapeutic approaches to better synchronize or enhance the function of the body’s internal clock have limited effectiveness. A novel class of drug that effectively regulates circadian rhythm will have major value in treatment of jet lag, sleep disorders of shift work, and forms of insomnia due to depression, Alzheimer’s disease, and aging that affect more than 10 million Americans each year.”

**Orphagen is one of a select group of high-caliber, independently-owned technology companies that has created a successful drug discovery research program on the basis of SBIR grants. Grant proposals receive rigorous external review by an independent scientific panel. To date, Orphagen has been awarded a total of \$1.7 million in grants from the NIH and other agencies. Orphagen has four full-time and three part-time employees.**

**Phase I SBIR grants (such as the grant currently funded) support feasibility studies and, when these are successfully completed, enable applicants to apply for more substantial Phase II grants. Phase II grants are designed to translate research programs into technology that can be commercialized.**

**Contact: Scott Thacher**

**Phone: (858) 625-0540**

**e-mail: [smt@orphagen.com](mailto:smt@orphagen.com)**

**Orphagen Pharmaceuticals, 5310 Eastgate Mall, San Diego, CA 92121**