

MICROBIOTIX, INC. RECEIVES SBIR PHASE II RENEWAL GRANT TO DEVELOP A SECOND GENERATION ANTI-CMV AGENT

1 September 2008. Microbiotix, Inc, a privately held biotechnology company, announced today that it was awarded a Phase II Small Business Innovation Research (SBIR) Renewal grant from the National Institutes of Health/NIAID. The SBIR Phase II grant entitled, "A Potent Oral Therapy for Cytomegalovirus Infection" provides two years of support to develop an expanded IV preclinical biological profile of a second generation methylenecyclopropane for treatment of CMV infections and to file an Investigational New Drug (IND) application.

Cytomegalovirus (CMV) infection represents a major health concern in the immunocompromised population, especially recipients of bone marrow and solid-organ transplants. ZSM-I-62 is a novel anti-HCMV agent which has been shown to be very potent against human CMV (HCMV), including drug resistant clinical isolates, orally bioavailability (58%), highly efficacious against HCMV in animal models and extremely well tolerated in rat and dog oral toxicology studies. The goal of this SBIR Phase II Renewal is to prepare an expanded IV preclinical biological profile of ZSM-I-62 for its further development and file an Investigational New Drug (IND) application for the IV and oral treatment of HCMV infection.

The current standard for therapy is ganciclovir (GCV), and its prodrug valGCV, both of which suffer from bone-marrow toxicity and emerging resistance. Alternatives include foscarnet (PFA) and cidofovir (CDV); however, toxicity limits their use. Therefore, there is still a need for new anti-HCMV therapeutic agents. A new series of purine nucleoside analogs, the methylenecyclopropanes (MP), have been shown to be potent inhibitors of CMV. In our SBIR Phase II studies, a second generation analog, ZSM-I-62, was shown to be very potent against murine CMV (MCMV) and human CMV (HCMV), including GCV- and PFA-resistant clinical isolates, and very active against other beta- and gamma-herpes viruses, including HHV 6 and HHV 8. Coupled with its excellent oral bioavailability (58%), ZSM-I-62 was highly efficacious orally against MCMV and HCMV in four experimental animal models. Microbiotix, Inc. owns an exclusive worldwide license from Wayne State University to all the MP compounds and their uses. The primary project objective is to develop ZSM-I-62 for the intravenous (IV) and oral treatment of human CMV infection. HHV 6 and 8 will be secondary clinical therapeutic endpoints. As part of the original SBIR Phase II grant-funded research, Microbiotix conducted toxicology and pharmacokinetic studies using oral administration. ZSM-I-62 was extremely well tolerated in both the rat and dog oral toxicology studies. At the high oral dose in the dog toxicology studies (300mg/kg), the kidney was identified as a potential target organ. Analysis of the SBIR Phase II data further indicated sex, species and dose-related changes in pharmacokinetics. Therefore, additional IV ZSM-I-62 rat and dog studies will be performed in order to expand the pharmacokinetic and toxicology data to effectively establish endpoints required to monitor human clinical safety. The NIH RAID program is supplying ZSM-I-62, including radio-labeled material, formulation support and analytical method development.

The aims of this research program are as follows: (1) Conduct intravenous IND-enabling preclinical studies; (2) Develop chemistry, manufacturing and controls information; (3) Prepare and submit IND application for the treatment of human cytomegalovirus (HCMV).

Terry Bowlin, Ph.D., CEO, will serve as the Principal Investigator of the grant.

About Microbiotix

Founded in 1998, Microbiotix, Inc. is a product-focused biopharmaceutical company engaged in the research and development of novel, small-molecule, anti-infective drugs that address commercially significant medical markets. The company currently has several active research programs in the fields of anti-bacterial and anti-viral discovery, with three compound series in pre-clinical development. More information can be found on the company's web site, www.microbiotix.com.