

## **MICROBIOTIX, INC. RECEIVES STTR PHASE I GRANT TO DEVELOP A BIS-INDOLE COMPOUND AGAINST CATHETER COLONIZATION**

**August 15, 2011.** Microbiotix, Inc (MBX), a privately held biotechnology company, announced that it was awarded a Phase I Small Business Technology Transfer (STTR) grant from the National Institutes of Health/NIAID. The STTR Phase I grant entitled, "A Novel Bis-Indole Compound Against Catheter Colonization" provides two years of support to develop an innovative catheter coating that has been shown to be effective in preventing catheter colonization by Gram-positive and Gram-negative pathogens. The research will be conducted through a research collaboration with Dr. Rabih Darouiche and David Mansouri of Baylor College of Medicine (BCM) in Houston, TX.

Over 5 million vascular catheters are inserted in patients every year, and about 5% of these catheters lead to catheter-associated infections. Bacterial pathogens that colonize catheters and produce a biofilm on the surface of the catheter shortly after implantation are the cause of catheter-associated infections. A number of antimicrobial-treated catheters have been developed to combat these infections, however, many of them are not effective against biofilms. The innovative catheter coating, developed in collaboration with Dr. Rabih Darouiche and David Mansouri of Baylor College of Medicine, consists of MBX-1631, a novel broad-spectrum antimicrobial agent. Terry Bowlin, Chief Executive Officer of MBX, stated "MBX-1631 is a promising antimicrobial agent for use as a device coating that prevents microbial colonization of medical devices, because it is rapidly bactericidal ( $\geq 3$  log decrease in cfu/ml) against Gram-positive and Gram-negative pathogens, and we have not been able to detect resistance to MBX-1631 in numerous *in vitro* studies, which are ideal properties for an antimicrobial coating." In preliminary experiments using *in vitro* and *in vivo* systems, scientists at BCM have demonstrated that catheters coated with MBX-1631 are effective in reducing catheter colonization by the Gram-negative and Gram-positive pathogens that cause the majority of device-related infections.

The overall goal of the proposed research is to develop antimicrobial coatings for medical devices that will prevent device-associated infections. In Phase I, MBX will formulate device coatings containing MBX-1631 and several analogs, and we will use them to coat medical device materials. The anti-biofilm properties and cytotoxicity of these coated devices will be tested in a series of *in-vitro* assays to evaluate their efficacy and selectivity. In addition, the several physical parameters of the coated devices, such as elution kinetics and durability, will be evaluated. Finally, selected coated devices will be evaluated in animal models to test for their antimicrobial efficacy and toxicity. Compounds that meet specified criteria for efficacy, selectivity, and physical properties will be developed further in a subsequent Phase II project.

Timothy Opperman, Ph.D., Senior Research Scientist, 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](http://www.microbiotix.com).**