

## James & Esther King Biomedical Research Program

***Hare, Joshua***

*Interdisciplinary Stem Cell Institute  
University of Miami*

*2009 Program  
Shared Instrument Grant  
(1-year project)*

**Project Title:** Fixed-Base Biplane Imaging Laboratory for Experimental Models and Preclinical Therapeutic Studies in Cardiovascular Diseases Caused by Tobacco

**Project Summary:** Heart disease and stroke are the first and third leading causes of death in the United States, respectively, and smoking causes all forms of cardiovascular disease. Unfortunately, once damaged by lack of blood flow, the heart muscle, the brain, and other organs are irreversibly scarred. The University of Miami Interdisciplinary Stem Cell Institute (ISCI) conducts research in tobacco-related diseases and has an established track record in studying stem cell therapy for cardiovascular damage. The purpose of this shared instrument grant is to obtain a Cardiovascular Angiography System, which consists of dual x-ray imaging devices and computer systems for collection of digital x-ray images for preclinical research in animal models. The instrument is essential to the conduct of our research in the minimally invasive delivery of stem cells to diseased tissue. This instrument is shared by successful cell-therapy programs, which hold the promise of groundbreaking cures for tobacco-related cardiovascular diseases.