

James & Esther King Biomedical Research Program

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*Medicine
University of Florida*

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

Project Title: Fluorescence Activated Cell Sorter for Treatment of Tobacco-Related Diseases

Project Summary: Fluorescence-Activated Cell Sorting (FACS) is an essential technology for translational research where individual cells must be studied in large numbers, particularly when the source material is a mixture of cells, such as patient tissues or mixed cell cultures. A number of investigators at the University of Florida (UF) Health Sciences Center are testing new cellular therapies for the treatment of tobacco-related diseases such as cardiovascular disease, limb ischemia, bone marrow failure, and cancer. Cellular therapies for these diseases require cell collection, processing, storage, and infusion. The cells are administered with intent to repair tissues damaged by tobacco toxicity. A FACS system will greatly benefit the translational research work by UF physician-scientists by endowing them with the capability to adequately characterize harvested, processed, cryopreserved, and infused cells intended for investigational therapies. Careful evaluation of cells is required by the Food and Drug Administration (FDA) and for scientific reporting purposes. Thus, a FACS system is a critical piece of equipment that is essential for the success of physician-scientists at UF and Shands Hospital.