

James & Esther King Biomedical Research Program

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*Pulmonary and Critical Care Medicine
University of Miami*

*2007 Program
Bridge (1-year project)*

Project Title: Mechanisms of Oxidant-Induced Chronic Bronchitis

Project Summary: Chronic bronchitis is a debilitating disease characterized by chronic cough and frequent respiratory infections that result in frequent hospitalizations and poor quality of life. The most common cause of chronic bronchitis is exposure to cigarette smoke. Gases in tobacco smoke have been shown to have substances called reactive oxygen species that damage the lung epithelium and can result in chronic bronchitis in individuals exposed to cigarette smoke. In this grant, we will use cells obtained from lung donors suffering from chronic bronchitis in combination with state-of-the-art techniques to understand why mucous hypersecretion occurs and how we can intervene to prevent the disease or the progression of the disease in individuals that have been exposed to cigarette smoke.