

James & Esther King Biomedical Research Program

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*Cancer Prevention and Control
H. Lee Moffitt Cancer Center & Research Institute*

*2009 Program
New Investigator (3-year project)*

Project Title: Molecular Epidemiology of Lung Cancer Survival: A Pathway Approach

Project Summary: Globally, lung cancer is the most common tobacco-related disease. Despite the current knowledge about the deadly and deleterious effects of cigarette smoking, the prevalence of smoking in the U.S. has not seen drastic declines over the last decade. More people die from lung cancer than any other type of cancer in the U.S., and lung cancer accounts for more deaths than breast cancer, prostate cancer, and colon cancer combined. Over the last 40 years, lung cancer survival has not improved significantly, and the 5-year survival rate for all stages combined remains a dismal 15 percent. Hence, there is an immediate need to develop lung cancer survivorship studies to investigate genetic and environmental factors and their influence on lung cancer survival. The objective of this grant is to analyze genetic factors and environmental exposures for lung cancer survivorship using data from a cohort of lung cancer patients. The long-term objectives of this research are to improve lung cancer survival and to develop multidisciplinary lung cancer studies in collaboration with clinicians, basic scientists, geneticists, and biostatisticians. This research has tremendous societal implications by identifying high-risk individuals for poor survival and prognosis and provides an approach for individualized treatment based on genetic and environmental exposure profiles.