

James & Esther King Biomedical Research Program

Boules, Mona

*Neuroscience
Mayo Clinic*

*2011 Program
Technology Transfer Feasibility
(1-year project)*

Project Title: Novel Therapy for Nicotine Addiction in Alcoholics

Project Summary: Prevalence of smoking in alcoholics is as high as 90% compared to 30% for the general population, and alcohol consumption is associated with high nicotine use. The co-dependence of nicotine and alcohol addiction complicates treatment and is often associated with significant morbidity and mortality. Co-morbid cigarette smoking and alcoholism has been associated with higher rates of depression in comparison with non-alcoholic smokers and increased cravings for nicotine in comparison with non-alcohol dependent smokers. Additionally, smoker alcoholics are more likely to die from smoking-related diseases rather than directly from an alcohol-related medical condition. Treatment options of alcohol and tobacco co-dependence are limited. Thus, there is a critical need for the development of novel drugs and the exploration of new therapeutic targets. The goal of this grant is to prove the efficacy of a new drug, NT69L, in the treatment of nicotine addiction in an animal model of alcoholics, the alcohol dependent rats. Additionally, the effect of NT69L in restoring brain chemicals altered with nicotine and alcohol co-administration to their normal state will be determined to provide evidence that NT69L can counteract the chemical changes implicated in the addictive process.