

**Principal Investigator:** James G. Wilson

**Institution Affiliation:** University of Mississippi Medical Center

**Ancillary Study Title:** A challenge grant to conduct a multi-ethnic study of type 2 diabetes genes in in the Jackson Heart Study

**Project Overview:** The current project is undertaken to analyze common and rare variants that contribute to risk of type 2 diabetes (T2D) in each of six major ethnic groups that contribute to the US population: African Americans, Latino Americans, Asian Americans, Native Hawaiians, Native Americans and Non-Hispanic Whites. DNA samples and phenotype data from members of each of these groups who are participants in the Jackson Heart Study (JHS), Framingham Heart Study (FHS), Multi-ethnic Cohort (MEC), and Diabetes Prevention Program (DPP) will be analyzed. Common variants at an array of replicated loci that have been found in GWA analyses to be associated with T2D will be genotyped, and rare variants that may contribute to T2D will be sought by deep sequencing of all coding exons at these loci in 250 cases and 250 controls from each ethnic group. Data produced by this project will provide new insights into the molecular mechanisms that contribute to T2D, and may identify important risk markers as well as potential therapeutic targets for future advances in the management of T2D.