

Applicant

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Project Title

Pleiotropic Effects of Cardiometabolic Genetic Markers and their Interaction with Environmental Factors in Cardiovascular Diseases

Project Summary

Our goal is to understand the multiple effects of genetic variants. We will compare the large-scale data sets and analyze them to understand how genetics interact with environmental factors. We know that genetic variation contributes to four different plasma cholesterol traits, i.e. total cholesterol (TC), low density lipoprotein cholesterol (LDL-C), high density lipoprotein cholesterol (HDL-C), and triglycerides (TG). We wish to determine how these genetic contributions can be mitigated when such things as diet and exercise are taken into consideration. Additionally, we will also perform tests on multiple cardiovascular diseases to look for overlapping sets of genes. Our long-term goal is to discover new treatments for cardiovascular diseases by investigating both genetic and environmental mechanisms that contribute.

Keywords

Cardiovascular diseases, Genetics, Risk factors, Genome-Wide Association Studies, Gene-Environment Interactions