

Principal Investigator

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Summary of research

health, Alzheimer's, psychiatric, methods

Application Lay Summary:

1a: We are interested in how anthropomorphic and health/disease phenotypes are associated with health and disease. The specific aim of this study is to examine association signals from SNPs, examine how much of the variation is captured by examining all SNPs simultaneously, and look at the extent to which SNPs that predict variation in these phenotypes in one ethnic group also predict variation in these traits in other ethnic groups. We would also like to conduct association analyses of tobacco use and alcohol phenotypes and meta-analyze them with results from other studies. Finally, we are interested in using these phenotypes to test new methods for using SNP data to estimate the heritability of traits.

1b: Several 'intermediate' factors, such as anthropometric phenotypes (e.g., BMI and height) and blood proteins (e.g., cholesterol) affect human health and disease, yet the genetic underpinnings of these phenotypes remain poorly

characterized. This is a request for access to data relevant to health related traits in order to help elucidate the patterns of genetic variation that may underlie these traits. Access to data containing health and disease outcomes will allow study of the genetic variation underlying the particular diseases, and the relationship of that variation to anthropometric risk factors and correlates. Understanding the genetic architecture of anthropomorphic and health/disease phenotypes can lead to greater understanding of the mediating factors that affect the burden of health and disease in modern societies.

1c: We plan to use genetic data (single nucleotide polymorphism data) to investigate whether certain genetic variants predict these intermediate and disease traits, and how well we can predict these traits by considering all genetic data simultaneously.

1d: Our methods require large samples; we would like access to all whole genome genotyped data possible.