

### **Research Use Statement for Application for Genomic Data from NIAGADS**

Please limit to 2,200 characters max. The statement should include the following components:

- Objectives of the proposed research;
- Study design;
- Analysis plan, including the phenotypic characteristics that will be evaluated in association with genetic variants

#### **Research Use Statement:**

Genetic risk of Alzheimer's disease is available for SNPs across the genome from a large number of sources and for multiple human populations. The aim of this research is to combine the risk of individual SNPs using several methods ranging from naive additive and multiplicative models, to the most advanced statistical techniques, including elastic nets, other regularization techniques, and meta-analytic approaches that account for linkage disequilibrium. These different methods of combining risk will be validated and the single best method selected in order to provide a best estimate for an individual's genetic risk of developing Alzheimer's Disease.

#### **Non-Technical Summary for Application for Genomic Data from NIAGADS**

After all the research that has been done to identify what each gene says about our risk of developing Alzheimer's disease, the next step is to combine the knowledge from these studies so that we can use our DNA to predict a person's chance of developing Alzheimer's disease.