Creating a Genetics Resource with the Health and Retirement Study. David R. Weir, Jessica D. Faul.

This project aims to create a new resource based on rich phenotypic data and a substantial repository of genetic material on 13,000 participants in a major multi-disciplinary public-use longitudinal study of aging. The Health and Retirement Study (HRS), begun in 1992, sets the standard for data-sharing and dissemination, with over 1,000 publications by over 1,000 different authors and co-authors. Its rich measurement across domains of health, psychological characteristics, social networks, and economic status and behavior creates an unparalleled body of phenotypic data observed over time that can now be paired with a rich genotypic characterization of a million SNPs genotyped using the Illumina Omni1-quad beadchip platform. Valuable as a replication sample for many established GWA studies, this resource, building on a study already widely known in behavioral aging research, will revolutionize research on behavioral science as one of the first large-scale studies to combine genetics with behavioral phenotypes. Specifically, this project has resources to conduct genotyping through the Center for Inherited Disease Research (CIDR) on approximately 13,000 samples derived from saliva; to make the genotype data available through dbGaP with a limited array of phenotypes; and to create a process for sharing genotype and broader phenotype data more widely in the research community. Data will be available in 2011.