

Neanderthal Ancestry & Later Life Outcomes: Evidence from the Health and Retirement Study

Dalton Conley

In a landmark paper, “[The genomic landscape of Neanderthal ancestry in present-day humans](#)” Mallick et al. (2014) document the fingerprint of interbreeding between modern humans and *homo neanderthalis* among populations of European and Asian descent. In this paper, they identify six SNPs that appear to have genome-wide significant effects in the NHGRI GWAS catalog (plus another three associated with Type-II diabetes in Latinos). All of these Neanderthal SNPs appear to be deleterious in their consequences. However, theories of hybrid vigor, in general, and speculation about the brain-size gene Microcephalin (MCPH1), in particular, suggest that perhaps Neanderthal variants that survive are not all deleterious. In the present paper, we use a catalog of Neanderthal SNPs from an earlier study (Green et al. [2010]) to associate the proportion Neanderthal of a respondent’s genome with a number of sociodemographic, functional, health and health-behavior outcomes in older age. In contrast to the single SNP findings of Mallick et al. we find evidence of beneficial effects of interbreeding: lower depression levels and risk of stroke and higher mobility in older ages. These results do not appear to be artifacts of population stratification or other confounding.