clsa élcv
Canadian Longitudinal Study on Aging
Étude longitudinale canadienne sur le vieillissement

CLSA Approved Project

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Project Title
Impact of genome-wide and local homozygosity on sensory-related traits

Project Summary
Homozygosity, when an individual has two identical forms of a particular gene, one inherited from each parent, is known to cause rare, often very severe, Mendelian genetic diseases. Vision and hearing loss are very common affecting 6% and 18% of Canadians, respectively, and are heritable traits but their heritability cannot be explained by the additive effects of genes identified so far. Homozygosity effects could explain some of the missing heritability. We will measure homozygosity effects on traits related to vision and hearing loss in the CLSA data. The CLSA includes participants from Quebec and Newfoundland, and we will thus take advantage of the higher homozygosity levels present in the French-Canadian and Newfoundland founder populations to capture a wider range of homozygosity levels. Our research will provide much needed insights on non-additive effects for sensory-related traits and could ultimately result in better health management of vision and hearing loss.

Keywords
vision, hearing, non-additive genetic effects, homozygosity, founder populations