

**Applicant**

Dr. Marie-Hélène Roy-Gagnon, University of Ottawa

**E-mail Address**

[mroygagn@uottawa.ca](mailto:mroygagn@uottawa.ca)

**Project Title**

The Genetic and Environmental Contributions to Glaucoma-Related Traits

**Project Summary**

Glaucoma is a leading cause of blindness in the world. There are many types of glaucoma but the most frequent is primary open-angle glaucoma (POAG). The underlying cause of POAG is unknown. All available treatments focus on lowering intraocular pressure (IOP). Elevated IOP is thought to be caused by both genetic and environmental factors. Using data from the 9,900 adults in the CLSA Comprehensive Cohort with genomic data, we plan to perform a genome-wide search to detect gene-environment interactions with IOP and other glaucoma-related traits. This new knowledge could help to further understand the causes of POAG, to screen people for POAG, and to develop more effective therapies.

**Keywords**

Intraocular pressure, Gene, Environment, Glaucoma, Interaction