

Applicant

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Project Title

Identification and characterization of cardiometabolic drug targets using genomics

Project Summary

Cardiometabolic diseases, such as severe obesity, diabetes and heart diseases are frequent in the Canadian population, especially in the elderly. Currently available drugs are effective to decrease the risk of cardiometabolic diseases, but are not sufficient to prevent a large number of events. The objective of this project is to study available drugs and identify targets for new drugs using a genetic approach. We aim to predict the efficacy and potential adverse effects of the drugs as well as study their effect on lifespan. We will take advantage of the large amount of health data collected over time in the CLSA cohort to evaluate the potential effects of the drugs. We will use an approach that uses the genetic material to predict the consequences over a lifetime of targeting a specific gene by a drug. Our project could lead to the discovery of new biomarkers and treatments for cardiometabolic diseases which impact Canadian elders' health and longevity.

Keywords

Genomics, Cardiometabolic diseases, Drug targets, Longevity