

Applicant

Dr. Chris Verschoor, Health Sciences North Research Institute

E-mail Address

cverschoor@hsnri.ca

Project Title

Biological dysregulation as a mechanism of unhealthy aging in older adults

Project Summary

Evidence suggests that a breakdown of the numerous biological systems that maintain good health in the face of life's many stressors may be a key determinant of whether an individual develops disease, disability, or dies earlier than their peers. However, it remains unclear the degree to which this breakdown is affected by personal and lifestyle factors, and which biological systems are most responsible for poor health as we age. We aim to use the CLSA platform to investigate how biological dysregulation differs amongst older adults and how it relates to health changes over time. Dysregulation will be measured in a large database of metabolites using a statistical method called Mahalanobis distance, and compared to demographic, lifestyle and behavioral factors obtained from health questionnaires. To correlate dysregulation to health outcomes over time, we will evaluate the change in frailty and the incidence of death up to six years later.

Keywords

biological dysregulation, healthy aging, metabolomics, frailty