Using tears to assess Alzheimer's disease

PURPOSE OF THIS STUDY

MicroRNAs (miRNAs), small noncoding regulators controlling approximately 60 per cent of human genes, have strong early diagnostic potential due to their ability to modulate complex gene networks and stability in extracellular fluids. However, blood-based miRNA findings remain inconsistent, highlighting the need for alternative, scalable biofluids. This study aims to demonstrate the translational potential of tear-fluid miRNAs as non-invasive, clinically relevant early biomarkers for diagnosing sporadic Alzheimer's disease.

WHO CAN PARTICIPATE

This study is open to cognitively healthy controls aged 50 years and above who do not have severe dry eye or eye conditions requiring the use of eye drops. Individuals with eye diseases such as glaucoma, diabetic retinopathy or retinal disorders such as age-related macular degeneration may not be eligible to participate in this study.

WHAT IS INVOLVED

Participants will have tear samples collected by a trained research team member. They will avoid eye medications or manipulation before the visit, complete a brief data sheet and undergo the Montreal Cognitive Assessment. Tears will be collected using Schirmer's tear test strips placed under the lower eyelid for five minutes per eye. Samples will be analyzed for microRNAs and proteins to compare individuals with Alzheimer's dementia, non-Alzheimer's dementia and healthy controls.

CONTACT INFORMATION

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To learn more about this study, visit vchri.ca/participate

STUDY TIME/ DURATION

Ongoing

STUDY LOCATION

Eye Care Centre,
Room 314 and 316,
2550 Willow Street,
Vancouver

PRINCIPAL INVESTIGATOR

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