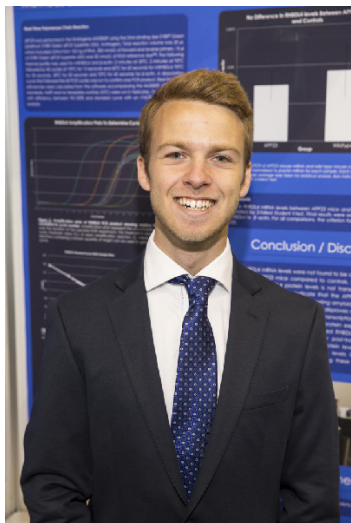


CWSF 2015 - Fredericton, New Brunswick



Lucas Penny

Rhomboid Protease 4 mRNA Expression In A Mouse Model of Alzheimer's Disease

Challenge: Health

Category: Intermediate

Region: Niagara

City: Grimsby, ON

School: Grimsby S.S.

Abstract: Rhomboid-related protein 4 is a protease that cleaves the Amyloid Precursor Protein (APP). However, mutations in APP follow a separate process to produce toxic Amyloid-?. Excess of Amyloid-? in the brain is one of the primary markers of Alzheimer's disease. In this study, transgenic APP23 mice that over-express mutated APP were used as a partial model of Alzheimer's disease to test Rhomboid 4 expression.

Biography

Lucas Penny is a passionate grade 10 student, scientist and athlete. He has been actively involved with science all of his life. His past scientific work has included researching TrkB, which plays a crucial role in development of brain networks, to study in a mouse model of autism spectrum disorder (ASD). Lucas is also on the rowing team for school. During his grade 9 year, he won gold with his crew in the Canadian National Secondary School Regatta. Aside from athletics, he is a member of the Education Minister's Student Advisory Council, and is playing level 8 Royal Conservatory of Music. At school, Lucas is the President of the DECA club, a member of the Student Council, and on the committee for Relay for Life. Lucas hopes to pursue a career in medicine and believes that being involved with science fair is an incredible way to contribute to his learning and society at large.

Awards

Value

Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 000