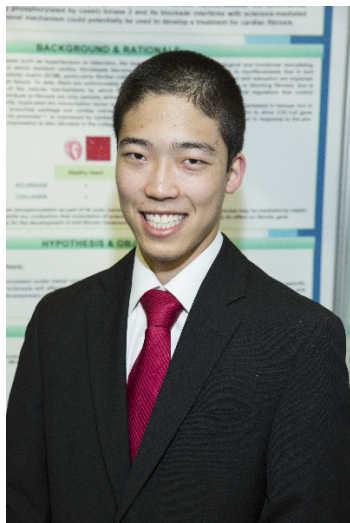


CWSF 2014 - Windsor, Ontario



Ryan Wang

Identification and Functional Properties of Phosphorylation Sites on Scleraxis

Challenge: Health

Category: Senior

Region: Manitoba Schools Science Symposium

City: Winnipeg, MB

School: St. John's Ravenscourt School

Abstract: Cardiac fibrosis is a widespread and significant clinical problem lacking effective therapies. The Czubryt laboratory has shown that the transcription factor scleraxis regulates fibrotic collagen gene expression in cardiac myofibroblasts. We demonstrate that scleraxis is constitutively phosphorylated by casein kinase 2 and its blockade interferes with scleraxis-mediated target gene expression. This novel mechanism could potentially be used to develop a treatment for cardiac fibrosis.

Biography

I am Ryan Wang and I am a grade 12 student from Manitoba. I have a very keen interest in science and cars. In my spare time, I play the piano, and badminton, and I enjoy hanging out with friends. This is my first experience in participating in the CWSF. The inspiration for my project arose as a tangent to what my mentor was investigating. We hope to continue to investigate more on how the protein Scleraxis functions and more specifically, to increase our understanding of how phosphorylation affects the activity of this protein. My advice to other students who are considering about doing a project is to find a topic that you are interested in and find a mentor who is dedicated and willing to guide you through your project. Being involved in carrying out a science fair project alongside a mentor gave me an in depth look at how treatments can be developed to improve the lives of others and gave me a greater appreciation towards recognizing the work that goes on to make a difference in people's lives.

Awards

Value

Excellence Award - Senior - Bronze Medal Sponsor: Nuclear Waste Management Organization	\$100
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$2 100