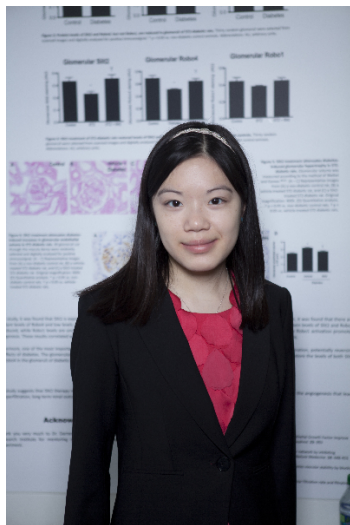


CWSF 2013 - Lethbridge, Alberta



Lauren Chan

Targeting Slit-2 Robo Signaling as a Novel Therapy for Diabetic Nephropathy

Challenge: Health

Category: Senior

Region: Toronto

City: Toronto, ON

School: University of Toronto Schools

Abstract: Diabetes is a chronic disease that can lead to life-threatening complications, such as diabetic nephropathy. An early manifestation of DN is hyperfiltration that is driven by angiogenesis, which is a predictor of poor renal outcomes. The protein Slit2 activates either Robo1 (which promotes angiogenesis) or Robo4 (inhibits angiogenesis). Slit2 administration attenuated the rise in Robo1 expression and increased Robo4 levels that were decreased in diabetes.

Biography

My name is Lauren Chan and I am a grade 12 student at the University of Toronto Schools. I was recently awarded the Loran Scholar Award, a merit-based scholarship for my undergraduate education. I love to volunteer in my community, I am involved with Best Buddies as a Chapter President and volunteer at Bloorview Kids Rehab Hospital and in palliative care at Hospice Toronto. Last summer, I was working full time in a research lab at St. Michael's, where I was introduced to various basic lab techniques. It was then that I became fascinated with research into treatments for diabetic nephropathy. I hope to continue the research that has been done in this field and to better understand the different factors that cause angiogenesis and an increase in filtration in the early stages of diabetes. I discussed my project with my mentor, Dr. Yuen, and decided to salvage tissue from experiments that were being done to test the safety of administering Slit2 to rats. Someday, I hope to see this treatment used clinically because it has the potential to change many people's lives. For students thinking about a project? contact a research institute, you never know what will happen!

Awards

Value

Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	\$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