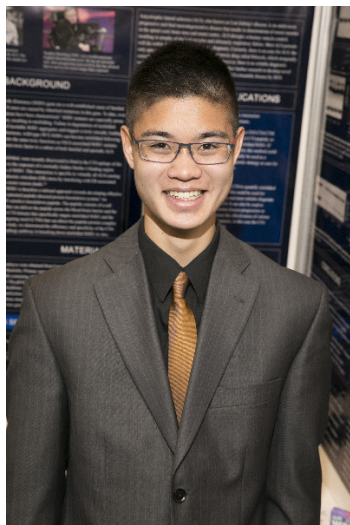


# CWSF 2017 - Regina, Saskatchewan



## Justin Lin

### Peptide-Directed Knockdown of Misfolded SOD1 by Chaperone ? Mediated Autophagy

**Challenge:** Health

**Category:** Senior

**Region:** Manitoba Schools Science Symposium

**City:** Winnipeg, MB

**School:** St. John's Ravenscourt School

**Abstract:** ALS is a neurodegenerative disease that results in death 3-5 years following diagnosis. Currently, there is no cure or definitive diagnostic test for ALS. This project investigates two novel techniques: firstly, we demonstrate the potential of our modified ELISA technique as a diagnostic tool. We also show our TAT-CT4-CTM peptide's ability to knock down ALS-associated misfolded SOD1; this peptide could be a cure for ALS.

#### Biography

My name is Justin Lin and I am in Grade 12 at SJR school in Winnipeg, Manitoba. My hobbies include playing piano and debating. In my spare time, I do a lot of volunteering at various organizations, although I especially enjoy peer tutoring. I also play sports such as basketball, soccer and ultimate frisbee. I hope to pursue a career in medicine or research. This will be my third and final year at CWSF. After doing two years of cardiovascular research, I decided to try something new this year by working in a neuroscience lab. My project developed a new strategy to target ALS, a devastating neurodegenerative disease that results in death 3-5 years after diagnosis. My results are very promising and my lab is now testing the peptide-based treatment on ALS mouse models. To any other students thinking about doing a project, I would recommend following your passions and finding a mentor who is willing to work closely with you. It is also important to have faith in yourself and persevere; I believe that the research conducted by high school students can change the world!

#### Awards

#### Value

Canadian Society for Clinical Chemists Award - Senior Sponsor: Canadian Society for Clinical Chemists	\$1 000
Youth Can Innovate Awards - Senior Sponsor: The Gwyn Morgan and Patricia Trotter Foundation	\$1 000
Youth Can Innovate Awards - Senior Sponsor: The Gwyn Morgan and Patricia Trotter Foundation	\$7 000
Excellence Award - Senior - Gold Medal Sponsor: Youth Science Canada	\$250
Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$5 000
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
University of Manitoba Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: University of Manitoba	\$5 000
University of Ottawa Entrance Scholarship Senior Gold Medallist - \$4,000 Entrance Scholarship Sponsor: University of Ottawa	\$4 000
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
<b>Total</b>	<b>\$31 250</b>