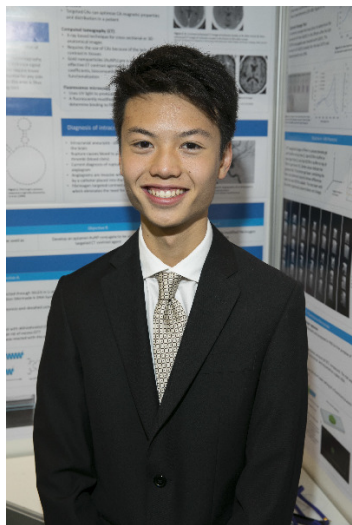


## CWSF 2017 - Regina, Saskatchewan



### Bowen Xue

#### Developing Aptamer-Based Targeted Imaging Probes for the Diagnosis of Stroke

**Challenge:** Health

**Category:** Senior

**Region:** Ottawa

**City:** Ottawa, ON

**School:** Bell Corner High

**Abstract:** Targeted imaging probes for magnetic resonance imaging and computed tomography were developed through separate bioconjugations of a fibrinogen-targeted aptamer with a DOTA-gadolinium chelate and with a gold nanoparticle. The aptamer-based contrast agents enhance the diagnostic value of images while minimizing adverse reactions in patients, and could be used in the diagnosis of stroke and intracranial aneurysms to circumvent the conventional invasive imaging procedure.

#### Biography

Hi! My name is Bowen Xue and I am a grade 12 student at Bell High School. I enjoy participating in a variety of activities in school and outside of it. Currently, I'm the Co-President of my school's Executive Student Council and I'm the Co-Chair of the OCDSB President's Council. I run a club at my school which focuses on community service and I play competitive soccer and ultimate. I'm a part of DECA business club and I placed first in Ontario this year in my individual event. I have always been interested in science and when I learned about the possibility of having my own research project at Carleton University, I jumped at the idea. I hope to continue my work and to pursue engineering in university.

#### Awards

#### Value

Youth Can Innovate Awards - Senior Sponsor: The Gwyn Morgan and Patricia Trottier Foundation	\$1 000
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>\$23 250</b>