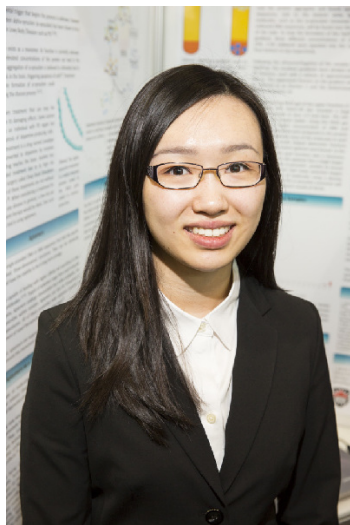


# CWSF 2015 - Fredericton, New Brunswick



## Hanna Tang

### Utilization of aptamers as a novel therapeutic tool for Parkinson's Disease

**Challenge:** Health

**Category:** Senior

**Region:** Ottawa

**City:** Ottawa, ON

**School:** Bell Corner High

**Abstract:** A novel SELEX technique was used to select an enriched aptamer pool capable of binding with high affinity and specificity to the alpha-synuclein monomer. Previous studies have shown that the aggregation of alpha-synuclein is linked to the progression of neurodegenerative disease including Parkinson's disease (PD). The selected aptamer pool significantly reduces protein aggregation and could deter the progression of PD.

#### Biography

My name is Hanna Tang and I am a grade 12 student at Bell High School. I enjoy a variety of sports including cross-country running, swimming, and taekwondo. My passion for science and mathematics began when I was four years old. Some of my notable achievements include leading a team of four students to win gold in the Skills Ontario provincial competition and placing top 60 worldwide in the Fermat math contest. I have always had an interest in neurology and I am so happy to have the opportunity to discover new ways to stop the progression of Parkinson's disease (PD). I hope that my project will progress to clinical trials and be used as a novel therapeutic tool for PD in the future. This would have invaluable implications in the life quality of individuals suffering from this disease. We, as researchers, are all the first humans on the planet to know a piece of information, which is so cool! To other students thinking about doing a project, my advice is to do something for which you have a passion. Undoubtedly, any project will require effort and effort, but the excitement of getting results makes it worth it!

#### Awards

#### Value

|  |                 |
|--|-----------------|
| Excellence Award - Senior - Gold Medal<br>Sponsor: Youth Science Canada  | \$250           |
| Dalhousie University Faculty of Science Entrance Scholarship<br>Senior Gold Medallist - \$5000 Entrance Scholarship<br>Sponsor: Dalhousie University, Faculty of Science | \$5 000         |
| UBC Science (Vancouver) Entrance Award<br>Senior Gold Medallist - \$4000 Entrance Scholarship<br>Sponsor: The University of British Columbia (Vancouver)                 | \$4 000         |
| University of Manitoba Entrance Scholarship<br>Senior Gold Medallist - \$5000 Entrance Scholarship<br>Sponsor: University of Manitoba                                    | \$5 000         |
| University of New Brunswick Canada-Wide Science Fair Scholarship<br>Gold Medallist - \$5000 Entrance Scholarship<br>Sponsor: University of New Brunswick                 | \$5 000         |
| University of Ottawa Entrance Scholarship<br>Senior Gold Medallist - \$4,000 Entrance Scholarship<br>Sponsor: University of Ottawa                                       | \$4 000         |
| Western University Scholarship<br>Gold Medallist - \$4000 Entrance Scholarship<br>Sponsor: Western University  | \$4 000         |
| <b>Total</b>   | <b>\$27 250</b> |