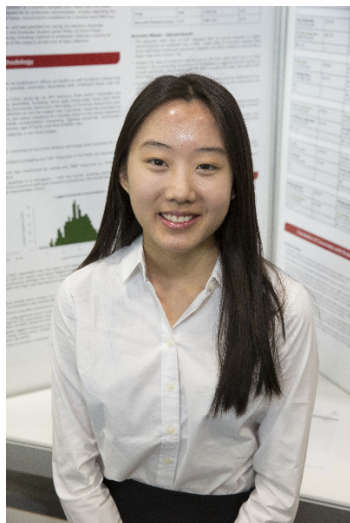


# CWSF 2019 - Fredericton, New Brunswick



## Laura Wang

### Endotoxin's Association with Wheeze and Atopy

**Challenge:** Health

**Category:** Senior

**Region:** Greater Vancouver

**City:** Burnaby, BC

**School:** Burnaby North Secondary

**Abstract:** This project aims to determine the effects of endotoxin exposure on childhood wheeze and allergy development. There is currently a paradox regarding endotoxin's effect on the rising diseases of wheeze and allergy. By determining endotoxin's effects and identifying significant covariates, preventative action can be implemented in early life by reducing harmful exposures and increasing beneficial ones to lower children's risks of developing these chronic diseases.

#### Biography

For my project on Endotoxin's Association With Wheeze and Atopy, I was primarily drawn to this topic due to the pervasiveness of these diseases within my community, throughout Canada, and across the world, and their specific prevalence among infants and children. Moreover, currently, there is a paradox regarding endotoxin's effect on wheeze and atopy. Furthermore, I was able to delve into this topic area under the mentorship and guidance of a professor and graduate student at Simon Fraser University. In further research, I would like to look into populations of differing ages, as the current research has suggested that the paradox may be a result of the different ages of exposure used in the studies, as the immune system would be in different stages of development. For future students contemplating doing a research project, I recommend considering seeking a university professor for mentorship; this may appear daunting but is an enriching learning experience. Beyond research, I am the co-president of the club We Youth Help as well as Secretary of The Noble Tutors. Outside of school, I enjoy teaching children skiing and swimming lessons, as well as playing the piano and violin.

#### Awards

#### Value

|   |                |
|---|----------------|
| Canadian Young Researcher Award - Senior<br>Sponsor: Canadian Science Publishing and STEM Fellowship                                | \$1 000        |
| Excellence Award - Senior - Bronze Medal<br>Sponsor: Youth Science Canada   |                |
| University of Ottawa Entrance Scholarship<br>Senior Bronze Medallist - \$1000 Entrance Scholarship<br>Sponsor: University of Ottawa | \$1 000        |
| Western University Scholarship<br>Bronze Medallist - \$1000 Entrance Scholarship<br>Sponsor: Western University                     | \$1 000        |
| <b>Total</b>  | <b>\$3 000</b> |