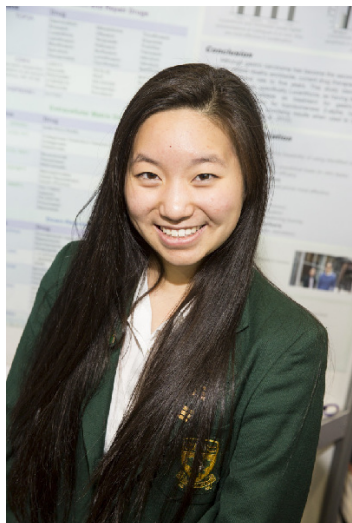


# CWSF 2015 - Fredericton, New Brunswick



## Elizabeth Suen

### Isolating Genes for Gastric Carcinoma Treatment via Expression Meta-Analysis

**Challenge:** Health

**Category:** Senior

**Region:** Greater Vancouver

**City:** Richmond, BC

**School:** York House School

**Abstract:** Gastric carcinoma is the second leading cause of cancer-related deaths worldwide; however, the current rate of drug therapy efficacy for existing treatments is less than 20%. A meta-analysis was done to analyze 226 genes to determine whether their expression and pathways influence the development of gastric cancer. Topoisomerase 2-alpha has been identified as the most promising target of inhibition, with Lucanthone as a possible inhibitor.

#### Biography

Elizabeth Suen is a Grade 11 student at York House in Vancouver, BC, where she has maintained an "Honours with Distinction" standing. Being a well-rounded individual, Elizabeth's plethora of interests include music, sports, and community involvement. An avid musician, Elizabeth plays the piano, bassoon, and oboe; she has been a dedicated member of concert and jazz bands, as well as the concert and jazz choirs's lead pianist. Elizabeth's interest in swimming has resulted in five records and a recent third place finish at the High School Championships; she also demonstrates her respect for the sport by coaching her school's junior swim team. Similarly, Elizabeth's academic success motivates her to give back to her community as a volunteer at an elementary school. Earlier this year, a paper discussing gastric cancer's prominence of in people of Asian descent stunned Elizabeth. Further inquiry lead to her discovering that present-day therapies have a low success rate. As a result, her current project explores an area new to Elizabeth--the field of bioinformatics--as a means of uncovering alternative treatments to combat this carcinoma. To aspiring scientists, Elizabeth would advise them to embrace the unfamiliar because trying something new is the only way to make any...

#### Awards

#### Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 500
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
University of New Brunswick Canada-Wide Science Fair Scholarship Silver Medallist - \$2500 Entrance Scholarship Sponsor: University of New Brunswick	\$2 500
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$11 000</b>