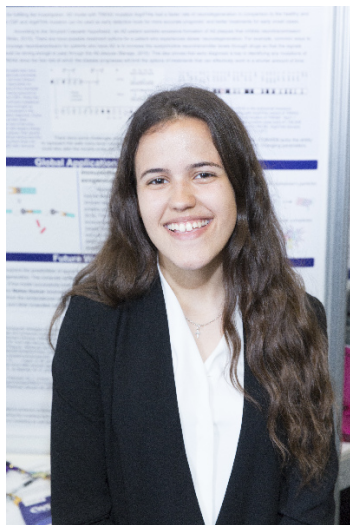


# CWSF 2018 - Ottawa, Ontario



## Anabela Cotovio

### The Role of Microglia TREM2 on the Progression of Alzheimer's Disease

**Challenge:** Health

**Category:** Senior

**Region:** York

**City:** Toronto, ON

**School:** Town Centre Montessori School

**Abstract:** The aim of this experimental study was to understand the involvement of the TREM2 protein and its loss-of-function mutation Arg47His in amyloid beta plaque formation. By simplifying the complexity of Alzheimer's disease using computational simulations, the results showed that the TREM2 mutation led to accelerated neurodegeneration. Through cerebrospinal fluid analysis, TREM2 provides insight into earlier diagnosis, more accurate prognosis, and future use in targeted therapeutics.

#### Biography

My name is Anabela Cotovio and I am currently in grade 12, enthusiastically deciding which post-secondary institute I should attend. My research endeavours for the past years were heavily inspired by my awareness of the need in advancing health care treatments for aging seniors in our society. Alzheimer's Disease is so biologically complex that I find it extremely fascinating to study. Science fair has always been my most anticipated event of the year, finally getting the chance to present my findings passionately. I competed and placed at other science fairs for my research in Alzheimer's Disease including Science Rendezvous, York Region STEM Fair, and the Sanofi Biogenius Canada Competition. When I'm not scurrying to the lab after school, you can probably find me playing one of the many sports I enjoy. My message for other students is to take advantage of every opportunity given as it can lead to a limitless path of self-growth and discovery.

#### Awards

#### Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	
Carleton University Entrance Award Senior Silver Medallist - \$2,000 Entrance Award Sponsor: Carleton University	\$2 000
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 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>\$10 500</b>