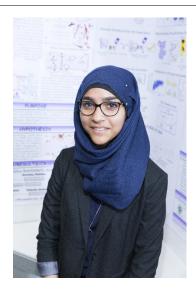




## CWSF 2018 - Ottawa, Ontario



## **Amal Aziz**

## A Switchable, Dual-Functioning Trojan Horse for Alzheimer's Disease Photothera

Challenge: Innovation Category: Senior

**Region:** Thames Valley **City:** London, ON

**School:** Sir Wilfrid Laurier S.S.

**Abstract:** Blood-brain barrier drug delivery problems of existing neuropharmaceuticals

can be solved using genetically engineered molecular Trojan horses. A novel tailor-made Trojan horse drug that quickly switches into an

aggressive molecule to destroy even the residual amyloid plaques could be more effective than any known drug thus far developed for Alzheimer's

disease.

## **Biography**

Amal is enrolled in the enrichment program at Sir Wilfrid Laurier S.S. She enjoys reading, graphic designing, and playing the viola and piano. Amal has won a few honors/awards from the Gauss Contest, the Canadian Royal Legion Speech Contest, the Thames Valley Science and Engineering Fair, the Canada Wide Science Fair, and the Sanofi Biogenius Competition. In her project, Amal proposes that the blood-brain barrier drug delivery problems of existing neuropharmaceuticals can be solved using genetically engineered molecular Trojan horses. A novel, tailor-made, photoactive, Trojan horse drug that quickly switches into an aggressive molecule to destroy even residual amyloid plaques could be more effective than any other known drug developed for Alzheimer's disease thus far.

Awards	Value
Youth Can Innovate Awards - Senior	\$1 000
Sponsor: The Gwyn Morgan and Patricia Trottier Foundation	
Excellence Award - Senior - Gold Medal	
Sponsor: Youth Science Canada	
Carleton University Entrance Award	\$4 000
Senior Gold Medallist - \$4,000 Entrance Award	
Sponsor: Carleton University	
Dalhousie University Faculty of Science Entrance Scholarship	\$5 000
Senior Gold Medallist - \$5000 Entrance Scholarship	
Sponsor: Dalhousie University, Faculty of Science	
UBC Science (Vancouver) Entrance Award	\$4 000
Senior Gold Medallist - \$4000 Entrance Scholarship	
Sponsor: The University of British Columbia (Vancouver)	
University of Manitoba Entrance Scholarship	\$5 000
Senior Gold Medallist - \$5000 Entrance Scholarship	
Sponsor: University of Manitoba	
University of Ottawa Entrance Scholarship	\$4 000
Senior Gold Medallist - \$4,000 Entrance Scholarship	
Sponsor: University of Ottawa	
Western University Scholarship	\$4 000
Gold Medallist - \$4000 Entrance Scholarship	
Sponsor: Western University	
Total	\$27 000



