

CWSF 2011 - Toronto, Ontario



Gaëlle Groux

The Role of the Adventitia in Hypertension

Challenge: Health

Category: Senior

Region: Niagara

City: Niagara-on-the-Lake, ON

School: Sir Winston Churchill

Abstract: The purpose of this research is to discover if the adventitia produces the vasoconstrictor Endothelin-1 when stimulated with Angiotensin-II and if its production is mediated by NADPH Oxidase. Immunohistochemistry was performed on four types of mouse aortas with and without Angiotensin-II or NADPH oxidase to determine levels of ET-1, ECE-1, ETA and ETB receptors. ET-1 is produced by the adventitia when NADPH oxidase is present.

Biography

Gaëlle Groux has been highly involved in her community for many years. She is the founder of both the Eco Club and Teens for Change Club at her school. The Teens for Change Club is the school's human rights club, raising funds and awareness for issues ranging from education in third world countries to sexual abuse in the Niagara region. She is a member of the Amnesty International Group and the Shintani Wado Kai Karate Federation Club of Niagara-on-the-Lake as well as a Peer Tutor and a Prefect at her school, Sir Winston Churchill Secondary School. She has won awards in several CPF and Lion's Club French speech competitions at the regional and provincial level as well as the Grade eleven Brock-French Niagara competition of 2010. Gaëlle is the recipient of the TD Award of Merit for Community Leadership and the Gene Luczkiw Spirit of Enterprise Award. Her first place at the Niagara Regional Science and Engineering Fair is the result of a combination of her passion for health sciences and the help of her Brock University mentors, Matthew Rätsep and Dr. Hui Di Wang. Her future career goal is to become a surgeon and humanitarian aid worker.

Awards

Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	\$700
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
The University of Western Ontario Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Total	\$9 200