

CWSF 2012 - Charlottetown, Prince Edward Island



Jessie MacAlpine

Callelo: a novel bioherbicide

Challenge: Innovation

Category: Senior

Region: London District

City: Woodstock, ON

School: Huron Park S.S.

Abstract: *Alliaria petiolata* (garlic mustard) and *Coffea arabica* (coffee) have both been found to inhibit germination through the production of allelochemicals. When combined in a 50/50 ratio, aqueous extracts of both compounds applied three times were able to significantly inhibit germination and seedling growth after statistical analysis. This compound shows promise as an economical and environmentally friendly herbicide.

Biography

Jessie MacAlpine is a grade eleven student who lives in Woodstock, Ontario. She is a very active student and enjoys swimming, cross-country, track-and-field, cross-country skiing, volleyball, soccer and step dancing. Jessie plays the flute, piano and fiddle and participates in her school's band while being vice president of Music Executive. As part of the PRO (People Reaching Out) club at her high school, Jessie and fellow students work with Free the Children to provide children in developing nations with the education they deserve. She enjoys participating in model United Nations debates at her school and playing a role in local politics as a member of the Youth Advisory Committee. Jessie has also always had a keen interest in the environment and strives to help end global climate change. In the future she aspires to be a biochemist focusing on exploiting biological and chemical processes to improve the environment.

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
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
Total	\$9 200