

CWSF 2016 - Montreal, Quebec



Owen Robison

Detection of DNA Integration in Tardigrades after Anhydrobiosis

Challenge: Discovery

Category: Senior

Region: Waterloo-Wellington

City: Guelph, ON

School: Centennial Collegiate & Vocational Institute

Abstract: This project looks at the possible link between a process called anhydrobiosis and the uptake of foreign DNA. Upon subsequent rehydration after anhydrobiosis, tardigrades are exposed to plasmids that contain different promoters. I hypothesize that anhydrobiosis is linked to horizontal gene transfer. The experimental results showed that there may be some expression of foreign DNA from treated tardigrades.

Biography

My name is Owen Robison and I am in my senior year of high school. I attend Centennial CVI in Guelph. I am an athlete on the rugby team for my school. Go Spartans! I have been involved in my community assisting and promoting the Smile Train charity. I work out of my school's lab. If I'm not in the lab or at practice I'm at the gym engaged in my favourite hobby, weightlifting. Next year I will go off to either Western (UWO) or McMaster University for Molecular Biology and Genetics. Afterwards, I will pursue a DVM at the OVC in Guelph. During and after my post grad studies I want to work for a veterinary clinic with companion animals. My project deals with tardigrades which are microscopic invertebrates. I've always had an interest in these critters as they are hyped to be indestructible. The idea for my project came from the controversy in science magazines concerning tardigrades exhibiting high amounts of horizontal gene transfer.

Awards

Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	
Challenge Award - Discovery - Senior 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 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	\$8 500