

CWSF 2018 - Ottawa, Ontario



Nick Murray

Low-Cost, Point-of-Care Skin Cancer Detection

Challenge: Innovation

Category: Senior

Region: Greater Vancouver

City: Vancouver, BC

School: Templeton Secondary

Abstract: This project was focused on the design, construction and validation of the first ever low-cost and portable device for detecting and staging skin cancers and skin diseases. This novel device is interesting because it could potentially solve the problem of a lack of dermatologists in resource poor settings. Hopefully, it can one day be used to detect early stage skin cancers and save lives.

Biography

The inspiration for my project came from my realization that there is not really a low-cost and quantitative way to detect skin cancer. I decided to set out to solve this problem. In the future, I hope that my research could eventually lead to a real medical device that would be used all around the world for detecting skin cancers. My advice for other students is to dream big. Some projects may not be feasible due to funding or scale, but it is good to be ambitious! Through my school, I am a part of the STEM program, where we apply our math and physics knowledge to solve real world engineering problems, like building a smart greenhouse or a solar tracker. I have also founded a STEM entrepreneurship speaker series, and a journal to chronicle what we learn in the STEM program. In university I will likely study engineering physics, to blend my passions for physics, medicine and technology. I hope to eventually become a clinician scientist, or a Professor of Physics and Biomedical Engineering at a research university.

Awards

Value

York University STEM Entrepreneur Bootcamp Scholarship Awards All categories Sponsor: York University, Lassonde School of Engineering	\$2 500
Youth Can Innovate Awards - Senior Sponsor: The Gwyn Morgan and Patricia Trottier Foundation	\$1 000
Youth Can Innovate Awards - Senior Sponsor: The Gwyn Morgan and Patricia Trottier Foundation	\$7 000
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
Total	\$21 000