

CWSF 2019 - Fredericton, New Brunswick



Ishan Herath

Discovery of a Novel Callus Production Protocol from an Invasive Species

Challenge: Discovery

Category: Senior

Region: Niagara

City: Niagara Falls, ON

School: Sir Winston Churchill

Abstract: "Dog-Strangling Vine" is a highly invasive plant species in Canada which is preventing forest regeneration, costs extremely large amounts of money to control, and is harming the endangered monarch butterfly populations. This project investigates how to produce compact cell calli (plant tumour) from this plant to determine their potential for medicinal, agricultural, and ecological uses.

Biography

My name is Ishan Herath and I am a grade 12 student at Sir Winston Churchill Secondary School in St. Catharines. I am 17 years old and this will be my first time attending the Canada Wide Science Fair and my third science fair overall! Recently, I have won 7 awards at the NRSEF including the gold medal in my division and the Best in Fair trophy. Along with research, I am involved in numerous activities including student council, lifeguard training, a university physics immersion program, and playing as the concertmaster of the Niagara Youth Orchestra. I also volunteer at the St. Catharines General Hospital in both the Emergency Room and Main Welcome Desk every week. My project is a joint effort between Brock University and Vineland Research and Innovation Centre in which I was placed on as a part of the Brock University Mentorship Program.. The inspiration for this project stems from the drastically increasing risks that the dangerously invasive species Vincetoxicum rossicum poses to both the environment and economy. By investigating the possibility of creating callus from this species and analyzing the alkaloids produced within the plant, it opens the possibility for possible pharmaceutical, agricultural, and pesticidal uses.

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