

CWSF 2018 - Ottawa, Ontario



Monica Aida Lopez

Developing Hypoallergenic Plants

Challenge: Discovery

Category: Intermediate

Region: Calgary Youth

City: Calgary, AB

School: Westmount Charter School

Abstract: Lipid transport proteins (LTPs) have been identified as allergenic proteins within plants. Two methodologies have been developed in creating hypoallergenic plants. The first is a genetic approach, which removes LTP1 transcripts while plant growth and development are not affected. The second one is a chemical strategy aiming to promote the uptake of antihistamines in areas of high LTP1 expression, resulting in antihistamine carrying plants.

Biography

My name is Monica Aida Lopez Quiroz, I am in Grade 9 and I was born in Ashford, Kent, England. I go to Westmount Charter School and play piano and badminton. I have participated in CYSF every year since Grade 5 and have won The Chemical Institute of Canada Calgary Award, The Haskayne School of Business Elementary Consumer Science Award and The Alberta Teachers' Association Award (Secondary). In the future I would like to become a biochemist. The inspiration behind my project was to determine if plants had mood. While researching about serotonin, I found that there wasn't a determined role of serotonin in plants or investigation into the affects of serotonin in plants. Therefore my project became investigating the affects of serotonin in plants and studying if plants showed mood-like responses. I would like to continue my project by examining the other roles of serotonin in plants as well as using more advanced techniques to determine the results. I would tell other students that no matter how many failures you endure, you need to keep trying and working to be successful in your experiment. Never give up on your goals just because they aren't easy to accomplish.

Awards

Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$2 000