CWSF 2018 - Ottawa, Ontario

Madighan Ryan

Novel Myotonic Dystrophy Type 1 Drug Treatment

Challenge: Health
Category: Junior
Region: Ottawa
City: Chelsea, QC
School: Elmwood School

Abstract: Myotonic Dystrophy 1 is a genetic disorder caused by a build up of RNA foci and an overuse of MBNL1 protein, resulting in mental and physical abnormalities. Recent testing on vorinostat suggests it increases MBNL1 protein levels, identifying it as a potential treatment. This study tested whether vorinostat increases MBNL1 protein, or merely changes the protein's solubility. Sufficient evidence was obtained to pursue further tests.

Biography

My name is Madighan Ryan and I am a Grade 8 student at Elmwood School in Ottawa, Ontario. This is my second Canada Wide Science Fair, my first being the Regina 2017 Fair. For over 10 months I have been working on my project, 8 of those months, I have spent working at CHEO with Dr. Alex MacKenzie and Nafisa Tasnim. I have thoroughly enjoyed working in a lab setting and helping achieve something that will affect thousands of people all over the globe. I am very passionate about finding a treatment for Myotonic Dystrophy Type 1 because of the disproportionately large population of people with DM1 around Ottawa, and the even larger population in specific regions of Quebec. I see people with all different severities of DM1 in my daily life, and it is my plan to continue working at CHEO with my mentors for as long as possible until we find a treatment. My other passions include playing 3 instruments in both classical and jazz styles, as well as playing on several sports teams, and practising for the professional theatre performance that I will be a part of at the Edinburgh Fringe Festival during the summer.

Awards	Value
Excellence Award - Junior - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: Western University	$1 000
Total	$1 000