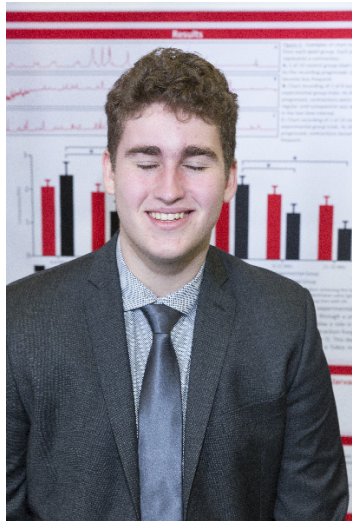


## CWSF 2018 - Ottawa, Ontario



### Hunter Murdoch

#### Effects of Octopamine on Fictive Locomotion in *Drosophila melanogaster* Larvae

**Challenge:** Discovery

**Category:** Senior

**Region:** Niagara

**City:** Niagara Falls, ON

**School:** Saint Michael S.S.

**Abstract:** Our nervous system relies on hormones to send messages throughout our body. One of these, noradrenaline, is responsible for motivation and aggression. In insects, octopamine has the same role. I studied octopamine's role in fruit fly movement, finding that it helps them move, but only if there's enough calcium present. This helps us better understand how hormones in the human nervous system work.

#### Biography

Hunter Murdoch is a grade 12 student at Saint Michael Catholic High School in Niagara Falls, Ontario. At school, Hunter has always shown his passion for math and science through actively participating in mathletes, peer science tutoring, and the science olympics. Outside of science, Hunter serves as student council president and as the lead pianist/keyboard player in the school's house band. Although Hunter has been passionate about science his whole life, this is his first time participating in a science fair. The inspiration for his project came from his interest in how the nervous system works. Hormones play a major role in our nervous system, so he decided to further our knowledge of what a specific hormone, octopamine, does in the nervous system. In the future, Hunter hopes to be able to use his skill and passion for science to create meaningful change in the lives of people around the world.