

# CWSF 2017 - Regina, Saskatchewan



## Akshay Patel

### The Role of Proctolin in Turning Behaviour of *Drosophila Melanogaster* Larvae

**Challenge:** Discovery

**Category:** Senior

**Region:** Niagara

**City:** St. Catharines, ON

**School:** Sir Winston Churchill

**Abstract:** Neurotransmitters are biological compounds that help the brain control the body and send signals to other organs and muscles. Many neurotransmitters' functions are unknown, and so, this project is focused on discovering the role of a certain neurotransmitter peptide called proctolin (a motoneuron). *Drosophila melanogaster* mutant larvae (fruit fly larvae) were used as model systems to study how proctolin is involved in movement and locomotion.

#### Biography

My name is Akshay Patel and I am a Grade 12 student at Sir Winston Churchill Secondary School in St. Catharines, Ontario. I am quite fascinated with biology and how fruit flies can be used to study it. Fruit flies are invaluable organisms that can be used to study an endless list of things related to biological research. In the future, if I have the opportunity to work with fruit flies again, I would like to research specifically the function of glutamate, which another neuropeptide that plays a key role in amyotrophic lateral sclerosis. Outside of my research, I am a competitive badminton player, although I do not come from an athletic background at all. I also love to play volleyball and basketball whenever I can with friends. In school, I am involved in many clubs including student council as a Grade 12 representative and my school newspaper as one of two editors. My future career goals include becoming a researcher to improve society.

#### Awards

#### Value

Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
<b>Total</b>	<b>\$2 000</b>