

# CWSF 2015 - Fredericton, New Brunswick



## Anika Gupta

### The Effects of Pesticides and Neuroprotective Agents on Dopaminergic Neurons

**Challenge:** Health

**Category:** Junior

**Region:** Bay Area

**City:** Dundas, ON

**School:** Sir William Osler

**Abstract:** I have found that pesticides (Rotenone and Paraquat) cause damage to dopaminergic neurons in the nematode *C. elegans*. These results allowed me to screen for natural compounds with neuroprotective properties in the pesticide-induced Parkinson's disease nematode model. My work showed that two compounds, fenugreek and turmeric, delayed neurodegeneration. In the future I will test different active components of natural compounds for beneficial effects.

#### Biography

My name is Anika Gupta, a Grade 7 student at Sir William Osler Elementary Public School in Dundas, Ontario. I am an avid sports lover and enjoy being active by playing volleyball, basketball, tennis and running competitively for a club. As a captain of our volleyball team this year, we won third at our City-West tournament! My hobbies include figure skating, playing the violin/flute and watching 'I Love Lucy'. I am involved with many clubs in my school. As a part of the student leadership council, I had a privilege to organize the Great Big Crunch for the whole school. My favourite subjects include mathematics and science. I am fascinated by the complexities of the human brain. I got the inspiration to do my project from my grandpa; he was recently diagnosed with Parkinson's disease. One of my favourite quotes from Walt Disney, which I always keep in my mind, "We keep moving forward, opening new doors, and doing new things, because we're curious and curiosity keeps leading us down new paths."

#### 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