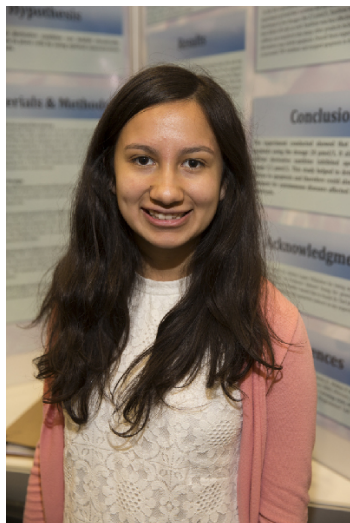


# CWSF 2016 - Montreal, Quebec



## Monica Aida Lopez Quiroz

### Inhibiting Apoptosis with Caffeine

**Challenge:** Health

**Category:** Junior

**Region:** Calgary Youth

**City:** Calgary, AB

**School:** Westmount Charter School

**Abstract:** Apoptosis is cell suicide used to kill harmful cells in an organism. When excessive apoptosis occurs, it causes prevalent autoimmune diseases. The experiment's purpose was to inhibit apoptosis using caffeine and xanthine. Apoptosis was induced with tacrolimus and inhibited using the compounds above. Dead cells were viewed using trypan blue staining method. The experiment was successful as caffeine and xanthine inhibited apoptosis effectively.

#### Biography

My name is Monica Aida Lopez Quiroz, I am 13 years old and I was born in Ashford, Kent, England. I go to Westmount Charter School and play/teach piano, swim and play 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 my psoriasis, an autoimmune disease affect by apoptosis. I wanted to understand my disease and how I could improve the treatments for my disease and other autoimmune diseases. In the future to continue my work, I would like to understand the molecular mechanisms therefore I would like to use more advanced techniques to identify the factors that are regulating these diseases. I would tell other students that no matter how many failures you suffer, 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 - Junior - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 000