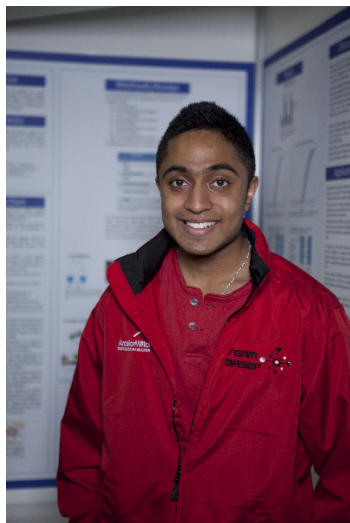


CWSF 2013 - Lethbridge, Alberta



Ishan Aditya

Skeletal Muscle Inflammatory Cytokine Expression Predicts Metabolic Disease Risk

Challenge: Health

Category: Senior

Region: Bay Area

City: Mississauga, ON

School: MacLachlan College

Abstract: The gene expression of cytokine C-C motif Ligand 2 (CCL2) was investigated in lean and overweight or obese skeletal muscle tissue from male and female subjects of both South Asian and European descent in order to assess risk of cardiovascular disorders and type 2 diabetes mellitus (T2DM). Results of the experiment demonstrate that alternative measuring scales are needed to accurately assess metabolic disease risks.

Biography

I define myself as a innovative challenge seeker who believes in being well-rounded and having a close connection with the creative world. From being the Head Prefect of my school and serving as the voice of our student body to being an internationally-recognized public speaker and debater, I enjoy communicating information just as much as I do in developing and synthesizing my creativity. Being a black belt in Goju-Ryu Karate as well as a runner and swimmer, I take personal fitness and discipline very seriously. Therefore, I decided to tackle an issue that deals with these values ? the global epidemic of obesity. More specifically, I chose to investigate the effect of the inflammation caused by obesity on skeletal muscle tissue in humans of different ethnicities as I felt that today's scales of measuring one's health such as the BMI scale are too general and don't give a fair representation of each kind of person as genetics play a significant role in one's predisposition to disease and disorder. I plan to pursue this area of "immuno-metabolism" in post-secondary study, where I aim to study Health Sciences and progress into Medicine.

Awards

Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	\$300
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 500
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$8 800