

CWSF 2012 - Charlottetown, Prince Edward Island



Shreyas Devalapurkar

The Effect of Oxidative Stress on Protein Profile of Cells

Challenge: Health

Category: Intermediate

Region: Manitoba Schools Science Symposium

City: Winnipeg, MB

School: Dakota Collegiate

Abstract: Oxidative stress is associated with many diseases. The causative reactive oxygen species (ROS) production causes cell death. Hydrogen peroxide is a potent inducer of oxidative stress, and causes alterations in biomolecule synthesis. This project investigates the variations in cellular protein profile in healthy and oxidatively damaged cells, and suggests the possibility of proteins with antioxidant-like properties being synthesized by the oxidatively damaged cells.

Biography

My name is Shreyas Devalapurkar and I am currently a student at Dakota Collegiate in Grade 10 from Winnipeg, MB. I love the field of science and I am also interested in sports. I play basketball and badminton as my main sports. I also enjoy music and I have been learning the violin for around 9 years. I want to find a career in science whether it be engineering, research or something else. My project this year was on the effect of oxidative stress on protein profile of cells. I came up with the idea when I was eating apples for dessert and they got all brown after a few minutes. Then after researching into why this happens, I realized that it was due to oxygen and then further continuing research and discussing with my mentor to conduct some experiments, I came up with my project that I have today. I want to continue in the same field and keep working. Advice to new students: have fun, learn a lot and do it with interest otherwise nothing is possible if you don't put your heart and soul into your work. God Bless! Thank you

Awards

Value

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| Excellence Award - Intermediate - Bronze Medal Sponsor: Nuclear Waste Management Organization | \$300 |
| Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University | \$1 000 |
| Total | \$1 300 |