CWSF 2013 - Lethbridge, Alberta

Amit Scheer

Overproduction of Reactive Oxygen Species: A Principal Cause of Cancer

Challenge: Health
Category: Intermediate
Region: Ottawa
City: Ottawa, ON
School: Colonel By S.S.

Abstract: Recent studies demonstrate that oxidative stress could play a role in oncogenic transformation and cancer. Internal production of reactive oxygen species (ROS) occurs during the mitochondrial electron transport chain, and may additionally occur during hypoxia to activate HIF-1. By incubating COS7 cells at 21% oxygen, normoxia, and at 1% oxygen, hypoxia, I found that the normoxic cells produced more ROS than those under hypoxic conditions.

Biography

My name is Amit Scheer, and I am a Grade 9 student. My interests include music (I play the flute in the school band), writing, and of course, science. In the future, I am planning to go to university to eventually study medicine. Science has been my favourite subject for as long as I can remember, and this passion has driven me to enter science competitions since I was in Grade 6. This year was my third year participating in the Ottawa Regional Science Fair, where I have previously won the award for the Chemical Institute of Canada. In addition to this, I have entered the WHERE Challenge for four years, and in Grade 6 I won an honorable mention for Ontario. In Grade 8 I had the incredible and inspiring opportunity to experience university for one full week in a course about biomedical engineering, which sparked my interest in cellular research and is one of the inspirations for my project.

Awards	Value
Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	$100
Western University Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: Western University	$1 000
Total	$1 100