

CWSF 2018 - Ottawa, Ontario



Ishaan Sachdeva

Promising Future of Algae Based Silver Chloride Nanoparticles as Antibiotics

Challenge: Health

Category: Senior

Region: Northwestern Ontario

City: Thunder Bay, ON

School: Sir Winston Churchill C.V.I.

Abstract: Silver chloride nanoparticles can kill bacteria. When made using chemicals, they can release byproducts which can be toxic to the human body and environment. I conducted an experiment to make silver nanoparticles using an algae called kelp. Then, I compared their action in killing bacteria to the nanoparticles made by chemical method. This experiment will help in producing cost effective and environment friendly antibiotics.

Biography

I came to Ottawa, Canada from Kuwait with my parents at the age of seven years and then, moved to a small town, Thunder Bay, in Northwestern Ontario in 2013. Over the course of my school studies, I became interested in mathematics, computer coding, and research. My participation at Northwestern Ontario Regional Science Fair 2017 introduced me to the field of research. During the summer of 2017, I thoroughly enjoyed designing and constructing String Phantoms and Ultrasound Transducer Cases using Solidworks, Dremel and the 3D Printer at Dr Pichardo's lab at Thunder Bay Research Institute. This experience inspired me to design a novel health related experiment for the Northwestern Ontario Regional Science Fair 2018. My project received the Senior award of excellence and University of Ottawa Scholarship Award. My future plan is to conduct more experiments on kelp in the next year to determine why some set of data did not work. This experience with research taught me that results may not match the hypothesis most of the times. But having an inquisitive mind, self reflecting and seeking feedback at every step as well as perseverance are the qualities of a good researcher.

Awards

Value

Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	
Carleton University Entrance Award Senior Bronze Medallist - \$1,000 Entrance Award Sponsor: Carleton University	\$1 000
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$3 000