

CWSF 2012 - Charlottetown, Prince Edward Island



Arjun Nair

A Novel Study Exploring Photothermal Therapy for Protein Denaturation in Cancer

Challenge: Innovation

Category: Intermediate

Region: Calgary Youth

City: Calgary, AB

School: Webber Academy

Abstract: My project aims to identify an alternative method for cancer treatment which is more effective and reduces the long-term consequences of chemotherapy/radiation therapy by examining the fundamental mathematical equations and variables that describe photothermal therapy. The idea proposed is to use nanoparticles to convert photonic energy into thermal energy onto surrounding cancerous tissue, reaching the threshold temperature required for protein denaturation and cell death.

Biography

Hi, my name is Arjun and I'm a grade ten student attending my second year at the Canada Wide Science Fair. I enjoy science and have participated in science fairs since grade five, winning either a gold or silver medal at school and regional levels. I am excited to be at this event and to be exposed to many facets of science and technology. I plan on taking my interest in science further to my university studies. Besides science, I love sports and athletics especially soccer, basketball, and cross-country running and is a part of both community club and school level teams. I also love to debate, coming in first at the regional competition this year with my partner. Between science, sports and debate time sure goes by!

Awards

Value

The Actuarial Foundation of Canada Award - Intermediate	\$750
Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	\$700
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$3 450