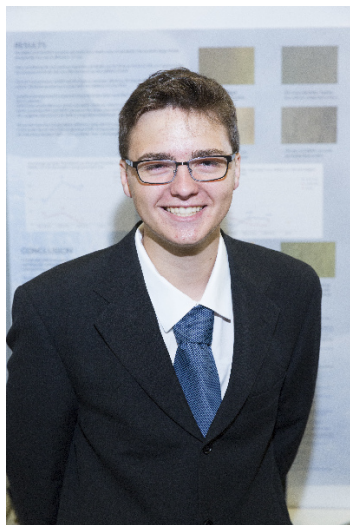


# CWSF 2018 - Ottawa, Ontario



## Rory Smith

### Targeted Oxidation: A New Method for Local Chemotherapeutic Medicine

**Challenge:** Health

**Category:** Senior

**Region:** East Kootenay

**City:** Cranbrook, BC

**School:** Mount Baker Secondary

**Abstract:** Building off previous research on delivering drugs directly to the targeted tissue, a novel active agent was explored through investigation of feasibility and experimentation. Targeted oxidation of a malignant cell's nucleus was investigated by nanoparticle delivery. The drug model is comprised of DiBenzyl Peroxide (BOP), for its aromatic radical properties, which is absorbed into 5 nm gold nanoparticles (AuNPs) and microencapsulated inside a liposome.

#### Biography

I am a grade 11 student in beautiful Cranbrook, B.C. This is my fourth and last CWSF, as next year I will be honoured to be an exchange student in northern Thailand! This summer I will be working as a lifeguard and camp counsellor, And I will also be teaching survival! My hobbies include downhill skiing, coaching elementary basketball, playing rugby, and parkour.

#### 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
<b>Total</b>	<b>\$3 000</b>