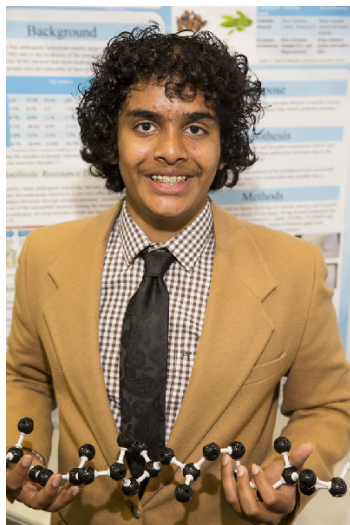


# CWSF 2015 - Fredericton, New Brunswick



## Aryan Singh

### Inhibiting Pathogenic Infections: A Polyphenol and Carotenoid Based Approach

**Challenge:** Health

**Category:** Junior

**Region:** Ottawa

**City:** Ottawa, ON

**School:** Bishop Hamilton Private

**Abstract:** A procedure was established to determine whether polyphenols and carotenoids found in Green Tea and Cloves can help inhibit and treat certain antibiotic resistant pathogenic infections. NMRs and Partition techniques were conducted upon each compound to prove non-inferiority towards water cell broth. At a microbiological scale, the results had shown that these compounds can be used to treat and inhibit deadly pathogenic infections.

#### Biography

My name is Aryan Singh, I am currently in the 8th grade and attending Bishop Hamilton Montessori School in Ottawa. My favorite subjects are Math and Science. I also obtain a black belt in Taekwondo and I play Alto Saxophone. Last year, in 2014 I was one of the CWSF finalists in Windsor Ontario. The reason that I am doing this project is because of how pathogenic infections are affecting the world. The goal of my project was to use polyphenols and carotenoids found in Green Tea and Cloves and use them to inhibit the cell growth of certain pathogenic infections. The main inspiration of my project was how these pathogenic infections are affecting the world and humanity. Most of the pathogens I worked with all do not have effective medications so I wanted to create a low cost and effective treatment. I plan to further improve my understanding of pathogenic infections by volunteering at a lab and attending bacteriology courses. To improve my experiment, I would like to test my treatment against more pathogens. My advice to someone willing to pursue a project in health is to really know what you are researching and never put your self down!

#### Awards

#### Value

Excellence Award - Junior - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 000