

## CWSF 2015 - Fredericton, New Brunswick



### Malika Sharma

#### Antibiotic Resistance Threat: Testing Alternative Therapies

**Challenge:** Health

**Category:** Junior

**Region:** Cariboo Mainline

**City:** Kamloops, BC

**School:** St Ann's Academy

**Abstract:** I tested garlic, allicin and silver as alternative antibacterial therapies against Escherichia coli (non-pathogenic strain) and; if these could also boost activity of other antibiotics (Chloramphenicol). I used the Disc Agar Diffusion method and measured zone of clearance with these treatments. Three treatments showed different zones of clearance however allicin was the most effective antibacterial and was also the best in boosting Chloramphenicol activity.

#### Biography

My name is Malika Sharma. I am in Grade 7 at St. Ann's Academy, Kamloops, BC. This was my fourth time participating in a regional science fair, and my first time in CWSF. This year, at the Cariboo Mainline Regional Science Fair, I won a gold medal, the best in Life Sciences award, and the BC Science Teacher's award (for clearly presenting a hypothesis and independent, controlled variables). In the previous years, I had participated in the Manitoba School Science Symposia (MSSS) and won gold medals and best in Health, Biology and Physical sciences. I also play the clarinet in the Grade 7 band. I enjoy cross country skiing, singing, dancing, reading, swimming, and going hiking. I plan to study medicine in university. I was inspired to do this project when I learned that bacterial infections could be deadly as bacteria are developing resistance to almost all the known antibiotics. I decided to explore alternative antibacterial therapies (garlic, allicin and silver) that the world could use. I love science especially conducting science experiments and will encourage other students to participate because it is great learning in a fun way!

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