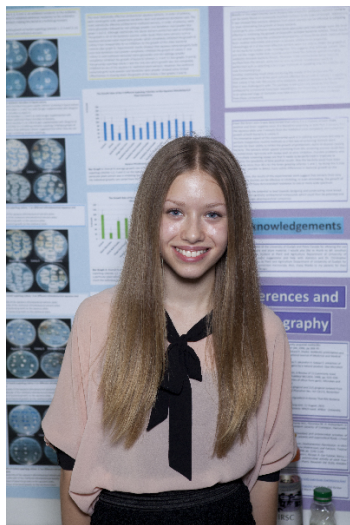


# CWSF 2013 - Lethbridge, Alberta



## Emma Hoover

### Plants That Bug Superbugs

**Challenge:** Health

**Category:** Junior

**Region:** Waterloo-Wellington

**City:** Guelph, ON

**School:** John McCrae Public School

**Abstract:** Antibiotic resistance in bacteria has become one of the major public health concerns of the 21st century. In my project, I designed and developed an assay for using ethnobotanical extracts to determine their efficiency against antibiotic resistant strains of bacteria. The end goal would be to develop semi synthetic compounds from these natural products in order to develop new drugs to replace synthetic antibiotics.

#### Biography

My name is Emma Hoover, I am from John McCrae Public School, Guelph Ontario. I am interested in Microbiology, and using plants as alternatives to medication, sources of electricity etc. The inspiration for my project came from the CBC TV show "Market Place" where they conducted an experiment into testing hotel cleanliness and found antibiotic resistant strains of bacteria in each hotel room tested. This gave me the idea to swab different public places in Guelph to see if antibiotic resistant bacteria was present on surfaces we commonly touch, and to see whether antibacterial compounds extracted from different plants would inhibit their growth. I have won the best of division award at the Regional Science Fair this year, and a gold medal in my division. My plans for further investigations in my project would be to create a semi synthetic drug containing natural and synthetic compounds to effectively inhibit the growth of antibiotic resistant strains of bacteria. Advice for any students interested in my project would be to have a mentor with experience to guide you through the experiments and to research this topic well for better comprehension.

#### Awards

#### Value

Excellence Award - Junior - Bronze Medal Sponsor: Youth Science Canada	\$100
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
<b>Total</b>	<b>\$1 100</b>