

## CWSF 2015 - Fredericton, New Brunswick



### Rebecca Lewis

#### Bacterial Infections: Natural or Synthetic Antibiotics?

**Challenge:** Health

**Category:** Intermediate

**Region:** Cape Breton

**City:** Sydney, NS

**School:** Riverview High School

**Abstract:** To answer the question posed in my project, common bacteria was collected, and then grown on TSA plates. On this medium, 3 natural and 3 synthetic antibiotics effectiveness were measured via disk diffusion sensitivity testing. The antibiotics zone of inhibition was measured, then classed as being bacteriostatic, bacteriocidal, or not effective, and rated as to which was most effective.

#### Biography

The inspiration for my project began when I underwent reconstructive ACL surgery for my knee. I soon learned that I contracted a Staphylococcus Aureus infection from the surgery. The infection was resistant to several antibiotics, so I had to be prescribed a top-of-the-line antibiotic that had many side effects. I decided to build my project on the question that possibly, natural antibiotics could be more effective than synthetic in the treatment of bacterial infections. For my future, I've always had an interest in medicine, in particular, wanting to attend McGill University and becoming a cardiac surgeon. So for the opportunity to do this project and do well with it is a major confidence boost to push me in those plans. I also would like to do further investigations with this project and possibly find a way to infuse or alter natural antibiotics to make them more effective than synthetic antibiotics. For advice to others thinking about doing projects, just find a reason/question that honestly interests you into wanting to do that project. For me, I played sports for years, but I was more interested in doing a project related to medicine, so, that's what I did.

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