

## CWSF 2014 - Windsor, Ontario



### Kariann Szemethy

#### Phage Busters

**Challenge:** Health

**Category:** Intermediate

**Region:** Southeast Alberta

**City:** Medicine Hat, AB

**School:** Medicine Hat High School

**Abstract:** After I heard about a method called ultraviolet germicidal irradiation it got me curious into sterilization methods. I wondered if other light systems, such as everyday fluorescent lights would have the same effect on viruses. To test, I used a surrogate virus of T4 phage paired with its host cell E. coli and exposed the phage to fluorescent and UV light then monitored its growth.

#### Biography

I am Kariann Szemethy, attending Hat High, grade 9. I have received numerous academic awards and scholarships during my elementary and middle school years. I am determined to graduate high school top of the class with scholarships. My plan includes university and graduate with a PhD in Medicine, to become a General Practitioner. Besides my academic strengths I am also an avid athlete. I participate in both school and club volleyball and basketball. I also play rep soccer and track and field. When I'm not playing sports I'm learning the piano, organ and guitar. Science has been a long time passion for me, especially environmental. I have been participating in Science Fair since grade 4 and have received many awards in school and regional fairs. It has always been my goal to be chosen to go to Nationals. This is my first opportunity to attend, but definitely not my last. My project was inspired by the constant health concerns and hearing about a system called ultraviolet germicidal irradiation and testing it on T4 Phage. Then altering this sterilization method to wondering if fluorescent lights would work. I now want to investigate infrared light as my next experiment. Believe to achieve.

Youth Science Canada  
PO Box 297  
Pickering ON L1V 2R4  
[www.youthscience.ca](http://www.youthscience.ca) / [info@youthscience.ca](mailto:info@youthscience.ca)  
416-341-0040