

## CWSF 2013 - Lethbridge, Alberta



### Divya Shah

#### Potential of Probiotics in the Treatment and Prevention of Colorectal Cancer

**Challenge:** Health

**Category:** Senior

**Region:** York

**City:** Markham, ON

**School:** Markham District H.S.

**Abstract:** This project involved designing a novel carboxymethyl cellulose film, containing probiotics *Lactobacillus reuteri* - a safer therapy for colorectal cancer. The in vitro capacity of embedded *Lactobacillus reuteri* to remain viable was studied and several parameters were optimized. The practicality of the probiotics biofilm to improve immune defenses and its ability to serve as a preventative and natural therapeutic agent for colorectal cancer is proposed.

#### Biography

As a Grade 11 student at Markham District High School, I have always been fascinated by the field of health science. Last summer, I explored this passion by volunteering at a research lab which provided me with the academic knowledge and scientific experience needed to participate in the science fair. These experiences continue to motivate me to update myself with current knowledge in the field of science. My involvement with research has been a great learning experience! As an advocate for literacy, I began the first Markham Chapter for Pencils for Kids (P4K) and initiated a P4K club at school which has raised over \$5000 since 2010. P4K strives to lift the children of Libore, Niger from poverty through education. Recognition such as the Mayor's Youth award as well as Nelly Furtado's visit to my school in support of my initiative has inspired me further. I have been volunteering at Markham Stouffville Hospital since 2010 and through the LEAD program I have organized many charitable events. It is an honor to be a part of the CWSF 2013 team and I am really excited and look forward to this enriching experience!

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