

# CWSF 2012 - Charlottetown, Prince Edward Island



## Laura Kim, Ashley Bell

### Using Nuclear Matrix to Detect Colorectal Cancer Cells

**Challenge:** Health  
**Category:** Senior  
**Region:** Manitoba Schools Science Symposium  
**City:** Winnipeg, MB  
**School:** Fort Richmond Collegiate  
**Abstract:** Fecal Occult Blood Tests are the first tests used for detecting colorectal cancer in Manitoba. The sensitivity of this test could be improved upon. This project looked at a possible serum test using nuclear matrix proteins from colorectal cancer cells with TP53, a tumor suppressor, and without TP53. These samples were compared on a 1D and 2D PAGE, revealing proteins in the absence of TP53.

#### Biographies

Laura - My name is Riyeon Kim and I am currently enrolled Fort Richmond Collegiate, completing grade 12. I am involved in many school and community activities. I am very interested in Health Science, which led me to get involved in research projects and volunteering at hospital. I received an Overall Best Award in Manitoba with the research project I worked on in 2012. Considering my interest, I am planning to attend Faculty of Life Science in University. This year, our project is on an effective screening tool to diagnose colorectal cancer. This project was inspired by a scientific article dealing with cancers in Canada. In our project, we identify...

Ashley - My name is Ashley Bell. I am a grade 11 student at Fort Richmond Collegiate in Winnipeg, Manitoba. This is my first year attending the Canada Wide Science Fair. I worked on a project with my partner Laura Kim. Our project is called Using Nuclear Matrix Proteins to Detect Colorectal Cancer Cells. We participated in the Sanofi BioGENEius Challenge Canada with it, as well as the Manitoba Schools' Science Symposium, which has led us to the CWSF. This project was inspired out of curiosity to improve standard testing for colorectal cancer. To me, colorectal cancer seemed like a very curable disease. I never felt trouble by it, until I read a fact...

#### Awards

#### Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	\$700
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 500
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$9 200</b>

