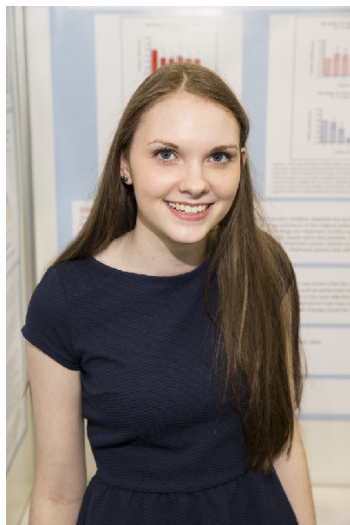


CWSF 2015 - Fredericton, New Brunswick



Alyssa Young

Childhood Cancer Chemotherapy: The promise of non-genotoxic options

Challenge: Health

Category: Senior

Region: Eastern Newfoundland

City: St. John's, NL

School: Holy Heart High School

Abstract: Childhood cancers are treated with chemotherapeutic regimens that may incorporate DNA-damaging, or genotoxic, drugs. To shift away from genotoxic options, I examined the efficacy of a growth factor receptor inhibitor, lapatinib, in a juvenile-onset ovarian cancer cell line (COV434) versus the DNA-damaging agent cisplatin. COV434 cells were sensitive to growth inhibition with lapatinib treatment, suggesting growth factor signaling is an alternative target for effective therapy.

Biography

My name is Alyssa Young and I'm currently enrolled in 11th grade at Holy Heart High School, completing the IB program. Aside from academics, I am involved in many extracurricular activities at school revolving around STEM topics as well as social justice and arts, such as the Green Leaf club and Choir. I have a high interest in science, and have been accepted into the Da Vinci Engineering Enrichment Program's summer academy for July 2015. In University I plan on studying various sciences and continuing with medical research, eventually specializing in oncological research. This is where the inspiration for my project began. As I have always had an interest in cancer research, I knew I wanted to explore beneficial treatments for cancer. The results of my experiment were positive but the opportunities to expand on this knowledge are endless, including a survey of all rare childhood cancers that still have genotoxic chemotherapy as their current standard of care in clinic, and pursuit of the options for other targeted therapies. I recommend to anyone planning on doing a project that they do something they are truly interested in as it makes the research very enjoyable and personal.

Awards

Value

Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$2 000