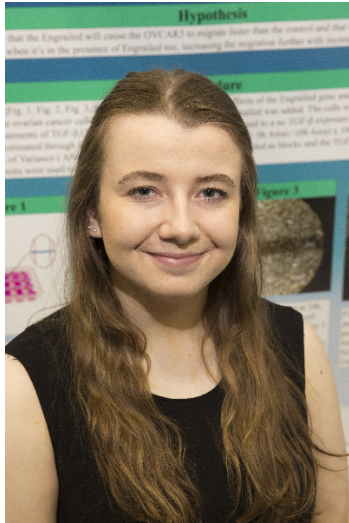


# CWSF 2019 - Fredericton, New Brunswick



## Juliana Koen Alonso

### The Effect of the Engrailed Gene & TGF Beta on the Migration of Ovarian Cancer

**Challenge:** Health

**Category:** Senior

**Region:** Eastern Newfoundland

**City:** St. John's, NL

**School:** Holy Heart High School

**Abstract:** Mainly, I studied how a gene - Engrailed - affected the movement of cancer cells. My experiment showed that when cells have this gene, they migrate twice as fast; interesting since it was present in almost all the cells I tested. If I can stop this gene from working, I can slow down the cancer and help save a lot of lives in the future.

#### Biography

Cancer is something that has affected me a lot within my short life. Before I was even born, my grandfather died of it. Recently, I saw a little boy I knew from before he was even in the womb receive a leukemia diagnosis. When I read a paper about the presence of Engrailed being a biomarker in prostate cancer, I knew I had to investigate - that this could be my chance to contribute to the fight. My plans for further investigation are, of course, to do more replicates of the experiment to make sure they will shield the same result. After I've gathered that information and it's validated, I will move on to investigating if Engrailed has the same affect in other ovarian cancer cell lines and then onto other cancers if that proves the same. If so, I will work on trying to inhibit the gene to slow down migration and metastasis of cancerous cells within a patient. Advice I would give other students when doing a project is to do it on something you're passionate about. With enough passion, you'll be driven forward and you will never think of it as work, but just a new discovery.

#### 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
<b>Total</b>	<b>\$2 000</b>