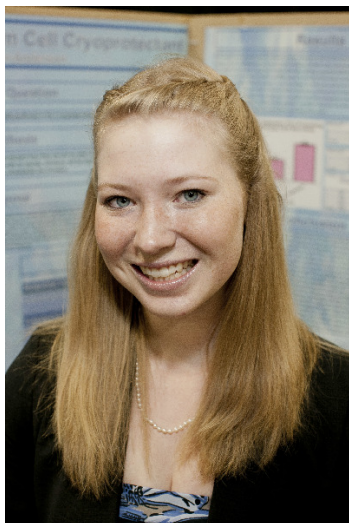


## CWSF 2011 - Toronto, Ontario



### Kelcie Miller-Anderson

#### Trehalose: A Novel Stemcell Cryoprotectant

**Challenge:** Discovery

**Category:** Senior

**Region:** Calgary Youth

**City:** Calgary, AB

**School:**

**Abstract:** This project investigated if trehalose, a natural sugar, could be used in place of Dimethylsulfoxide as a new method for cryopreservation. This project was able to demonstrate that trehalose is a viable alternative cryoprotectant to DMSO. By using trehalose in place of DMSO the risks to patients receiving cryopreserved cells would be virtually eliminated, making treatment with cryopreserved cells more effective and less dangerous.

#### Biography

My name is Kelcie Miller-Anderson and I'm currently a Grade 11 student at Bishop Carroll High School. This will be my third year participating at the CWSF and I am looking forward to experiencing the 50th anniversary. This past summer I had the opportunity to be selected by YSF to be part of the Schools on Board program, where I got to spend part of my summer traveling through the northwest passage aboard the CCGS Amundsen research vessel. Dance occupies most of my time as I am a competitive Dancer and dance almost every day after school. Besides dance, I enjoy skiing, snowboarding and horseback riding as well as volunteer work.