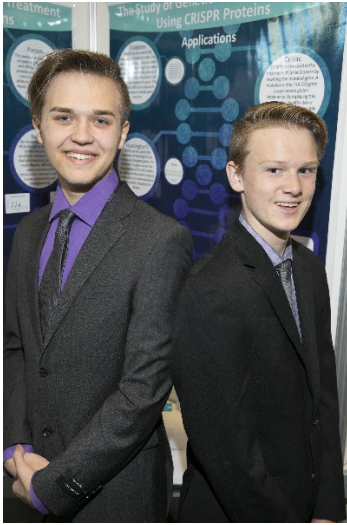


## CWSF 2017 - Regina, Saskatchewan



### Riley Geisler, Caleb Charette

#### The Study of Genetic Disease Treatment Using CRISPR Proteins

**Challenge:** Health

**Category:** Intermediate

**Region:** North Bay

**City:** Powassan, ON, Callander, ON

**School:** West Ferris S.S.

**Abstract:** The project was created to study the targeting efficiency over cleavage effectiveness of CRISPR Proteins, for future human applications. Success was based on the production of HR repairs produced by the cells we transfected/nucleofected with the TLR system. It was concluded that the *Campylobacter Jejuni* Cas9 had the best results for future human applications.

#### Biographies

Riley - My name's Riley Clarke Geisler, I'm a grade 10 student at West Ferris Secondary School in North Bay, Ontario. I play the guitar, piano, provincial level football, and love all aspects of science. I wish to attend Western University for my BHSc and McMaster University for my M.D, with the end goal of being a neurosurgeon. The most substantial academic reward I've received was the TransCanada Award at my regional science fair, which gained academic recognition from the Nipissing MPP Vic Fedeli. I was inspired by last years CWSF, the Shulman Travel Award this year, and The Lalonde Family Award in Biology & Medicine. My partner Caleb Charette and...

Caleb - My name is Caleb Charette, I am 16 years old. I attend West Ferris Secondary School in North Bay, Ontario. I am a part of the project "Comparing cas9 Proteins in Editing the Human Genome". My partner, Riley Geisler, and I, created this project to help a close friend we made on our CWSF journey last year. They were diagnosed with Non-Hodgkins Lymphoma. They were a key component in our project last year, and was the glue that held our project together. That combined with our passion for medicine truly inspired us to do this project. In the future we want to take this project to the level of being able to use it on people. Using CRISPR to treat...

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