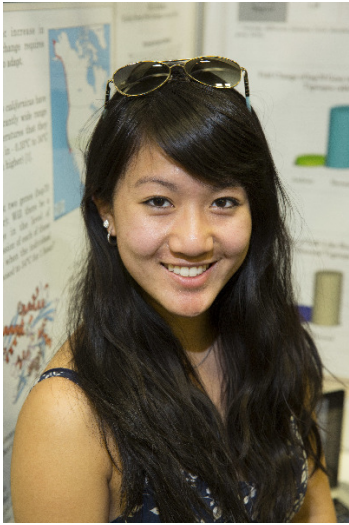


## CWSF 2014 - Windsor, Ontario



### Christabel Chan

#### Gene(s) that Allow *Tigriopus californicus* to Survive Under Thermal Stress

**Challenge:** Environment

**Category:** Senior

**Region:** Toronto

**City:** Toronto, ON

**School:** Bishop Strachan Private

**Abstract:** The species of copepods called *Tigriopus californicus* can live in tide pools from Alaska to Southern California, surviving 0.35°C to 34°C. After testing the difference in gene expression between copepods kept at 20°C and copepods at 34°C, we have determined that both the hsp70 gene and one of the toll-like receptor genes of *Tigriopus californicus* play a role in conferring the trait of thermal tolerance.

#### Biography

As a Grade 11, I'm a Model UN addict, high-achieving math nerd, science geek and rower. In the rare free time that I have, you'll either find me curled up with a well-worn copy of *Gone with the Wind* or playing with my little sister. During the summer, I love working with younger kids as a camp counsellor or a volunteer in paediatric wards. I was recently chosen to be part of the student leadership team for 2014-2015 as Junior School Prefect. In the future, I hope to major in both Biology and International Relations so I can fulfill my dream of becoming a paediatrician with Doctors without Borders. In terms of my research, I was inspired by my mentor's pilot study. My lab was right beside the ocean, so that also guided me toward studying the genetics of a small marine creature. In the future I would like to expand my research into how other genes affect thermal tolerance in *Tigriopus californicus*. To others thinking about doing a project, my advice would be to focus on something that you have a genuine interest in - otherwise things can get pretty tedious and you definitely want to stay passionate!

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