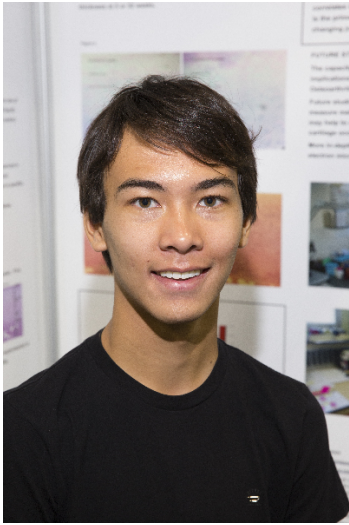


## CWSF 2019 - Fredericton, New Brunswick



### Braxton Chan

#### The Effect of Autologous Blood Components on Human In Vitro Articular Cartilage

**Challenge:** Health

**Category:** Intermediate

**Region:** East Kootenay

**City:** Cranbrook, BC

**School:** Mount Baker Secondary

**Abstract:** The components of blood (platelets, red blood cells and white blood cells) have specific roles in the homeostasis of biologic tissue. In this study, I examined the effect of each component of blood on human articular cartilage. The goal is to utilize certain components to promote the health of articular joints and to remove certain components to prevent its degradation.

#### Biography

I am excited to return to CWSF for the second time. This is particularly special as my younger brother is joining me at CWSF. I am currently attending Mount Baker Secondary School in grade 10. I am an avid soccer player and a member of the Caps to College (pre-Collegiate) Whitecaps soccer program. I also play for the U18 regional rep soccer team. My other passions include SCUBA diving, surfing, kitesurfing and snowboarding. My research project was inspired by the global need to improve the function of arthritic joints and to decrease their associated pain. Arthritis is the leading cause of disability in adults in North America. My project is now in its second year of development. Long-term outcomes were collected this year with the plan in the future to determine the biologic mechanism causing the favourable results demonstrated in my study. My best advice for future science fair students is to come up with an idea that you can imagine that would be enjoyable to study and test. This way, the hard work and long hours will not seem so hard or long.

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