

## CWSF 2008 - Ottawa, Ontario



### Steven Zhu

#### Garlic Against Genotoxicity

**Division:** Biotechnology / Environmental Innovation

**Category:** Intermediate

**Region:** Greater Vancouver

**City:** Vancouver, BC

**School:** Sir Winston Churchill Secondary

**Abstract:** In my experiment, I investigated whether certain substances produced by germinated potatoes could cause mutations in the form of micronuclei in the root tip cells of the broad bean plant (*Vicia faba*). I also explored whether garlic can effectively inhibit the micronuclei occurrence induced by the germinated potatoes. I found out that germinated potatoes have mutagenic potential, and that garlic has antimutagenic potential.

#### Biography

I am a grade 10, pre-IB student from Churchill S.S. I am extremely interested in biological sciences and mathematics. I am an executive of the Dissection Club and a coach of our math club. This year, I was invited to write the Canadian Mathematical Olympiad (CMO) and the USAMO. As a member of the Reach for the Top team, I've won a silver medal at a district tournament. I am very interested in current developments in genetic research. My past regional science fair topics all dealt with toxicology in general as well as genotoxicity. I also like writing about science. In my Royal Commonwealth Essay, which is being evaluated in the final round in London, I investigated current trends in global warming. In the DNA Day Essay Competition, I discussed current developments in cutting-edge anti-sense RNA cancer prevention research. My extra-curricular activities include playing for a Vancouver Thunderbirds minor hockey team. I've won third place at the Kiwanis grade 10 piano music festival this year. I also played drums for our school's band. I'm a student ambassador at our school, and have volunteered as a tour guide for VanDusen Botanical Gardens. I wish to pursue a career in genetic research.

#### Awards

#### Value

The University of Western Ontario Scholarship	\$2 000
Gold Medallist - \$2000 Entrance Scholarship	
Sponsor: University of Western Ontario	
Honourable Mention - Environmental Innovation - Intermediate	\$100
Sponsor: EnviroExpo, Presented by VIA Rail Canada	
Gold Medal - Biotechnology & Pharmaceutical Sciences - Intermediate	\$1 500
Sponsor: Rx&D Health Research Foundation	
<b>Total</b>	<b>\$3 600</b>