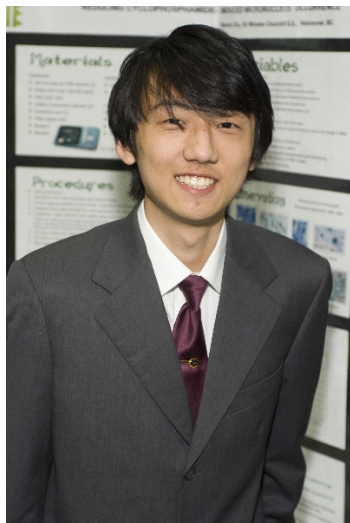


# CWSF 2009 - Winnipeg, Manitoba



## Steven Zhu

### Fabulous Fiddleheads

**Division:** Biotechnology / Environmental Innovation

**Category:** Senior

**Region:** Greater Vancouver

**City:** Vancouver, BC

**School:** Sir Winston Churchill Secondary

**Abstract:** In my experiment, I used cyclophosphamide-induced chromosomal mutations to determine the fiddlehead's anticlastogenic potential on onion root meristem cells. Another aspect of my project involves researching the marketability of the fiddlehead as a commonly-consumed vegetable. This experiment demonstrated that fiddlehead extract seemed to have an anticlastogenic effect and significantly reduced the rate of micronuclei. The cooked fiddleheads were more anticlastogenic than the raw fiddleheads.

### Biography

I am a grade 11 International Baccalaureate student from Sir Winston Churchill S.S., Vancouver. I am extremely interested in biological sciences and mathematics and wish to pursue a career in genetic research. I have been an executive of our school's Dissection Club and a coach of our math club for 3 years. I was also invited to write the Canadian Mathematical Olympiad (CMO) and the USAMO. In May 2008 I ranked in the top 50 of the U of T National Biology Competition, and I'm currently in the International Biology Olympiad Team Canada selection process. I am very interested in current developments in genetic research. My past regional science fair projects (dating back to grade 8) all dealt with general toxicology as well as genotoxicity. I also like writing about science. I am a columnist and editor for our school's science journal The Big Bang. 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 also enjoy playing piano. I won 2nd place at the Kiwanis piano music festival. I also volunteer as a tour guide for VanDusen Botanical Gardens.

### Awards

### Value

|  |                 |
|--|-----------------|
| Statistical Society of Canada Award<br>Sponsor: Statistical Society of Canada  | \$1 000         |
| Dalhousie University Faculty of Science Entrance Scholarship<br>Senior Gold Medallist - \$4000 Entrance Scholarship<br>Sponsor: Dalhousie University, Faculty of Science | \$4 000         |
| UBC Science (Vancouver) Entrance Award<br>Senior Gold Medallist - \$4000 Entrance Scholarship<br>Sponsor: The University of British Columbia (Vancouver)                 | \$4 000         |
| The University of Western Ontario Scholarship<br>Gold Medallist - \$2000 Entrance Scholarship<br>Sponsor: University of Western Ontario                                  | \$2 000         |
| University of Ottawa Entrance Scholarship<br>Senior Gold Medallist - \$20,000 Entrance Scholarship (\$5,000 each year for 4 years)<br>Sponsor: University of Ottawa      | \$20 000        |
| Honourable Mention - Environmental Innovation - Senior<br>Sponsor: EnviroExpo, Presented by VIA Rail Canada  | \$100           |
| Gold Medal - Biotechnology & Pharmaceutical Sciences - Senior<br>Sponsor: Youth Science Canada   | \$1 500         |
| <b>Total</b>   | <b>\$32 600</b> |