

# CWSF 2011 - Toronto, Ontario



## Pranay Pratijit, Prakriti Pratijit

### Expedited spike-culture-derived variant population for mutation-mining in wheat

**Challenge:** Innovation

**Category:** Senior

**Region:** Saskatoon

**City:** Saskatoon, SK

**School:** Evan Hardy Collegiate, Walter Murray Collegiate

**Abstract:** A novel method involving chemical mutagenesis of immature spike culture was developed for obtaining new wheat varieties. This method requires very low mutagen concentration and produces rapid and consistent results because it targets germ-cell mutation. Mutation was detected using a combination of simple-sequence-repeat (SSR) and high-resolution-melting (HRM), which was highly effective in mutation detection. The project also discovered variants of starch-branching-enzyme-IIb in new wheat varieties.

#### Biographies

**Pranay -** Pranay was born in Cambridge, UK and moved to Canada in 2001, after living in UK, Singapore and Switzerland. He is currently in Grade 10 at Evan Hardy Collegiate. He likes doing math, science and social studies. In 2008, he received 150 out of 150 at the Gauss Math Contest. Pranay is a keen sportsman and plays badminton and basketball for his high school. His hobbies include travelling, photography, drawing and producing music. He aspires to be a doctor and wants to use biotechnology to find a cure for cancer.

**Prakriti -** Prakriti was born in Singapore and moved to Canada in 2001, after living in Singapore and Switzerland. She is currently in Grade 8 at Lakeview School, Saskatoon. She likes doing math, science and language arts. In 2009, she received 136 out of 150 at the Gauss Math Contest. Prakriti is a voracious reader and likes singing and dancing, and hanging out with friends. Her hobbies include baking, drawing and listening to music. She is very fond of pet animals. She aspires to be a vet and wants to use biotechnology to cure animals.

#### Awards

#### Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	\$700
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 500
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
The University of Western Ontario Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
<b>Total</b>	<b>\$9 200</b>

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