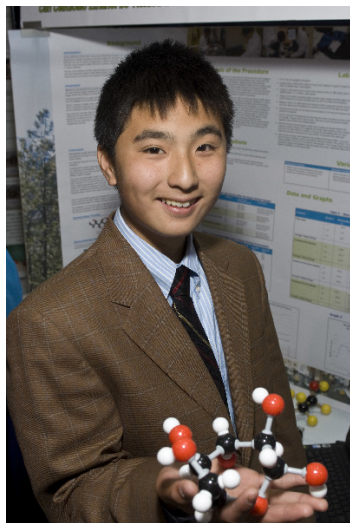


## CWSF 2010 - Peterborough, Ontario



### Get Into the Spirits

**Division:** Physical & Mathematical Sciences

**Category:** Junior

**Region:**

**City:** ,

**School:**

**Abstract:** This project tested for cellulosic ethanol production from BC Mountain Pine Beetle killed Pinus Ponderosa by acid hydrolysis, steam explosion and fermentation. Ethanol yield was measured by the mass loss of samples over a four-day period, Bromothymol Blue acid indicator and aroma. The experiment results showed all feedstocks produced ethanol, with the green pine needles producing the most.

Awards	Value
The University of Western Ontario Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Western Ontario	\$1 000
Bronze Medal - Environmental Innovation - Junior Sponsor: EnviroExpo, Presented by VIA Rail Canada	\$300
Total	\$1 300