

## CWSF 2012 - Charlottetown, Prince Edward Island



### Moaaz Rashad

#### Optimizing Environmental Factors in *C. reinhardtii* Based Hydrogen Bioreactors

**Challenge:** Energy

**Category:** Senior

**Region:** Regina

**City:** Regina, SK

**School:** Regina Huda School

**Abstract:** This project investigates the effects of key environmental factors on the hydrogen production in *Chlamydomonas reinhardtii* bioreactors. The project outcome includes the development and demonstration of experimental methods for determining the optimum temperature and duration of lighting cycles during the anaerobic respiration phase, and for maintaining the health of the algae through controlling the level of contamination caused by bacterial growth in the reactors.

#### Biography

Moaaz comes from Regina, Saskatchewan and attends Regina Huda School. He is currently in grade twelve, and is highly active at his school. He has interests in math, science, and computer programming. Moaaz has been participating in science fairs, debate clubs, and several other extracurricular activities. He enjoys reading and writing, and currently serves as the president of his school's Student Leadership Council. Next fall, Moaaz will be attending the University of Saskatchewan to pursue a career in medicine.

#### 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
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$9 200</b>