

# CWSF 2014 - Windsor, Ontario



## Roi Levy, Lior Levy

### One Little Cell, A World of Possibilities

**Challenge:** Environment

**Category:** Intermediate

**Region:** Toronto

**City:** North York, ON, Toronto, ON

**School:** William Lyon Mackenzie Collegiate

**Abstract:** Cultivating coccolithophorid *E. huxleyi* has significant potential for carbon dioxide sequestration through photosynthesis and biomineralization. We designed and constructed a novel, high efficiency, modular, portable, closed photobioreactor panel to optimize algal growth and optical density. Our investigation yielded the optimal growth conditions necessary for large scale cultivation, enhanced carbon dioxide bioremediation, climate regulation and the production of biofuel, biomass and calcium carbonate.

### Biographies

Roi - My name is Roi Levy and I am a grade 9 student attending the enriched Math and Computer Science program of William Lyon Mackenzie C. I. in Toronto. Science has always been an integral component of my worldview and my experience in last year's CWSF only enhanced my passion and motivates me to continue pursuing new fields in science and technology. At the CWSF, I was honoured to work with great scientific minds, and have gained great experience, knowledge, and inspiration. As a secondary school student, I have been an active member in science clubs, math contests, sports and a dedicated volunteer at Baycrest Hospital. I have many interests an...

Lior - My name is Lior Levy and I am a grade 10 student attending the enriched Math and Computer Science program of William Lyon Mackenzie C. I. in Toronto. Growing up, I always had a strong passion for the biological sciences. As a devoted environment activist, junior representative of student council, Baycrest Hospital student executive, highly regarded peer tutor and dedicated volunteer in the local elderly home, I am greatly involved in supporting my community. I have many interests and have been involved in everything from computer coding, math contests, competitive swimming, ice hockey, rugby, volleyball and intense science inquiry. I am extre...

### Awards

### Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	\$300
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$2 300</b>