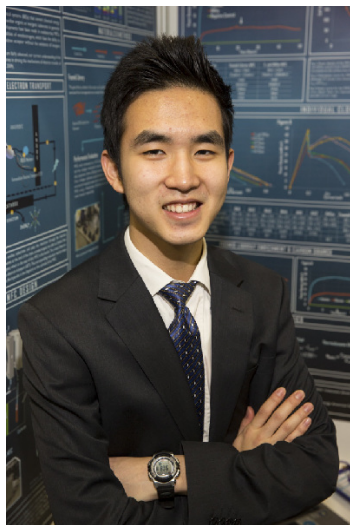


CWSF 2015 - Fredericton, New Brunswick



Austin Wang

A Novel Method to Identify Genes in Electron Transfer of Exoelectrogens

Challenge: Energy

Category: Senior

Region: Greater Vancouver

City: Vancouver, BC

School: David Thompson Secondary

Abstract: Exoelectrogens are microorganisms that are able to engage in extracellular electron transport (EET) to generate power in microbial fuel cells (MFCs). This project aims to identify genes involved in bacterial EET by screening an E. coli fosmid library in MFCs for enhanced clone performance. Analysis of gene inserts carried by these clones may provide new insight into the functions and mechanisms behind bacterial EET.

Biography

Austin Wang is a grade 11 student at David Thompson Secondary in Vancouver, BC. He is an aspiring scientist, competitive athlete and passionate musician. He played high school basketball, as well as soccer, track and field, and cross-country. Austin has played piano for 10 years, cello for 3 years, and was part of jazz and concert bands as a flutist and alto saxophonist. In his spare time, Austin enjoys composing original music. Recently, he won the Golden Key International Piano Composition Competition. Austin will perform his composition at the World Young Composer's Recital in Vienna, Austria this summer. Passionate about global issues, and an enthusiastic participant of Model United Nations, Austin is the founding president of his school's Model UN club. Currently, Austin does research into the microbial dynamics of microbial fuel cells (MFCs). As a novel electricity generation technology, Austin believes that MFCs have great potential in reducing our carbon emissions, and in providing power for third world and developing nations. Austin believes his research will yield new insights into the internal functions of MFCs and will lead to improved reactor designs and the eventual commercialization of this technology. Austin plans to study physics or biotechnology in universit...

Awards

Value

The Manning Innovation Achievement Award - Senior Sponsor: Ernest C. Manning Awards Foundation	\$500
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Excellence Award - Senior - Gold Medal Sponsor: Youth Science Canada	\$250
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Platinum Award - Best Senior Project Sponsor: Youth Science Canada	\$1 000
Best Project Award Sponsor: Youth Science Canada	\$2 500
Total	\$31 250

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