



*FOR RELEASE*

## ***Bacteria induced electricity earns Vancouver's Austin Wang Manning Innovation Achievement Award at national science fair***

FREDERICTON, NB (May 15, 2015) – Vancouver's David Thompson Secondary Grade 11 student, Austin Wang, was today named a Manning Innovation Achievement Award winner at the 54<sup>th</sup> Canada Wide Science Fair (CWSF) held at the University of New Brunswick campus. He received a \$500 award from the Ernest C. Manning Awards Foundation, and membership in a network of nationally recognized innovators. The CWSF featured 400 projects in three age categories and involved 468 finalists, representing the top one percent of science fair projects conducted across Canada this year.

Austin Wang also earned a Gold Medal for Excellence (\$250) and the CWSF Challenge Award for Energy. His project earned the Platinum Award as best senior project, which entitled him for consideration as the \$2,500 Best Project Award, which he won.

Through his project, *A Novel Method to Identify Genes in Electron Transfer of Exoelectrogens* Austin Wang conducted research into the microbial dynamics of microbial fuel cells (MFCs). As a new clean source of energy that uses special types of bacteria to produce electricity, the efficiency and effectiveness is completely reliant upon the bacteria that are being used. Wang developed a method of screening possible genes that could be inserted into the genome of Exoelectrogens, a specific type of energy-producing bacteria used in the MFC.

Wang used a library of "DNA extracted from microorganisms in a mine remediation bioreactor" that he screened and tested in a MFC to see the effects of different genes. The energy output of the bacteria containing these genes were compared and the top four energy producing novel-gene-containing bacteria were selected.

The genes that produced the largest amount of energy are being sequenced in order to determine their role in the External Electron Transfer, the system responsible for the energy output in the Exoelectrogen bacteria. Wang's project will provide insight into the workings of the External Electron Transfer system while increasing the efficiency of the MFC's using his screening process of selecting unique genes.

"The caliber and ingenuity of Wang's project is proof that age is no barrier to innovation," said Jennifer Diakiw, President of the Ernest C. Manning Awards Foundation. "For the past 23 years, the Foundation has been celebrating outstanding young Canadians competing at the Canada Wide Science Fair. The

2015 winners are passionate and creative visionaries and we and our sponsors believe supporting them is critical to creating a culture of Canadian innovation.”

The Ernest C. Manning Awards Foundation introduced its Young Canadian Program in 1992 to recognize outstanding high-school students at the Canada-Wide Science Fair. Each year, the Manning judging team selects eight winning projects, to receive a \$500 Manning Innovation Achievement Award. From the eight, four are further honoured with the Manning Young Canadian Innovation Award, which includes a \$7,000 prize. More information about the Manning Awards is available at [www.manningawards.ca](http://www.manningawards.ca), Twitter @ManningAwardsCA Facebook/ManningAwards.

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**For media info, photo and to interview winner:**

Rosemarie Enslin, Enslin Group

403-630-8421

[enslin@enslinpr.com](mailto:enslin@enslinpr.com)

@RosemariePRyyc