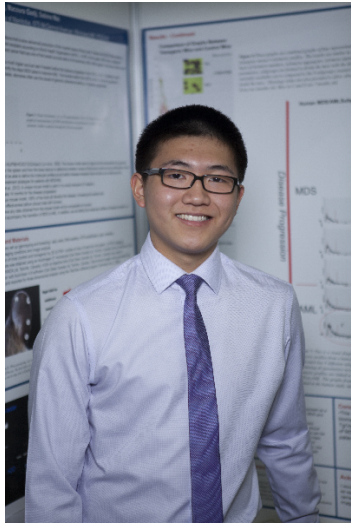


CWSF 2013 - Lethbridge, Alberta



Michael Xu

A Unique Mouse Model to Understand Human Disease Progression from MDS to AML

Challenge: Health

Category: Senior

Region: Manitoba Schools Science Symposium

City: Winnipeg, MB

School: St. John's Ravenscourt School

Abstract: MDS are medical conditions involving the abnormal production of blood cells. In 30% of cases, MDS has a malignant transformation into AML, a deadly blood cancer. A unique mouse model is used to compare 3D telomeric profiles in mice to create an accurate diagnostic tool for assessing disease progression, providing the opportunity for early diagnosis and improved individualized treatment for MDS/AML in humans.

Biography

As a grade 11 high school student from Manitoba, I've always had an interest in sports, music and science. Science particularly intrigued me with its practical applications to improve human health. At CancerCare Manitoba, I had the opportunity to be involved with leukemia research. My project uses a unique mouse model to create a new diagnostic tool that can identify steps of blood cancer disease progression in mice. With this diagnostic tool, further investigation involves applying this diagnostic tool in clinical trials with humans with the goal of advancing individualized treatment. My experience with science fair has been like none other. Working on a research project allowed me to explore my interests and actively learn about a topic, with an emphasis on critical thinking. Moreover, presenting to judges also provided a great opportunity to improve through their constructive feedback. In the future, I plan to continue pursuing sciences with an interest in practical applications. I am really grateful to have participated in science fairs and I am looking forward to presenting in Lethbridge.

Awards

Value

Excellence Award - Senior - Gold Medal Sponsor: Youth Science Canada	\$700
Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$5 000
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
University of Manitoba Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: University of Manitoba	\$5 000
University of Ottawa Entrance Scholarship Senior Gold Medallist - \$4,000 Entrance Scholarship Sponsor: University of Ottawa	\$4 000
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
Total	\$22 700