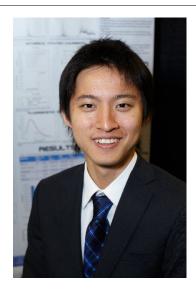




CWSF 2012 - Charlottetown, Prince Edward Island



Weige Zhao

Enhancing Chemotherapy

Challenge: Health
Category: Senior
Region: Toronto
City: Toronto, ON
School: A.Y. Jackson S.S.

Abstract: This investigation assays the phospho-regulation of the eIF4E/4E-BP2

interaction, a system implicated in many cancer types. Residues on 4E-BP2

were progressively phosphorylated and its binding with eIF4E was assessed using isothermal titration calorimetry. Phosphorylating 2 sites on 4E-BP2 significantly weakened affinity and increased enthalpy and entropy. These results will lay the ground work for further investigation of this

interaction as a drug target.

Biography

Change has been a big part of my life. I was born in Beijing, but have lived in London, Singapore, Vancouver and Toronto. In fact, I've changed schools every single year since Grade 8! Similarly, my areas of interest have varied quite a bit, oscillating from politics to finances. That was until 2 years ago, when a trip to the zoo inspired me into Biology, and my passion took over. From then, I became the leader of science clubs, took part in science competitions, organized science-related events, worked in science labs, went to school in the Ontario Science Centre...You name anything "nerdy", I've probably done it! My current project regarding cancer stemmed from my last project about neurology. The same system that governs cellular mechanisms in the brain is implicated in many cancers. The realization of conserved patterns throughout Nature's many intricacies inspired and awed me, and hence the project was born. If I were honored with the opportunity to provide advice for students who want to do a similar project, I would say: Be confident! I went through lists of professors and faced countless rejections before securing this opportunity. But in the end, it's worth it!

Awards	Value
Challenge Award - Health - Senior	\$1 000
Sponsor: Canadian Institutes of Health Research	
Excellence Award - Senior - Gold Medal	\$1 500
Sponsor: Youth Science Canada	
Dalhousie University Faculty of Science Entrance Scholarship	\$5 000
Senior Gold Medallist - \$5000 Entrance Scholarship	
Sponsor: Dalhousie University, Faculty of Science	
UBC Science (Vancouver) Entrance Award	\$4 000
Senior Gold Medallist - \$4000 Entrance Scholarship	
Sponsor: The University of British Columbia (Vancouver)	
University of Manitoba Entrance Scholarship	\$5 000
Senior Gold Medallist - \$5000 Entrance Scholarship	
Sponsor: University of Manitoba	
University of Ottawa Entrance Scholarship	\$4 000
Senior Gold Medallist - \$4,000 Entrance Scholarship	
Sponsor: University of Ottawa	
Western University Scholarship	\$4 000
Gold Medallist - \$4000 Entrance Scholarship	
Sponsor: Western University	
Total	\$24 500





