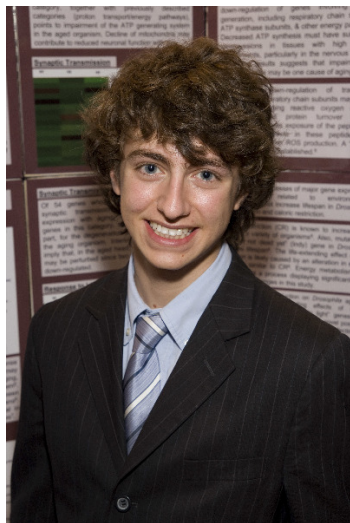


CWSF 2008 - Ottawa, Ontario



Aaron Hakim

Microarray Profiling of Gene Expression in the Normal Aging Brain of *Drosophila*

Division: Physical & Mathematical Sciences / None

Category: Senior

Region: Bay Area

City: Mississauga, ON

School: Appleby College

Abstract: A better understanding of the molecular effects of aging in the brain may help to reveal processes that lead to age-related brain dysfunction and neurodegenerative diseases. Two channel oligonucleotide cDNA microarrays were used to investigate genome-wide gene expression throughout aging in the *Drosophila* brain. Gene expression relating to synaptic transmission, energy metabolism, proton transport, and response to light were significantly dysregulated throughout aging.

Biography

For the past four years, my interest in biological sciences has been channeled through Science Fairs. It has been a great learning process, providing academic knowledge, practical laboratory experience, and presentation skills. My future goal is to lead Canadian clinical research teams. Some of my notable awards include winning 2nd place in the Cellular and Molecular Biology Division at the 07 Intel International Science and Engineering Fair as well as 4th nationally and the best commercialization potential award at the 07 National Sanofi-Aventis Biotech Challenge. I have been honored to represent Ontario as a finalist at two Canada-Wide Science Fairs (05' and 06'), winning successive gold medals in the Life Sciences category. Some of my other hobbies include international relations, volunteering, and sports. I am a four year Model United Nations and debate team participant, notably achieving 'Best Delegate' awards at the Students League of Nations, in Geneva, and twice at the York University Model UN Conference. I am a passionate member of several school teams, including varsity cross country, varsity squash, reach for the top, french club, and robotics. I am currently the Ontario Coordinator for the Student Mentorship Association Regarding Science and Technology (<http://...>)

Awards

Value

Quality of Life Student Research Award Sponsor: Institute of Musculoskeletal Health and Arthritis of the CIHR	\$3 750
Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$4 000
NSERC Undergraduate Student Research Award - Senior Gold Medallist Sponsor: Natural Sciences and Engineering Research Council of Canada (NSERC)	\$5 625
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
The University of Western Ontario Scholarship Gold Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
University of Ottawa Entrance Scholarship Senior Gold Medallist - \$20,000 Entrance Scholarship (\$5,000 each year for 4 years) Sponsor: University of Ottawa	\$20 000
Gold Medal - Life Sciences - Senior Sponsor: Pfizer Canada	\$1 500
Total	\$40 875