

CWSF 2009 - Winnipeg, Manitoba



Caitlin Martin Newnham

Capsaicin Admixture Found to Ease Initial Pain Using a Novel Invertebrate Model

Division: Life Sciences / None

Category: Senior

Region: London District

City: London, ON

School: A.B. Lucas S.S.

Abstract: Hot peppers contain the molecule Capsaicin, which causes an initial burning sensation followed by long-term numbness and, therefore, provides efficient pain relief. It has few side effects and no known drug interactions. To research Capsaicin, leeches were developed as an invertebrate model for pain research, since current models for pain research are vertebrates. By injecting 0.9% sodium chloride, the initial reaction to capsaicin was reduced.

Biography

I am devoted to my scientific research because of my personal connection to the topic. My mom was in a car accident twenty years ago and suffers from severe chronic pain in her neck and back. I will continue my research until I develop a pain-free protocol for using capsaicin so that my mom can use it instead of narcotics. I won first place in the regional Sanofi Aventis Biotalent Challenge, second place in Senior Life Sciences at London and District Science and Technology Fair, and the Western Imagination Award for my project. I plan to publish my findings in the near future. I am the co-president of my school's Social Justice club and Snowboarding Club. I volunteer regularly at a physician's office. In my spare time, I enjoy photography, collecting vintage cameras, snowboarding, fashion, concerts, traveling, acting, and art. I am interested in medical and biological sciences, and want to be involved in a medical career.

Awards

Value

The Manning Innovation Achievement Award Sponsor: Ernest C. Manning Awards Foundation	\$500
The Manning Innovation Achievement Award and \$4000 Manning Young Canadian Innovation Award Sponsor: Ernest C. Manning Awards Foundation	\$4 000
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 000
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
The University of Western Ontario Scholarship Silver Medallist - \$1500 Entrance Scholarship Sponsor: University of Western Ontario	\$1 500
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$3000 Entrance Scholarship Sponsor: University of Ottawa	\$3 000
Silver Medal - Health Sciences - Senior Sponsor: Canadian Institutes of Health Research	\$700
Total	\$13 700