

CWSF 2012 - Charlottetown, Prince Edward Island



Sarah Julia Hyslop

The Road to Novel Antibiotics

Challenge: Health

Category: Senior

Region: Calgary Youth

City: Calgary, AB

School: Bishop Carroll High School

Abstract: Most bacterial species have multi drug resistance, resulting in an urgent need for new classes of antibiotics. I developed a novel experimental protocol using *Pseudomonas aeruginosa* strains mutated with lux operons to determine which genes are expressed in response to various antimicrobial substances. My results showed two groups of antimicrobial chemicals with genomic effects dissimilar to known antibiotics, indicating two classes of potential novel antibiotics.

Biography

My name is Sarah Hyslop and I am in grade 11. This is my fourth year at the Canada Wide Science Fair, seventh year in the Calgary Youth Science Fair. I have enjoyed working at the University of Calgary on my project, "The Road to Novel Antibiotics", in which I discovered two potential classes of novel antibiotics. This project received three awards at the Calgary Youth Science Fair. Besides science, I love scuba diving, reading, playing guitar and ukulele. I enjoy traveling and am excited to visit PEI, and am looking forward to a trip to Italy this summer.

Awards

Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	\$700
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 500
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$9 200