

Biology Seminar



Western
UNIVERSITY · CANADA

12:30 - 1:30 pm
Friday, February 2, 2024
BGS 0165



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CRC in Microbe-Surface Interaction
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The 2024 Irene Uchida Lecture

How to give bacteria food poisoning – antibiotics that hijack nutrient transporters

Antibiotics underpin modern medicine but they are losing their effectiveness due to the widespread development of resistance. We discovered that uptake of large natural product antibiotics by priority Gram negative pathogens is enhanced in low-nutrient media. These antibiotics exploit outer membrane nutrient transporters to cross this barrier, and can be potentiated by combining them with clinically-approved molecules that further decrease nutrient availability. Our microbiological, biochemical, and structural studies of transporter-ligand interactions can inform the development of antibiotics and antibiotic combinations for multidrug resistant bacteria.

