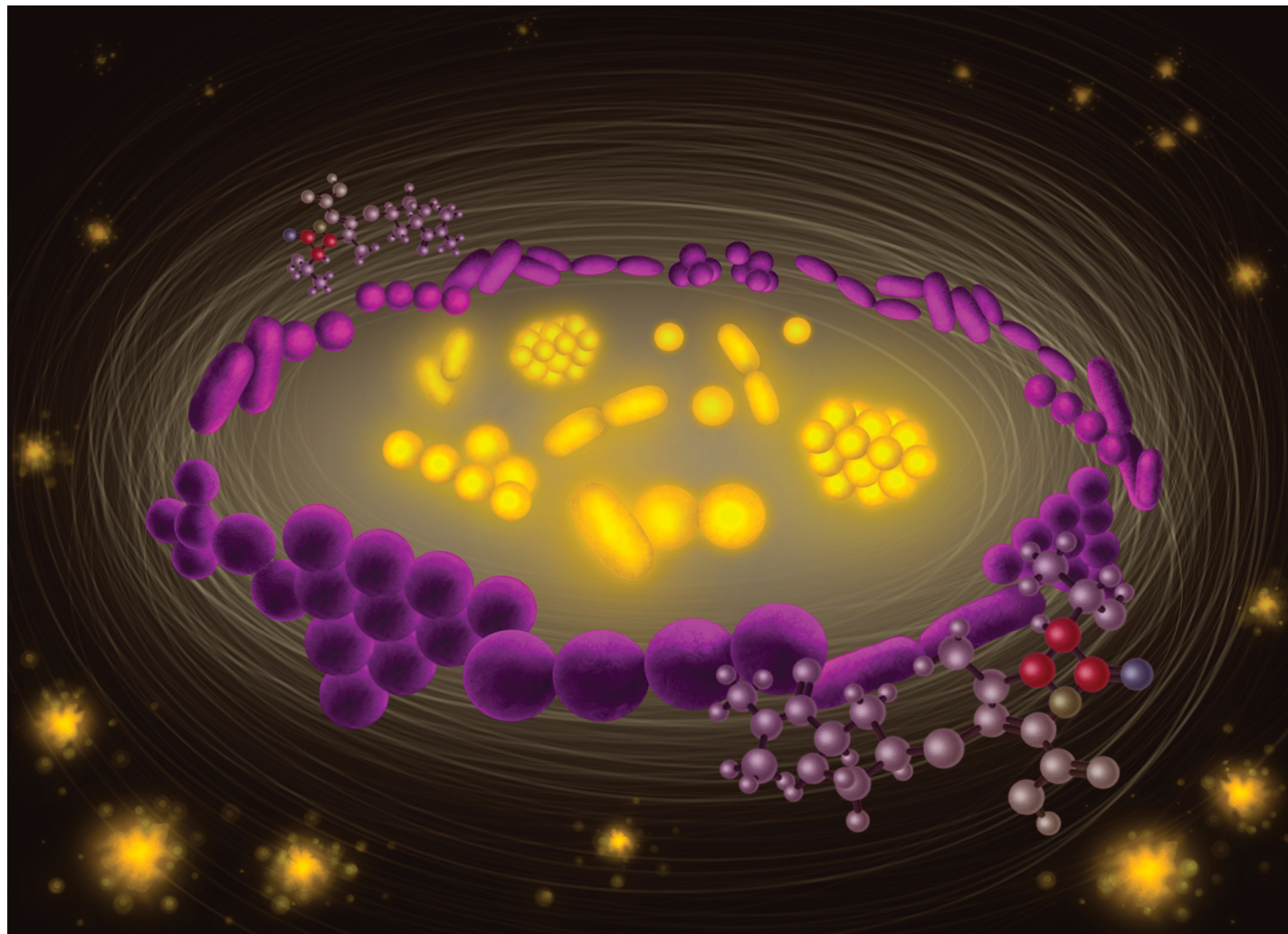




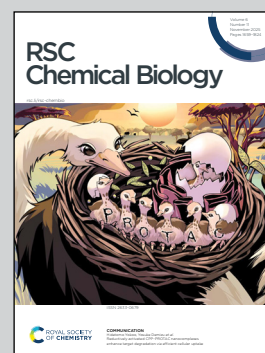
**Showcasing research from Professor Lohans' laboratory,
Department of Biomedical and Molecular Sciences,
Queen's University, Canada.**

Contributions of β -lactamase substrate specificity and outer membrane permeability to the antibiotic sheltering of β -lactam-susceptible bacteria

The production of β -lactamase enzymes by resistant bacteria can deplete β -lactam concentrations, helping β -lactam-susceptible bacteria to survive antibiotic exposure. We report the application of a luminescent reporter strain to quantify this phenomenon, using this method to evaluate the contributions of enzymatic and cellular factors to antibiotic sheltering. In addition to β -lactamase substrate specificity, the stability and permeability of the cell wall play major roles in determining the level of sheltering that occurs. Our findings inform on how the presence of resistant bacteria can impact antibiotic efficacy in a polymicrobial environment.

Image reproduced by permission of Josephine Liu from *RSC Chem. Biol.*, 2025, **6**, 1731.

As featured in:



See Christopher T. Lohans *et al.*,
RSC Chem. Biol., 2025, **6**, 1731.