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Understanding the role of bacterial anti-phage defences to inform phage therapy

Tuesday, 6 October 2026 12:20 (30 minutes)

Bacteriophages are a major force in shaping microbial evolution and microbial community composition. In response, bacteria have evolved a wide repertoire of anti-phage defence systems. Most defence systems have been characterised in isolation and against only one or a few phages. As a result, we lack a quantitative and comparative understanding of defence range and the determinants of phage susceptibility.

In my talk I will discuss the evolutionary ecology of anti-phage defences, using *Pseudomonas aeruginosa* and its phages as a model system. I will talk about recent unpublished work aimed to understand the relative importance of these defences and the extent to which they can explain bacterial immunity to phage infections across clinical isolate collections.

Reference #1

Reference #2

Reference #3

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