**Hide and seek**: Using bacterial viruses to detect *Legionella* species

Neda Nezam-Abadi¹, Christopher Turkington¹, Martha R.J. Clokie¹, Edouard Galyov¹

¹Department of Infection, Immunity and Inflammation, University of Leicester, LE1 9HN, United Kingdom

*Legionella* spp. are water-borne pathogens, resistant to many disinfectants and antibiotics. These organisms can be difficult to detect in both patients and environmental samples.

**Potential solution**: Bacteriophage, viruses that infect and replicate in high numbers within bacteria.

- **NCBI**: Extract bacterial genome sequences from NCBI
- **PHASTER**: Identifying prophage-like elements (phage inside bacterial genomes)
- All versus-all comparison of putative phage sequences
- Designing primers for each cluster
- Application as diagnostic for *Legionella* spp.

A heatmap of the pairwise similarity between the 377 putative prophage elements identified using PHASTER.

Email: nna6@le.ac.uk