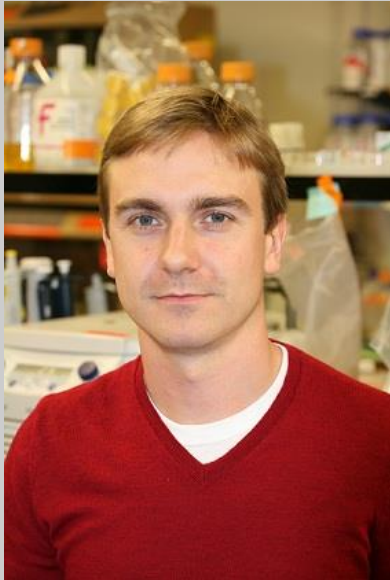




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Examining antibiotic treatment failure against chronic infections

Research emphasis:

Dr. Conlon's laboratory examines antibiotic efficacy under physiologically relevant conditions with an emphasis on bacterial population heterogeneity and antibiotic tolerance. The Conlon lab aims to identify novel determinants of antibiotic efficacy in the complex host environment and use this information to improve and personalize antibiotic treatment to eradicate chronic infection.

Application:

- Bacterial cell sorting
- Mouse models of chronic infection
- Antibiotic mechanism of action
- Microbial genetics

Collaboration potential:

- Antibiotic mechanism of action studies
- Mouse models of chronic bacterial infection
- Single cell analysis of bacteria

Selected publications: (limit 4)

Homma T, Nuxoll A, Brown AV, Ebner P, Engels I, Schneider T, Götz F, Lewis K, Conlon BP. Dual targeting of cell wall precursors by teixobactin leads to cell lysis. ***Antimicrobial Agents & Chemotherapy* (2016)**

Conlon BP*, Rowe SE*, Brown AV, Nuxoll AS, Donegan NP, Zalis E, Clair G, Adkins JN, Cheung AL, Lewis K. Persister formation in *Staphylococcus aureus* is associated with ATP depletion. ***Nature Microbiology* (2016)**

Ling LL, Schneider T, Peoples AJ, Spoering AL, Engels I, Conlon BP, Hughes DE, Epstein S, Jones M, Poullenc K, Steadman V, Cohen DR, Felix CR, Fetterman KA, Millett WP, Nitti AG, Zullo AM, Chen C, Lewis K. Killing of pathogens by teixobactin without associated resistance. ***Nature* (2015).**

Conlon BP, Nakayasu EN, Fleck LE, LaFleur MD, Isabella VM, Coleman K, Leonard SN, Smith RD, Adkins JN, Lewis K. Activated ClpP kills persisters and eradicates a chronic biofilm infection. ***Nature*. 503, 365-370, (2013).**