



Grant A. Edwards



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### Natural product inspired drug discovery

#### Research emphasis:

Grant's research interests in the Pierce Group focus primarily on complex molecule synthesis. Leveraging insights gained in these endeavors, Grant is working to understand the relationship between structure and function of natural product scaffolds and to explore novel modes of biological activity, with particular interest in small molecules active against multi-drug resistant microorganisms. The realization of new synthetic strategies to construct unusual and/or difficult to access chemical motifs provides a platform for the interrogation of biological systems, enables the assessment structure-activity-relationships and ultimately facilitates the development of new lead compounds for infectious disease research.

#### Publications:

1. Potent inhibition of Methicillin-resistant *Staphylococcus aureus* biofilm formation with 5-benzylidene-4-oxazolidinones. Edwards, Grant A., Shymanska, Nataliia V. and Pierce, Joshua G. In preparation
2. Allyl sulphides in olefin metathesis: catalyst considerations and traceless promotion of ring-closing metathesis. Edwards, Grant A., Culp, Phillip A. and Chalker, Justin M., *Chem. Commun.*, 2015, 51, 515. DOI: 10.1039/C4CC07932A
3. Melamine and Melamine-Formaldehyde Polymers as Ligands for Palladium and Application to Suzuki-Miyaura Cross-Coupling Reactions in Sustainable Solvents. Edwards, Grant A., Trafford, Mitchell A., Hamilton, Alaina E., Buxton, Audrey M., Bardeaux, Matthew C. and Chalker, Justin M., *J. Org. Chem.*, 2014, 79, 2094. DOI: 10.1021/jo402799t

#### Applications:

- Organic synthesis
- Drug discovery
- Chemical biology

#### Research Strengths:

- Multistep chemical synthesis
- Chemical characterization
- Antimicrobial assays
- Biofilm inhibition/dispersion assays