



Joshua G. Pierce



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### Chemical Synthesis as a Driving Force for Biological Discovery

#### Research emphasis:

Dr. Pierce's laboratory is primarily focused on the synthesis and chemical biology of complex marine natural products. Through these efforts the Pierce lab aims to develop rapid and scalable synthetic approaches to molecules that serve as chemical probes for biological pathways and/or selective and potent leads for drug discovery. Of particular interest is the development of molecules with activity against drug resistant pathogenic bacteria and molecules that can selectively target cancer cells.

#### Application :

- Drug Discovery
- Inhibitor Design
- Reaction Development
- Biological Target ID

#### Collaboration potential:

- Antibiotic Development
- Oncology
- Cell and Animal Models of Disease
- Proteomics and Metabolomics

#### Selected publications:

Synthesis of 1,4,2-Oxathiazoles via Oxidative Cyclization of Thiohydroxamic Acids. Lemerrier, B. C.; Pierce, J. G. *Org. Lett.* **2015**, *17*, 4542.

Rapid Synthesis and Antimicrobial Activity of Novel 4-Oxazolidinone Heterocycles. Shymanska, N. V.; An, I. H.; Guevara-Zuluaga, S.; Pierce, J. G. *Bioorg. Med. Chem. Lett.* **2015**, *25*, 4887.

A Rapid Synthesis of 4-Oxazolidinones: Total Synthesis of Synoxazolidinones A and B. Shymanska, N. V.; An, I. H.; Pierce, J. G. *Angew. Chem. Int. Ed.* **2014**, *53*, 5401.

Synthesis of Thiazolines by Copper Catalyzed Aminobromination of Thiohydroxamic Acids. Lemerrier, B. C.; Pierce, J. G. *Org. Lett.* **2014**, *16*, 2074.