

CHEMISTRY DEPARTMENT SEMINAR



Inspired by Nature: tuning biomolecular structure and conformation with unusual amino acid modifications

Matthew Aronoff, PhD
Assistant Professor
Department of Chemistry and Chemical Biology
University of New Mexico

Host: Mark Ams, PhD

Friday, February 09, 2024
2:00 pm MST
Lopez 106

Abstract

Natural products from plants and microorganisms have provided an endless source of unique chemical compounds as well as numerous therapeutics. Inspired by the novel molecular arrangements created by Nature we are exploring the chemical synthesis of a class of fungal and bacterially derived peptide natural products in order to explore new areas of molecular design. These peptides all share similar substitutions at the delta or C5 position of proline, a set of modifications with important implications for peptide conformation. I will present our recent synthetic progress as well as current insights into the consequences and effects of these unique structures.

Bio

I grew up in Texas and moved to Santa Fe, New Mexico as a teenager. I have a B.A. in Liberal Arts from St. John's College in Santa Fe, and after a multi-year break when I worked as a landscaper, gardener, and arborist, I enrolled as a returning student at Fort Lewis College in Durango, Colorado where I majored in Chemistry and became fascinated with the chemistry and complex bioactivity of natural products from plants. After Fort Lewis I did my PhD research at the University of Madison-Wisconsin, followed by time as a postdoc and senior scientist at ETH Zurich in Switzerland. I came back to New Mexico in August 2022 to start at UNM.

