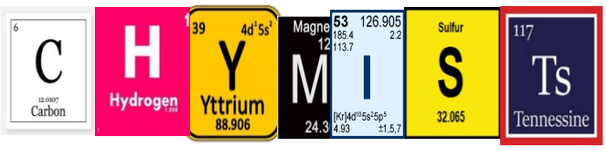

SEMINAR SERIES

Sarah Smith

Assistant Professor of Chemistry

Bucknell University

The design of helical peptides for metal-binding, cellular entry, and antibiotics

Peptides have demonstrated great potential for the development of therapeutics. The structure of peptides is crucial to their proper biological function, and my group focuses on the development of α-helical peptides, either by mimicking natural peptides or engineering metal-binding sites to induce helicity in otherwise unstructured peptides. My talk will focus on two ongoing projects in my lab. The first is analyzing a series of antimicrobial peptides natively expressed by Drosophila melanogaster (fruit flies) to better understand the impact of single amino acid changes on the structure and antimicrobial properties of the peptides. Other work in my lab is developing peptides to mimic native protein-protein interactions; in order to bind proteins found in the cellular environment, it is critical for peptides to cross cellular membranes. Previous literature has suggested that metal-bound peptides are better able to cross the eukaryotic cell membrane. I will describe our work to better understand what properties enable the cellular internalization of metal-bound peptides.

Thursday, September 29, 2022 ▪ 11:30 a.m.

Mara Auditorium (Masters Hall 110)

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