



Showcasing research from Professor Victor Outlaw's laboratory,
Department of Chemistry, University of Missouri, Columbia, United
States.

Chemoselective sulfonyl fluoride exchange (SuFEx)-induced
macrocyclization of tyrosine-containing peptides in aqueous media

Peptide macrocycles have emerged as a powerful class of therapeutics capable of targeting challenging protein-protein interactions with high affinity and selectivity. This work introduces a mild, aqueous method for chemoselective peptide macrocyclization using sulfur fluoride exchange (SuFEx) chemistry. The approach selectively targets tyrosine residues to form sulfonate-tyrosine ester macrocyclic peptides (*STEMtides*) without metal catalysts or organic cosolvents. The method exhibits exceptional sequence-length tolerance, side-chain compatibility, and yields, enabling efficient cyclization of therapeutically relevant peptides such as leuporelin, β -MSH, liraglutide, and RGD analogs.

Image reproduced by permission of Victor K. Outlaw from
Chem. Sci., 2025, **16**, 21359.

As featured in:



See Victor K. Outlaw *et al.*,
Chem. Sci., 2025, **16**, 21359.