SUTER SCIENCE SEMINARS 2023-24

Mechanistic Enzymology as a Metaphor for Life

Eli Wenger, PhD
Postdoctoral Scholar
University of Pennsylvania
Philadelphia, PA

Wednesday, February 14, 2024
10:10 a.m. • Science Center, room 104

Enzymes are proteins that catalyze chemical reactions and often contain cofactors that facilitate their reactivity. One class of enzymes use the organic cofactor pyridoxal phosphate (PLP) to accomplish a diverse array of chemical transformations, including an emerging subclass of O2-reactive PLP-dependent enzymes that oxidize amino acid substrates. Dr. Wenger will tell the story of how he deduced the mechanism of one member of this subclass, using it as a platform to share some general principles of kinetics and the techniques involved in mechanistic enzymology.

Dr. Eli Wenger graduated from EMU with a degree in biochemistry in 2017 and then began graduate studies at The Pennsylvania State University. He joined the joint group of J. Martin Bollinger Jr. and Carsten Krebs to study the mechanism of O2-reactive enzymes using rapid-kinetics and spectroscopic techniques and received his doctoral degree in the summer of 2022. He then moved to David Christianson's group at the University of Pennsylvania, where he is learning structural techniques to study reaction and channeling mechanisms of terpene synthases. His hobbies, which have not evolved since college, include running, Nintendo games, and reading too much political news.

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Suter Science Center
1194 Park Rd.
Harrisonburg VA 22802
540-432-4400

emu.edu/science-seminars