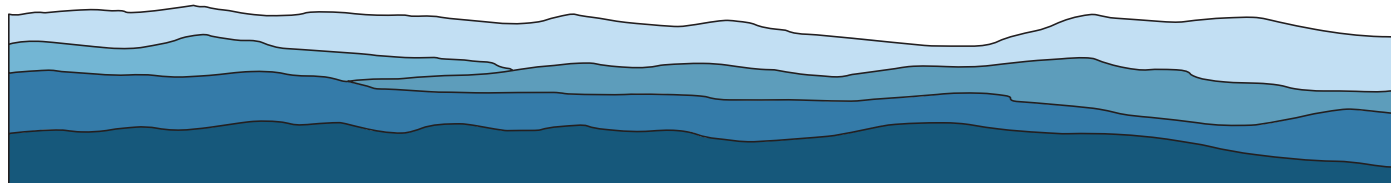


HIGHLANDS IN CHEMISTRY SEMINAR SERIES



MO SEYEDSAYAMDOST

PRINCETON UNIVERSITY

“Discovering new chemistry in the microbial world”

Microbial natural products serve as a dominant source of pharmaceutical compounds and comprise some of our most celebrated cures. Recent studies, however, have been plagued by the frequent rediscovery of old molecules. One underlying reason is that most natural product biosynthetic genes in a given bacterium are not significantly expressed under standard laboratory conditions. These so-called ‘silent’ or ‘cryptic’ gene clusters represent a large reservoir of bioactive metabolites and methods that unlock them would have a profound impact on natural products research and thereby on drug discovery. In this talk, I will present new strategies that my group has developed for activating silent biosynthetic gene clusters. Application of these approaches to diverse bacteria has unveiled not only the products of silent clusters, but also small molecule elicitors and the underlying mechanisms through which they turn on secondary metabolism. In addition, my group has been engaged in elucidating new transformations carried out by metalloenzymes during natural product biosynthesis. Recent reactions that we have discovered will be presented as well.

DECEMBER 3, 2021

2:30PM ET

ZOOM

FACULTY HOST:
EMILY MEVERS