Lecture 1: In search of biologically active compounds using the tools of chemical synthesis

In this introductory lecture, I will illustrate our evolving approaches to the discovery of bioactive molecules. I will draw examples from three different areas: peptides, small molecule fragments, and electrophilic boron-containing warheads. While seemingly unrelated, these examples will highlight our desire to develop a mechanistic understanding of reactions driven by amphoteric molecules and build a foundation for translational applications of our findings.