CUTTING LECTURE SERIES
FRIDAY, FEBRUARY 2, 12:30 PM
MUNZER AUDITORIUM

Tom Muir, Ph.D.
Princeton University
“A Tale of Two Tails”

For more information, please email npascua@stanford.edu or call 650-498-1310
Understanding protein function is at the heart of experimental biology. Perhaps one of the grandest contemporary challenges in this area is to catalogue and then functionally characterize protein posttranslational modifications (PTMs). Modern analytical techniques reveal that most, if not all, proteins are modified at some point; it is nature’s way of imposing functional diversity on a polypeptide chain. Understanding the structural and functional consequences of all these PTMs is a devilishly hard problem. While standard molecular biology methods are of limited utility in this regard, modern protein chemistry has provided powerful methods that allow the detailed interrogation of protein PTMs. In this lecture, I will highlight how these tools can be used to probe a series of problems in chromatin biology. In particular, I will discuss the discovery of a new histone PTM with a possible role in epigenetic regulation of gene expression in neurons. I will also discuss the development of a new protein chemistry methods for accelerated biochemical discovery.