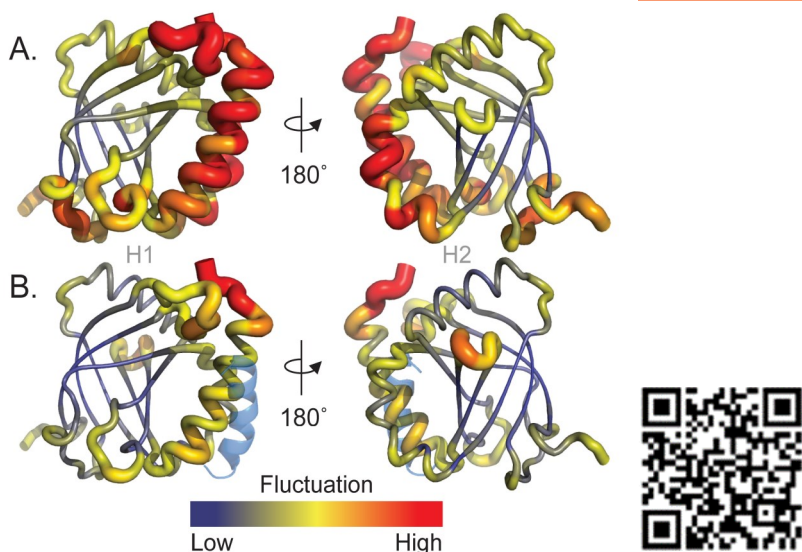


# CHEMISTRY COLLOQUIUM

**Guest Speaker:**  
**Professor Anna Mapp**  
University of Michigan  
Life Sciences Institute  
Chemistry and Life Sciences  
Institute

Wednesday, February 27  
12:00pm  
Hutchison Hall Room 140  
Lander Auditorium  
University of Rochester  
Department of Chemistry



## Title: “Conformational capture of transcriptional coactivators using small molecules”

**Abstract:** Transcriptional coactivators and their partner transcription factors have been labeled as intrinsically disordered, fuzzy, and undruggable. We propose that the identification of conserved mechanisms of engagement between coactivators and their cognate activators should provide general principles for small-molecule modulator discovery. Towards that end, biophysical characterization of the structurally divergent coactivator Med25 reveals that it forms short-lived and dynamic complexes with three different transcriptional activators and that conformational shifts are mediated by a flexible substructure of two dynamical helices and flanking loops. Analogous substructures are found across eukaryotic coactivators. Further, targeting one of the flexible structures with a small molecule modulates Med25-activator complexes. Thus, the two conclusions of the work are actionable for the discovery of small-molecule modulators of this functionally important protein class.

**Host:** Professor Brad Nilsson, email: [Bradley.Nilsson@rochester.edu](mailto:Bradley.Nilsson@rochester.edu)