

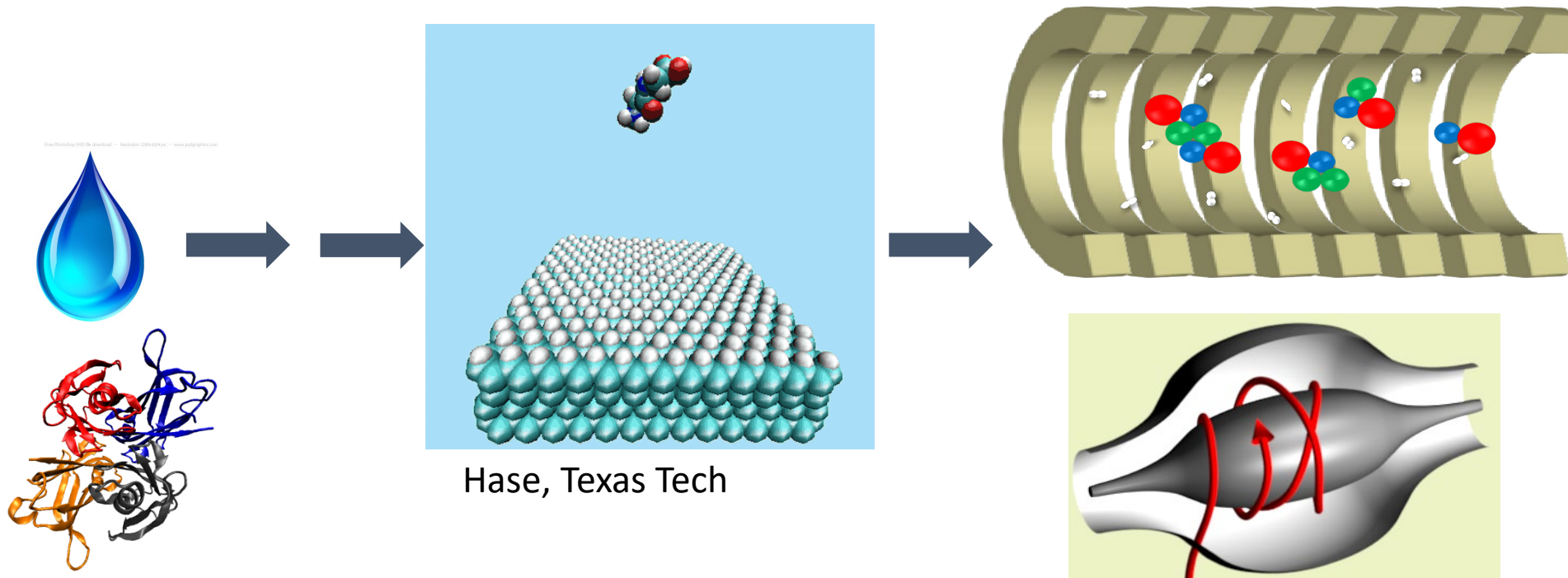
# Native MS in Structural Biology

V.H. Wysocki, Ohio State University

Michael Marty, University of Arizona

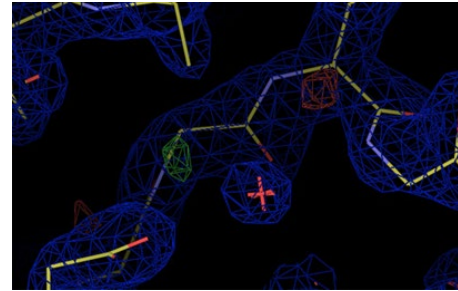
Brandon Ruotolo, University of Michigan

David Russell and Art Laganowsky, Texas A&M University

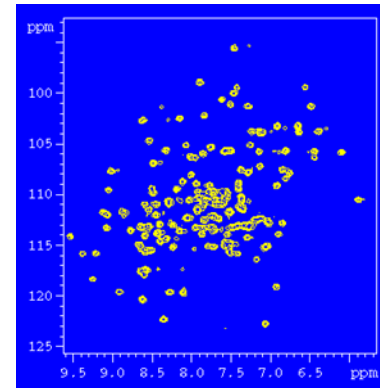


# Protein complexes

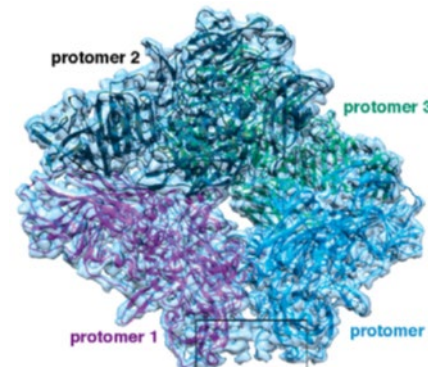
- Many proteins of interest function as large assemblies/complexes.
- Can be difficult to fully characterize complexes (*mixtures, won't crystallize, low amounts available, size mismatch with technique*).
- Native MS useful as quick complementary tool



10 X-ray  
crystallography

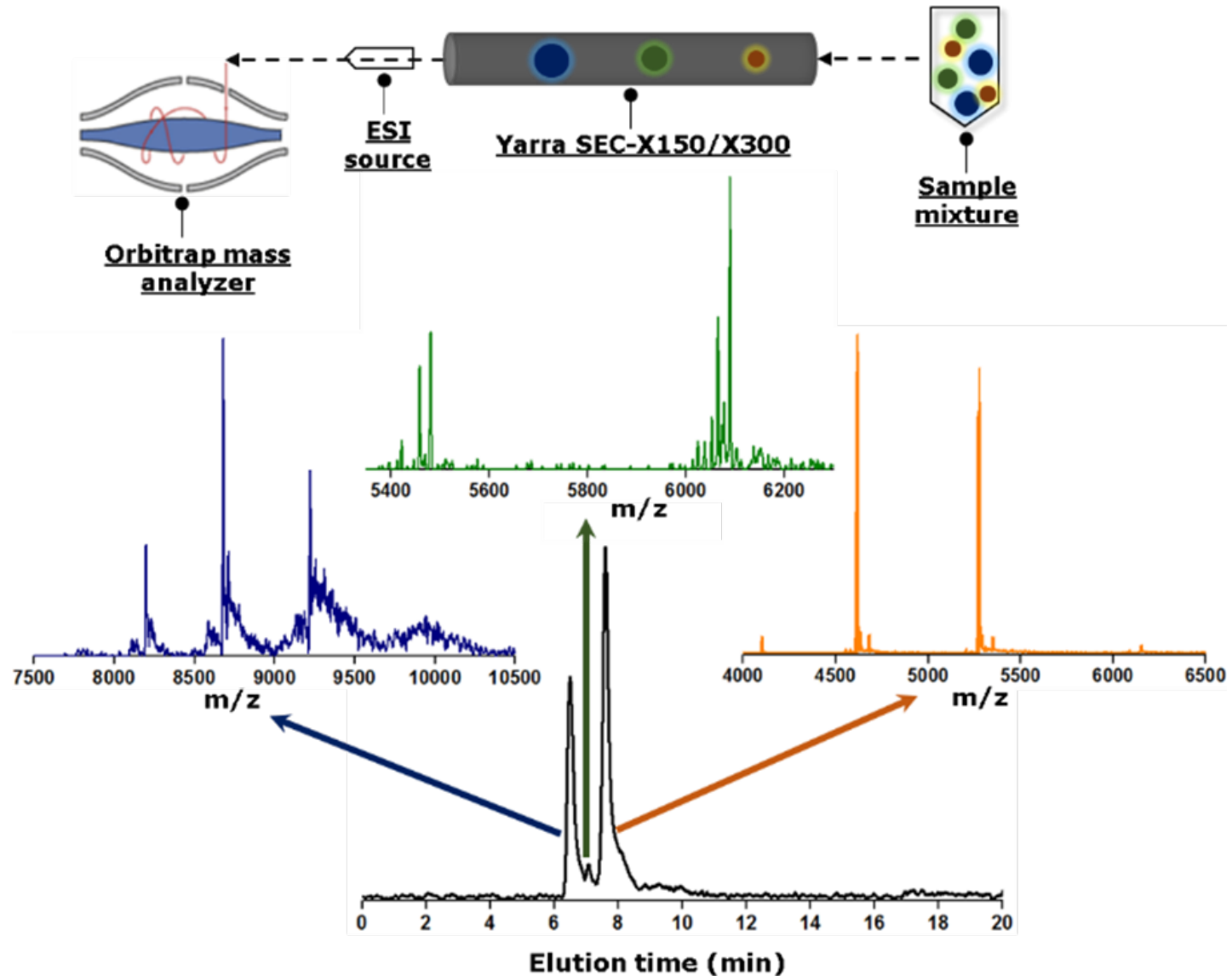


10 NMR



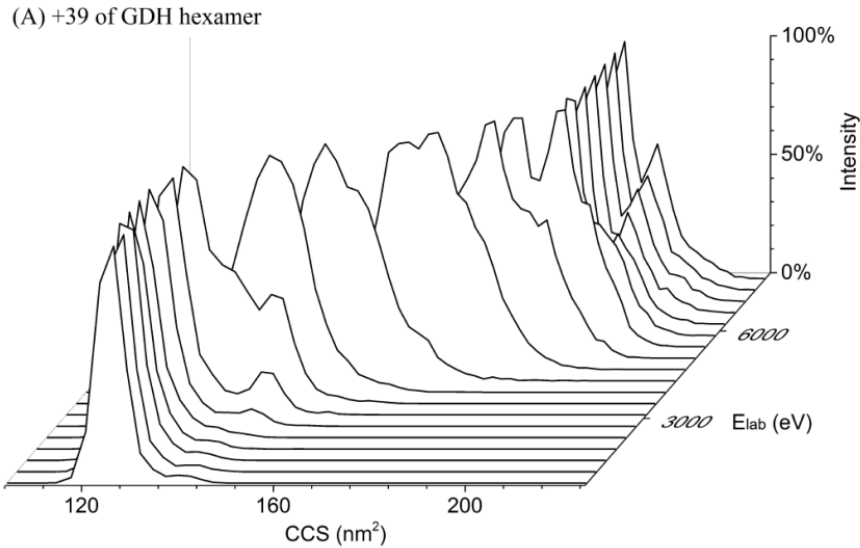
Cryo-EM

# Separation and Ionization of native Complexes

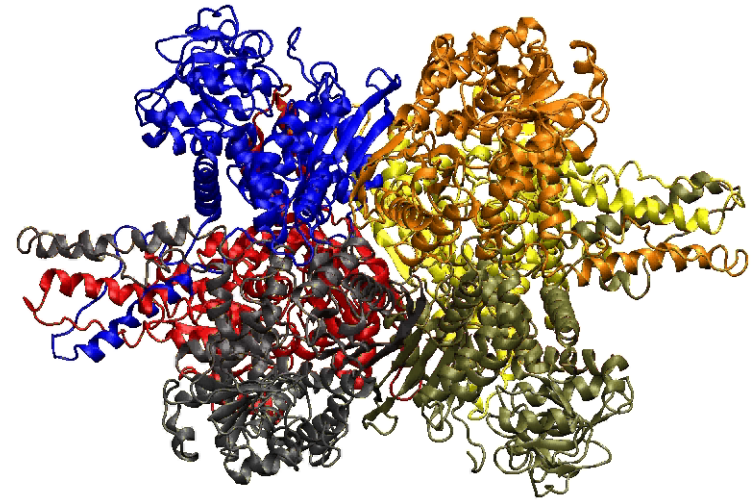
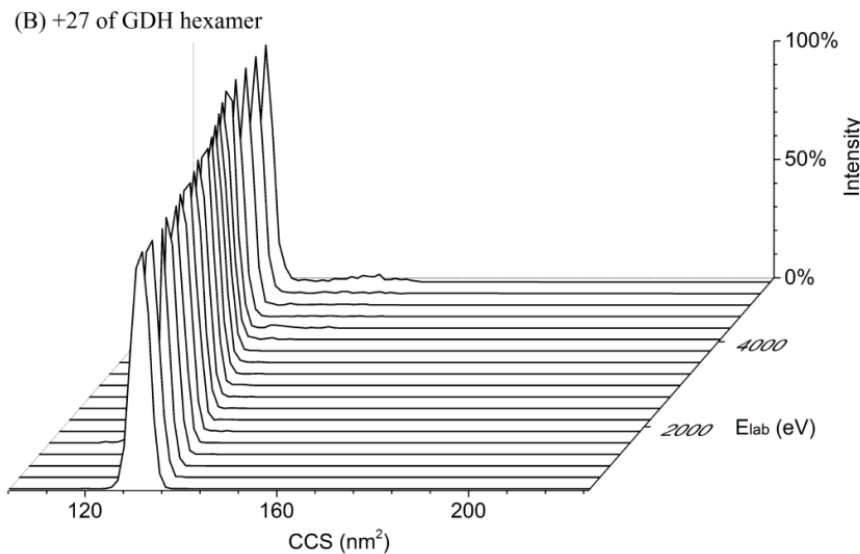


# Ion Mobility: unfolding charge dependent

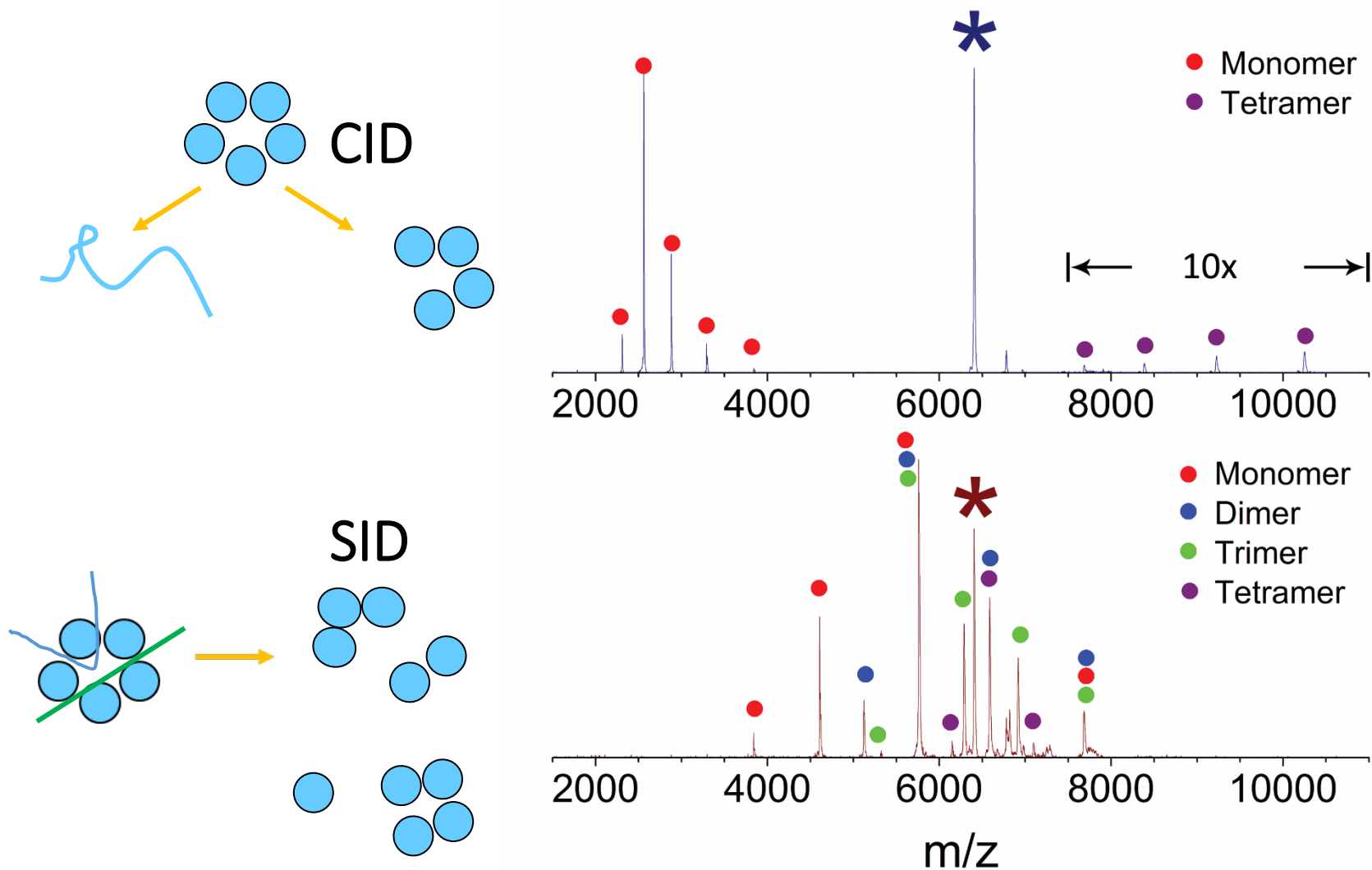
+39



+27



# CID/SID-IM of CRP (+18)



# Integrated Approach:

Connectivity +  
CCS  
+ covalent  
labelling  
+ modeling  
+ crosslinking  
= structure

## Native MS

