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

Hase, Texas Tech
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
Separation and Ionization of native Complexes
Ion Mobility: unfolding charge dependent

(A) +39 of GDH hexamer

(B) +27 of GDH hexamer
CID/SID-IM of CRP (+18)

Integrated Approach:
Connectivity + CCS + covalent labelling + modeling + crosslinking = structure

Song, Nelp, Bandarian, Wysocki