Invited Speakers

Weighing the evidence for molecular chaperone function

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We have been developing and applying mass-measurement approaches to interrogate directly the structure and dynamics of proteins. Here I will focus on the insights this has enabled in studying the evolution of specificity in assembly of molecular chaperone proteins [1], and how they interact with target proteins under the application of force. I also present mass photometry, a new method we have developed that allows the quantitative, label-free interrogation of proteins in solution [2].

[1] Hochberg G.K.A., et al. Structural principles that enable oligomeric small heat-shock protein paralogs to evolve distinct functions Science, 359, 930-935 (2018)
[2] Young, G., et al. Quantitative mass imaging of single biological macromolecules Science, 360, 423-427 (2018)