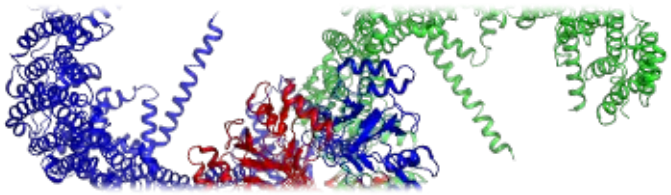

BPS2023
67th Biophysical Society Annual Meeting
February 18–22, 2023
SAN DIEGO CALIFORNIA, USA

Sunday, February 19
4:30 PM – 6:00 PM
Room 10
Fluidic Analytics

Introducing Microfluidic Diffusional Sizing (MDS) Technology; Quantify and Characterize Any Protein Interaction – Even In Complex Backgrounds, Even With Challenging Targets
Studying protein interactions is of fundamental importance in a wide variety of research fields, including neurobiology, oncology, immunology, structural biology, and molecular biology.

The more scientists understand about protein interactions, the more we will know about the inner workings of a cell, and crucially, the better we will understand what happens when normal cellular function is subverted in human disease. But, with a multitude of different technologies on the market, how do researchers know which technique is right for them?

Microfluidic Diffusion Sizing technology (MDS) brings a new tool to the analytical characterization toolbox: a different approach that enables the analysis of protein interactions close to *in vivo* conditions.

Measuring What Matters
With MDS, scientists can determine affinity of interaction (K_D), concentration of bound protein, and stoichiometric information, in solution, and all in a single experiment, whether using simple biological buffer systems or complex backgrounds such as serum, plasma, saliva, and cell lysates.
The MDS technology enables quantification and characterization of any protein interaction – even in complex backgrounds or with challenging targets

- Characterize membrane proteins
- Track functional immune response in serum samples
- Reveal therapeutic antibody / protein interaction mechanisms
- Characterize disordered proteins, higher-order complexes, or amyloids under close to in vivo conditions
- Explore aggregation effects and distinguish between specific and non-specific binding

During our presentation we will describe a series of case studies and collaborations with pioneering researchers covering such topics:

- Purification-free affinity and concentration measurement of membrane-protein targets
- Determination of antibody affinities and concentrations directly in clinical samples
- In-solution measurement of antibody affinities and binding stoichiometries to neurotoxic amyloid species
- Binding of Fc-engineered IgG antibodies to FcRn
- In-solution affinity measurement of a drug-induced protein complex

Speaker
Molly Coseno, Sales Application Specialist, Fluidic Analytics