

Redox Activation Strategies to Profile Biological Systems

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Talk Abstract:

Technologies that enhance our understanding of proteins within their native environments can inform our ability to target/modulate proteins of clinical interest for therapeutic benefit. An effective strategy leverages the use of chemical activation to covalently label a protein or protein environment for downstream profiling. Within the context of native biological systems, it is crucial that these chemical activation strategies are easy to control and provide minimal disruption to the system under investigation. This has placed an increased demand on identifying new synthetic chemical biology methods that can meet these criteria. This talk will describe the development of electro- and photo-chemical approaches for identifying protein targets and/or their proximal environments within complex biological systems as well as applications of these methods.