

Emergent Protein Assemblies in Cytoplasm

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Project Outcome: We used physics theory, computer modeling and simulation to elucidate key topologies of proteins contributing to emergent assemblies and folding behavior inside a cell that cannot be replicated in test tubes.

Benefits: The knowledge obtained will be used to identify the protein assemblies that change with the state of a cell. Once we understand this mechanism, scientists can control the functional state of a cell that benefits the bioeconomy by targeting key molecular interactions. The graduate and undergraduate will learn about the desirable skills of quantitative data analytics and contribute to the science and technology work forces.

Broadening Impacts: The funding from this award allows Dr. Cheung to co-organize the UW LSAMP Scientist Program at UW. This program pairs undergraduate students that lack prior research experience with faculty members and offers weekly professional development sessions to participants in the summer.

