

**Faculty Name:**

Allie Obermeyer

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**Lab:**

Obermeyer Research Group

**Project Title:**

Multiphase protein condensates

**Description:**

'Biomolecular condensates' formed via LLPS are involved in a diverse range of cellular functions with misregulation increasingly implicated in neurodegenerative disorders such as Alzheimer's disease. Recently, a number of phase separated bodies such as the nucleolus and P granules have been shown to exist as multilayered biomolecular condensates. The hierarchical organization of these multiphase droplets is understood to be dictated by material properties such as surface tension but much of this understanding stems from the study of polymers or intrinsically disordered proteins. The sequence level rules governing emergent material properties of condensates containing globular proteins and therefore multiphase formation, remain unclear. Therefore, this project aims to test the hypothesis that differences in surface charge of model GFPs are sufficient to drive the formation of multiphase condensates.

**Location of Research:**

On-Site

**# of hrs/week:**

40

**Department/Program:**

Biomedical Engineering

**Eligibility:**

BS, First Year, BS, Second Year

**To apply, please contact:**

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