

The Biological and Biomedical Joint Seminar Series

(Hosted by the departments of Molecular & Cellular Biology, Chemistry & Biochemistry, Cellular & Molecular Medicine, and Plant Sciences)

“A Mechano-active Protein Condensate that Drives Actin-Independent Endocytosis”

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Life Sciences South Rm 440 @ IIAM

Hosted By: Ted Weinert



Endocytosis controls the import of extracellular material in eukaryotic cells. Typically, endocytosis is driven by F-actin polymerization, however, it can also occur through a poorly understood actin-independent mechanism. Here, we demonstrate that the formation of a biomolecular condensate of cytosolic proteins with prion-like domains (PLDs) at the plasma membrane initiates actin-independent endocytosis in budding yeast cells. The interactions that lead to the formation of protein-rich condensates within cells contribute to their viscoelasticity and the interfacial tension between condensates and their surroundings. This interfacial tension deforms the plasma membrane and cytosol, thus paving the way for actin-independent endocytosis.

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