

CONFERENCES

Lundi 17 juin 2024 à 11h00 (IPMC)

Bruno ANTONNY (IPMC) invite

Dr. Abdou Rachid THIAM

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« Lipid droplet biogenesis and proteome acquisition »

Lipid droplets play crucial roles in maintaining cellular balance and are implicated in various disorders, such as hepatic, neuronal, and cardiovascular conditions. Their formation begins in the endoplasmic reticulum through the phase separation of neutral lipids synthesized within the bilayer membrane. These nascent lipid droplets develop into spherical structures within the cytoplasm, often maintaining connections with the endoplasmic reticulum. Consequently, lipid droplets emerge as intracellular emulsion droplets encapsulating neutral lipids and enveloped by a phospholipid monolayer. Proteins embedded within this phospholipid monolayer regulate the majority of lipid droplets' biological functions. Dysregulation of lipid biogenesis and the proteome is a hallmark of various diseases, leading to numerous pathologies. Therefore, understanding the mechanisms of lipid droplet biogenesis and proteome composition is crucial for comprehending its involvement in diverse cellular processes and disease states. In my talk, I will discuss new technologies we developed and how we capitalize on them to illuminate the mechanisms guiding lipid droplet assembly and protein targeting.

