CryoEM Current Practices Webinar

Architecture of a Bridge-like Lipid Transfer Protein

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Cells and cellular organelles are surrounded by membranes that are constantly undergoing lipid modification due to processes like cell growth, organelle biogenesis, exocytosis, and phagocytosis. Bridge-like lipid transport proteins (BLTPs) have emerged as key players in all of these processes due to their role in lipid transport. BLTPs localize to membrane contact sites, where they fold into hydrophobic tunnels that are proposed to function like "lipid superhighways" that mediate the bulk transfer of lipids from donor to acceptor membranes. Despite the fundamental importance of BLTPs for cellular function, the mechanism of lipid transfer remains enigmatic. Here, we present the subunit composition and cryo-electron microscopy structure of the native LPD-3 BLTP complex isolated from transgenic *C. elegans*. Our results suggest a model for how the LPD-3 complex mediates bulk lipid transport and provide a foundation for mechanistic studies of BLTPs.

All are welcome to attend. Registration is at no-cost, but sign-up is required:
[https://us02web.zoom.us/webinar/register/WN_xBTZg68KRJKTfo_ebFm3dA]