

Séminaire



CONFÉRENCIER
INVITÉ

Vendredi 02 décembre 2022 à 11h

Salle des
séminaires IBS

Institut de biologie structurale - 71 avenue des Martyrs CS 10090 38044 Grenoble Cedex 9 - T.+33 (0)4 57 42 85 00

www.ibs.fr

par **Jennifer M. Kefauver**

University of Geneva, Geneva, Switzerland

Lab of Robbie Loewith, PhD, Department of Molecular and Cellular Biology

CryoEM to characterize lipid features in membrane tubules scaffolded by yeast eisosome BAR-domain protein Pil1

Eisosomes are stable specialized plasma membrane (PM) domains of *S. cerevisiae* that are enriched in sphingolipids and ergosterol. These furrow-like, elongated structures are formed by a lattice of the highly abundant BAR-domain proteins Pil1 and Lsp1. Eisosomes are proposed to be sensitive to membrane stress (i.e. hypo-osmotic shock, heat shock, and mechanical pressure) and may be functionally analogous to caveoli in vertebrate cells. We have purified membrane-bound Pil1/Lsp1 filaments and using cryo-electron microscopy and helical reconstruction, have solved several structures of these filaments. Due to our gentle purification methods, these filaments likely preserve PM lipids in a native-like arrangement and give us a unique window into the lipid behavior of a specialized PM lipid domain.

Hôte : Ambroise Desfosses (IBS/groupe Imagerie microscopique d'assemblages complexes)