



Postdoctoral position available to study the coupling between an ER-PM tether and a lipid transfer protein at membrane contact sites

Project

Phosphatidylserine (PS) is highly enriched in the plasma membrane (PM) of eukaryotic cells, which is essential for diverse cellular processes ranging from establishment of cell polarity to signaling and caveolae formation (Lenoir et al. (2021) *Front Cell Dev Biol*). Selective transport of PS from the ER, where it is synthesized, to the PM in yeast is catalyzed by Osh6, a lipid transfer protein that functions within membrane contact sites (MCS). For efficient PS transport and localization at MCS, Osh6 requires Ist2, an integral membrane protein from the TMEM16 family (D'ambrosio et al. (2020) *J Cell Sci*), some members of which have been shown to promote non-selective and bidirectional lipid transport (scrambling) across the two leaflets of cell membranes. The project will address the coupling between transbilayer lipid movement through Ist2, and Osh6-catalyzed lipid transfer within the confined MCS environment. The project is within the framework of an ANR research program and will be conducted in collaboration with the groups of Alenka Čopič (Centre de Recherche en Biologie Moléculaire, Montpellier), Guillaume Drin (Institut de Pharmacologie Moléculaire et Cellulaire, Sophia Antipolis), and Luca Monticelli (Institut de Biologie et Chimie des Protéines, Lyon).

Host Institute

The successful candidate will join our group, the Laboratory of Membrane Proteins and Membrane Systems (LPSM), which aims at deciphering the molecular mechanisms of active transport across biological membranes, using biochemical, biophysical and in silico approaches (<https://www.i2bc.paris-saclay.fr/equipe-membrane-proteins-and-membrane-systems-laboratory/>). The LPSM is part of the Institute of Integrative Biology of the Cell (I2BC), which carries out interdisciplinary research at the forefront of structural biology, cell biology, microbiology, virology and genetics (<https://www.i2bc.paris-saclay.fr/?lang=fr>). The I2BC is located in Gif-sur-Yvette, 25 km south-west of Paris and its exciting culture and city life, at the heart of the world-class Université Paris-Saclay, a wonderful environment to live and work.

Requirements

We are looking for a motivated individual with a Ph.D. degree in biochemistry or biophysics. Experience in biochemistry is essential; experience with membrane protein expression, purification and reconstitution is preferred. Applicants should be able to take initiatives and responsibility within the work environment.

Terms of employment

The position is for 2 years and will be filled as soon as possible. The applicant should not have more than 2 years of experience after having completed his/her PhD. The salary will follow the CNRS guidelines.

How to apply

Interested applicants should send their CV, a cover letter describing their motivation and contact details of two academic references to guillaume.lenoir@i2bc.paris-saclay.fr.

