



Institut Jacques Monod, Paris

POST-DOCTORAL POSITION IN MEMBRANE CONTACT SITES, CELL ADHESION AND MECHANOBIOLOGY

We are looking for a highly-motivated Post-doctoral researcher to work in the field of membrane trafficking, cell adhesion and mechanobiology. The project is led by Mélina Heuzé, associate professor in the group of Jean-Marc Verbavatz and Cathy Jackson at Institut Jacques Monod, Paris.

Project

Membrane contact sites (MCS) are sites of close apposition between the ER and other organelles and serve as platforms for lipid and calcium exchange. Despite the growing knowledge of the molecular composition of MCS, their roles in patho-physiological processes are less understood. We have recently discovered that VAPA, an ER-resident MCS tether, plays a key role in cancer cell motility and cell-matrix adhesion. We now intend to define precisely how lipid exchange taking place at VAPA-mediated MCS controls cell-matrix adhesion dynamics and mechano-sensing. The Post-doctoral researcher will work at the interface of cell biology and biophysics, in collaboration with the group of Benoît Ladoux and René-Marc Mège at IJM, and use state-of-the-art approaches, including high-resolution microscopy, traction force measurements, FRET sensors and optogenetic tools.

Profile

The candidate should have a PhD in Life Sciences or Biophysics and a strong interest in membrane trafficking, together with a solid expertise in microscopy and quantitative imaging. A background in mechanobiology and/or optogenetics will be highly appreciated. The candidate will take part in research strategy definition, will conduct experiments, perform analysis and contribute to research communication. He/she should be able to work as part of a group, have organizational skills and a good level of spoken and written English.

Application details

The position is fixed term for 2 years, starting around November 2021, with the eventuality of extension through application to post-doctoral fellowships.

Applications should be sent to melina.heuze@ijm.fr and include a CV (with a list of publications), a cover letter summarizing your past and current research and two recommendation letters, **before July 30th, 2021**.

Selection of publications

Heuzé ML, Sankara Narayana GHN, D'Alessandro J, Cellerin V, Dang T, Williams DS, Van Hest JC, Marcq P, Mège RM, Ladoux B. *Myosin II isoforms play distinct roles in adherens junction biogenesis*. **Elife**. 2019 Sep 5;8.

Heuzé ML, Chabaud M, Bretou M, Vargas P, Maiuri P, Solanes P, Maurin M, Terriac E, Le berre M, Lankar D, Piolot T, Adelstein RS, Zhang Y, Sixt M, Jacobelli J, Bénichou O, Voituriez R, Piel M and Lennon-Duménil AM. *Cell Migration and antigen capture are antagonistic processes coupled by Myosin II in dendritic cells*. **Nature communications**. 2015, 6 : 7526.

Walch L, Pellier E, Leng W, Lakisic G, Gautreau A, Contremoulins V, Verbavatz JM, Jackson CL. *GBF1 and Arf1 interact with Miro and regulate mitochondrial positioning within cells*. **Scientific Reports**. 2018 Nov 20;8(1):17121.

Jackson CL, Walch L, Verbavatz JM. *Lipids and Their Trafficking: An Integral Part of Cellular Organization*. **Developmental Cell**. 2016 Oct 24;39(2):139-153.