



PhD position in Cell Biology

Our team Structure and Membrane Compartments, Department of Cell Biology and Cancer, CNRS UMR144, Institut Curie, Paris France have an open PhD position in the field of Cell Biology as part of an established collaboration with Pr. Rytis Prekeris, University of Colorado, Denver, USA. This partnership provides a rich International environment combining the scientific and technical expertise from both teams.

Our main focus is to understand the fate, processing and functions of Extracellular Vesicles. Extracellular Vesicles (EVs) comprise large and small EVs, commonly referred to plasma membrane derived Microvesicles/Ectosomes and endosome derived Exosomes (*van Niel et al., Nat Rev Mol Cell Biol 2018 19, 213-228*; doi: [10.1038/nrm.2017.125](https://doi.org/10.1038/nrm.2017.125); *Raposo and Stahl Nat Rev Mol. Cell 2019 20(9):509-510.* doi: [10.1038/s41580-019-0158-7](https://doi.org/10.1038/s41580-019-0158-7)). Among large EVs, MBsomes are MVs containing midbodies, RNA, selected protein and lipid components that likely act on target cells. MBsomes are released from cells during cell division and fated to target cells to induce several recipient cell functions acting as signalosomes (*Peterman E, et al. Nat Commun. 2019 18;10(1):3181.* doi: [10.1038/s41467-019-10871-0](https://doi.org/10.1038/s41467-019-10871-0); *Peterman and Prekeris J.Cell Biol. 2019 218(12):3903-3911.* doi: [10.1083/jcb.201906148](https://doi.org/10.1083/jcb.201906148)).

The PhD project aims to shed light on the cellular and molecular mechanisms of EVs fate and uptake, comparing Exosomes, MVs and MBsomes derived from different cell types. In particular how the contents of these distinct types of EVs are released to recipient cells and the impact on recipient cell function(s). To these goals different methods will be used: Purification of different types of EVs from diverse cell types, protein and RNA sequencing, screening of molecular components and imaging methods from optical to electron microscopy.

Your profile (for the PhD position):

- A master in cell biology, biochemistry, molecular biology
- Experience in working in a cell biology, biochemistry and imaging laboratory.
- Good knowledge in written and oral English.
- Highly motivated for discovering molecular mechanisms in a challenging environment.

- Interest for interdisciplinary projects.
- A passion for state of the art imaging methods at the highest level and the growing field of Extracellular Vesicles in intercellular communication and tissue homeostasis.

Application/selection procedure:

1. Send a **Letter of motivation**, a **CV**, a **summary of previously done research** and the **contact information of 3 referees** to graca.raposo@curie.fr and rytis.prekeris@cuanschutzbw.ac.at
2. Selected candidates will be invited for a (virtual) interview, and, in a second round a virtual visit (including a seminar and meetings with PhD students and postdocs).
3. If you need further information, visit, or contact.