



Unit Director
Franck Perez
Unit Deputy Director
Renata Basto

The mission of this unit is to understand the biogenesis of the cell compartments and the molecular mechanisms that govern normal cellular functions.

The main research themes of the unit include:

- Transport pathways between compartments,
- The dynamics of the actin- and microtubule-based cytoskeletons,
- Three-dimensional structures of molecular motors,
- Mechanisms of cell division and cell migration,
- The mechanisms involved in establishing the polarity of epithelia and their differentiation,
- Signalling pathways associated with tumour progression in several mouse models and human tumours,
- Regulation of adhesive systems during morphogenesis and development.

Key publications

Year of publication 2019

Viviana Barra, Glennis A Logsdon, Andrea Scelfo, Sebastian Hoffmann, Solène Hervé, Aaron

Aslanian, Yael Nechemia-Arbely, Don W Cleveland, Ben E Black, Daniele Fachinetti (2019 Jan 13)

Phosphorylation of CENP-A on serine 7 does not control centromere function.

Nature communications : 175 : [DOI : 10.1038/s41467-018-08073-1](https://doi.org/10.1038/s41467-018-08073-1)

Year of publication 2018

Tom Baladi, Jessy Aziz, Florent Dufour, Valentina Abet, Véronique Stoven, François Radvanyi, Florent Poyer, Ting-Di Wu, Jean-Luc Guerquin-Kern, Isabelle Bernard-Pierrot, Sergio Marco Garrido, Sandrine Piguel (2018 Nov 1)

Design, synthesis, biological evaluation and cellular imaging of imidazo[4,5-b]pyridine derivatives as potent and selective TAM inhibitors.

Bioorganic & medicinal chemistry : 26 : 5510-5530 : [DOI : 10.1016/j.bmc.2018.09.031](https://doi.org/10.1016/j.bmc.2018.09.031)

V Barra, D Fachinetti (2018 Oct 20)

The dark side of centromeres: types, causes and consequences of structural abnormalities implicating centromeric DNA.

Nature communications : 4340 : [DOI : 10.1038/s41467-018-06545-y](https://doi.org/10.1038/s41467-018-06545-y)

Julien Robert-Paganin, Daniel Auguin, Anne Houdusse (2018 Oct 3)

Hypertrophic cardiomyopathy disease results from disparate impairments of cardiac myosin function and auto-inhibition.

Nature communications : 4019 : [DOI : 10.1038/s41467-018-06191-4](https://doi.org/10.1038/s41467-018-06191-4)

Florian Blanc, Tatiana Isabet, Hannah Benisty, H Lee Sweeney, Marco Cecchini, Anne Houdusse (2018 May 31)

An intermediate along the recovery stroke of myosin VI revealed by X-ray crystallography and molecular dynamics.

Proceedings of the National Academy of Sciences of the United States of America : 6213-6218 : [DOI : 10.1073/pnas.1711512115](https://doi.org/10.1073/pnas.1711512115)

Philip D Stahl, Graça Raposo (2018 May 17)

Exosomes and extracellular vesicles: the path forward.

Essays in biochemistry : 119-124 : [DOI : 10.1042/EBC20170088](https://doi.org/10.1042/EBC20170088)