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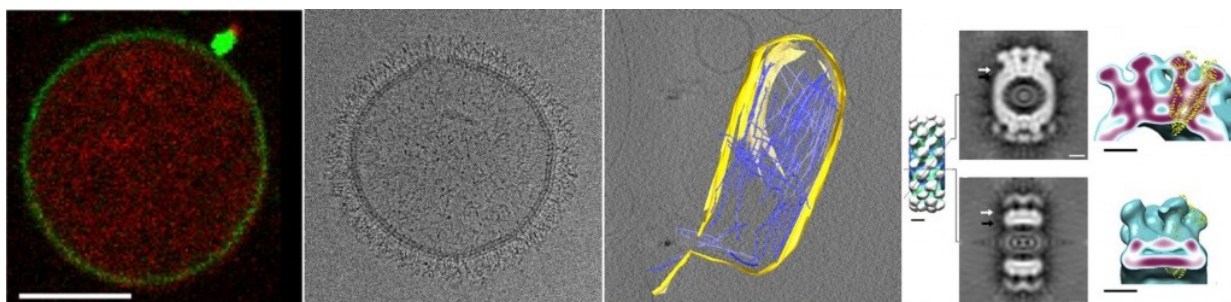
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**How the components of cell membranes, lipids, transmembrane proteins, and bound cytoskeleton proteins, are organized and how the interplay between their molecular 3D architecture and the surrounding membrane affects their function? Our Team addresses these general questions in the context of cell division, cell detoxification and inter-organelles communication. We combine cryo-electron microscopy, single particle analysis, cryo-tomography and novel in vitro membrane systems to decipher the architectures of both proteins and membrane. We integrate our results with data derived from functional analysis, physics of membranes and cell biology to unravel mechanisms at different spatial and temporal scales.**



From left to right: Energized transport of drugs by an ABC transporter reconstituted in *GUV* (Dezi et al., *PNAS* 2013). Cryo-EM of Myosin 1b specifically bound to *Pip2* vesicle (Yamada et al., *Nat Comm.* 2014). Cryo-tomography of septin filaments polymerized on *Pip2* vesicles. 3D reconstruction of an ABC transporter embedded in a lipid bilayer (Fribourg, *J.Mol. Biol.* 2014)

## Key publications

### Year of publication 2019

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Jamecna D, Polidori DJ, Mesmin B, Dezi M, Lévy D, Bigay J, Antony B (2019 Mar 22)

**An intrinsically disordered region in OSBP acts as an entropic barrier to control protein dynamics and orientation at membrane contact sites**

*Developmental cell* \* : \* highlighted Trend in Cell Biology 2019 : [DOI :](#)

[10.1016/j.devcel.2019.02.021](https://doi.org/10.1016/j.devcel.2019.02.021)

Simon C\*, Kusters R\*, Caorsi V\*, Allard A, Abou-Ghali M, Manzi J, Di Cicco A, Lévy D, Lenz M, Joanny J-F, Campillo C, Plastino J, Sens P\*, Sykes C\* (2019 Mar 18)

**Actin dynamics drive cell-like membrane deformation**

*Nature Physics* : [DOI : 10.1038/s41567-019-0464-1](#)

Beber A, Taveneau C, Nania M, Tsai FC, Di Cicco A, Bassereau P, Lévy D, Cabral JT, Isambert H, Mangenot S\*, Bertin A\* (2019 Jan 24)

**Membrane reshaping by micrometric curvature sensitive septin filaments**

*Nature communications* : [DOI : 10.1038/s41467-019-08344-5](#)

### Year of publication 2018

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Feng-Ching Tsai\*, Aurelie Bertin\*, Hugo Bousquet, John Manzi, Yosuke Senju, Meng-Chen Tsai, Laura Picas, Stephanie Miserey-Lenkei, Pekka Lappalainen, Emmanuel Lemichez, Evelyne Coudrier\*, Patricia Bassereau\* (2018 Sep 30)

**Ezrin enrichment on curved membranes requires a specific conformation or**

**interaction with a curvature-sensitive partner.**

*elife* : 7 : e37262 : [DOI : 10.7554/eLife.37262](https://doi.org/10.7554/eLife.37262)

**Year of publication 2017**

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P Guichard, V Hamel, M Le Guennec, N Banterle, I Iacovache, V Nemčíková, I Flückiger, K N Goldie, H Stahlberg, D Lévy, B Zuber, P Gönczy (2017 Mar 24)

**Cell-free reconstitution reveals centriole cartwheel assembly mechanisms.**

*Nature communications* : 14813 : [DOI : 10.1038/ncomms14813](https://doi.org/10.1038/ncomms14813)

**Year of publication 2014**

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Guillaume van Niel, Ptissam Bergam, Aurelie Di Cicco, Ilse Hurbain, Alessandra Lo Cicero, Florent Dingli, Roberta Palmulli, Cecile Fort, Marie Claude Potier, Leon J Schurgers, Damarys Loew, Daniel Levy, Graça Raposo (2014 Nov 13)

**Apolipoprotein E Regulates Amyloid Formation within Endosomes of Pigment Cells.**

*Cell reports* : 43-51 : [DOI : 10.1016/j.celrep.2015.08.057](https://doi.org/10.1016/j.celrep.2015.08.057)