**PhD position at the Institut de Biologie Structurale de Grenoble (CNRS/ CEA / University Grenoble-Alpes).**

Our lab has obtained a 3 year- financial support for a PhD student to work on the molecular mechanisms allowing the intercellular transfer of biologically active molecules via exosomes.

Exosomes are lipid vesicles secreted into the extracellular milieu by all eukaryotic cells. They bind to and are internalized by other cells, thus allowing their cargos (lipids, proteins and miRNAs) to modify the phenotype of receiving cells. Today, exosomes are extensively studied for their role in intercellular communication in normal and pathological conditions, as well as for their possible use to transfer genetic material and molecules of therapeutic interest. The PhD student will unravel some of the molecular mechanisms needed for exosomes to transfer cargoes into receiving cells. Combining approaches at the molecular/structural and cellular level, this project should reveal the fundamental pathways needed for exosomes to mediate intercellular communication.

About the host laboratory

The student will work in the team of W. Weissenhorn (Institute for structural biology, IBS, Grenoble), under the supervision R. Sadoul, who is a field specialist of exosomes. The IBS is an internationally recognized research centre (CNRS/ CEA/ UGA) in the field of integrated structural biology *http://www.ibs.fr/about-us/institute/.* It gathers 19 groups studying the structure and dynamics of proteins and other biological macromolecules to decipher their function at the atomic level and in a cellular environment.

The IBS is situated on the same campus as the EMBL as as well as two european large instruments, the ESRF (European Synchroton Radiation facility) and the Institute Laue Langevin (gathering each year more than 10 000 scientists from 40 different countries).

The student will be part of the ECSV doctorate school from Grenoble, which has more than 340 students working in 26 host laboratories and institutes. Grenoble is considered as one of the most innovative city in Europe and in the world (Forbes 2013; icapital 2014).

The city is in the heart of the Alpes with an incredible surrounding next to some of the best skiing resorts in the world.

Keywords: ESCRT proteins, exosomes, endosome traffic, endocytosis, virus infection.

Techniques used: cloning in eukaryotic and prokaryotic vectors, cell culture, fluorescence video-microscopy, vesicles and protein purification and characterization.

List of publications: <https://www.ncbi.nlm.nih.gov/pubmed/?term=sadoul+R>.

Please send application before September 30th 2019 in a single pdf file including CV, motivation letter, Bachelor and Master transcripts to Professor Remy Sadoul (remy.sadoul@univ-grenoble-alpes.fr).