



PhD Position in Immuno-Virology at Paris-Saclay University

We are seeking one highly motivated PhD candidate to join our research team at the Institute for Integrative Biology of the Cell (I2BC). The project entitled “Selective autophagy receptors in viral antigen presentation” is an exciting opportunity to explore the intersection of immunology and virology.

Project Overview: the PhD-project is part of a program, funded by the ANR (in partnership with ENS-Lyon and INRAe), on the study of selective autophagy receptors (SARs) in antiviral immunity. Our team recently demonstrated that the SAR, TAX1BP1, is a powerful modulator of MHC molecule trafficking, antigen loading and ultimately the activation of antiviral CD4+ T responses. The originality of our approach is to use viral factors that interfere with SARs, to define the pathways and the molecular mechanisms involved in their functions in antigen processing and loading onto MHC-II molecules. For this, the applicant will implement immunopeptidomic methods combined with imaging and biochemical approaches. She/he will exploit the results of SAR proximity interactomes, generated by our ANR partners. Overall, the thesis project will provide a complete map of the interactions of TAX1BP1/SAR on the antigen presentation pathways, as well as the underlying molecular mechanisms. The applicant will also unravel pathways used by viruses to escape immunity.

Institute and Team: I2BC is a French research institute exploring cellular, molecular and structural bases of biological systems. As the largest research institute in molecular and cellular biology of Paris-Saclay University, I2BC brings together five scientific departments: <https://www.i2bc.paris-saclay.fr/>. The Applicant will work in the team “Autophagy and Antiviral Ammunity” belonging to the Virology Department: <https://www.i2bc.paris-saclay.fr/equipe-autophagy-and-antiviral-immunity/>

Key Responsibilities:

- Design and perform experiments to evaluate the role of SARs in antigen presentation.
- Analyze, present and disseminate the results within the team, congresses and talks.
- Participate in the analysis and writing of scientific publications.

Required Skills: Expertise in cell biology, strong experience in cell imaging and biochemistry, knowledge in virology, to be a driving force and capable to work independently, proficiency in English.

If you are passionate about virus-host interactions and immunity, we encourage you to apply to join our team!

Supervisor: Arnaud Moris (arnaud.moris@i2bc.paris-saclay.fr)

Beginning of the contract: 1 October 2024

Application in the following link:

https://adum.fr/as/ed/voirproposition.pl?site=adumR&matricule_prop=58253#version