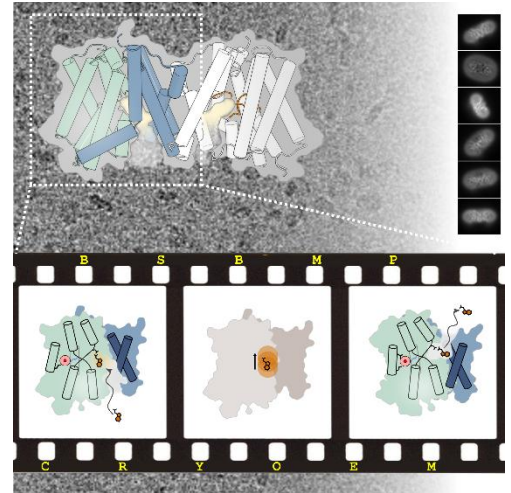


## Fully-funded PhD position in Structural Biology and Infectious Diseases

We are currently looking for a highly motivated PhD student with a strong interest in structural biology and infectiology to join our team (Biochemistry and Structural Biology of Membrane Proteins-BSBMP) at the Institute of Pharmacology and Structural Biology (IPBS, UMR 5089) - University of Toulouse, France.

We are interested in studying the molecular mechanism of membrane transporters and enzymes implicated in infectious disease. Using cryo-electron microscopy and protein biochemistry, we aim to capture the mechanisms of action of these biochemical processes, providing fundamental insights to guide the development of new drugs for combating infectious diseases. The primary objective of this project is to elucidate the molecular mechanism of glycan modification in bacteria. During the PhD project, we aim to (1) Purify the enzyme and optimize protocol for the reconstitution of the enzyme into nanodiscs or proteoliposomes; (2) Employ protein-design to stabilize target protein in different conformation; (3) Determine its three-dimensional 3D structure using cryo-electron microscopy (cryo-EM); (4) Characterize the purified protein using biophysical approaches, and (5) Develop an *in vitro* enzymatic assay, complemented with microbiological assays, to identify and validate inhibitors.



### Your profile

The candidate must hold a Master's degree (BAC+5) or equivalent in biochemistry, structural biology, enzymology and biophysics. Candidate with research experience in membrane protein production, structural biology and enzymology is highly desirable. Strong communication skills (oral and written) in English and good collaboration skills are required.

### The city

Situated between the Mediterranean and the Atlantic, and close to the Pyrenees Mountains, Toulouse has long been a major crossroads in Europe. Attracting 15,000 newcomers every year, the city boasts a particularly rich, vibrant cultural and artistic heritage. As the capital of the Occitanie Region, the leading French region for research and innovation, with over 15,000 academic researchers and 7,500 PhD students, and R&D investment representing 3.5 % of its GDP in 2022, Toulouse is internationally renowned for its cutting-edge aerospace, agronomic, biology-health, and economic research centres.

If you are interested in joining our team, please send your CV, a motivation letter, and a recommendation letter. For further information, please contact: Dr. Kien-Lam Ung, [kien-lam.ung@ipbs.fr](mailto:kien-lam.ung@ipbs.fr)

**Funding:** Fondation pour la Recherche Médicale | Amorçage de Jeunes Équipes

**Deadline for application:** 19 June 2025

**Expected starting date:** 1 September 2025

**Website:** <https://www.ipbs.fr/biochemistry-and-structural-biology-of-Membrane-Protein/>

### Recent publication from our team

- (1) Ung et al. **Nature**, 2022 Sep;609(7927):605-610. DOI: 10.1038/s41586-022-04883-y
- (2) Ung et al. **Protein Expr Purif**, 2022. Mar;191:106014. DOI: 10.1016/j.pep.2021.106014
- (3) Ung et al. **Trends Biochem Sci**, 2023 Nov;48(11):937-948. DOI: 10.1016/j.tibs.2023.07.006
- (4) Schulz & Ung et al., **Nature Plants**, 2025. DOI: 10.1038/s41477-025-01984-0