

Postdoctoral position: Molecular mechanisms of GPCR targeting by bacterial toxins

Project

To combat resistant strains of *S. aureus* (SA), we urgently need to target novel molecular mechanisms essential for SA growth and pathogenesis. One such essential mechanism is bacterial leukotoxins that hijack human chemokine G protein-coupled receptors on the surface of myeloid and erythroid cells, leading to the destruction of these cells.

This project aims at deciphering the structural, mechanistic and pharmacological aspects of the interaction between SA bi-component leukocidins and host chemokine receptors using a combined *structural mass spectrometry and pharmacology approach* ([Grison et al. PNAS 2021](#)).

The project is within the framework of an ANR JCJC research program and will be conducted under the supervision of Chérine Bechara.

Requirements

We are looking for self-motivated candidates with a Ph.D. in mass spectrometry or structural biology, interested in the analysis of membrane proteins using structural mass spectrometry tools (native MS and HDX-MS). A previous experience in biochemistry is essential; experience with membrane protein expression and purification is a plus.

Successful applicants are expected to have demonstrated ability to work independently, have good organizational skills, work in an interdisciplinary team, and manage multiple tasks.

Terms of employment

The position is for one year with a possible extension to a total of 3 years and will start as soon as possible. The salary will follow the INSERM guidelines.

How to apply

Interested applicants should send their CV, a cover letter describing their motivation and contact details of two academic references to cherine.bechara@igf.cnrs.fr.

Host Institute

The successful candidate will join the [Granier-Mouillac Lab](#) focused on deciphering the molecular mechanisms of membrane protein function using an integrated strategy combining molecular and structural pharmacology approaches and computational methods (eg. latest paper out: [Healey et al. Angew. Chem. Int. 2022](#)). The Granier-Mouillac Lab is part of the [Institute of Functional Genomics](#) (IGF), which carries out interdisciplinary research at the forefront of structural, biochemical, genetic, epigenetic, omics, physiological and behavioral studies.

The IGF is located in Montpellier, a growing and highly dynamic city in the south of France, at the heart of the famous [University of Montpellier](#), one of the oldest in Europe, making it a wonderful environment to live and work.