

Postdoctoral Researcher Opportunity in GPCRs Visual Proteomics using Cryo-Electron Tomography

Location: Institute of functional genomics (IGF), Montpellier, France

Position Type: Full-time, Postdoctoral Researcher

Duration: 18 months renewable

Start Date: 1st of June 2025

We are seeking an enthusiastic and motivated Postdoctoral Researcher to join the Granier-Mouillac team at IGF (University of Montpellier, CNRS, INSERM) to investigate G-Protein Coupled Receptors (GPCRs) function using cutting-edge visual proteomics techniques, with a specific focus on cryo-Electron Tomography (cryo-ET). This is an exciting opportunity to contribute to groundbreaking research at the intersection of structural biology, pharmacology, and advanced imaging technologies.

Key Responsibilities:

- Design and conduct experiments using cryo-ET to visualize GPCRs signaling complexes in their native membrane environment.
- Investigate GPCRs' signaling mechanisms with high-resolution imaging techniques.
- Use state-of-the-art approach (cryo-CLEM, cryo-FIB-SEM, cryo-TEM) to prepare suitable lamellae for cryo-ET.
- Apply visual proteomics to explore the protein-protein interactions and gain functional insights into GPCRs function.
- Collaborate with interdisciplinary teams of scientists and engineers to develop and optimize imaging protocols.
- Analyze large datasets generated from cryo-ET and related techniques, using state-of-the-art software and computational tools.
- Publish findings in high-profile scientific journals and present research at national and international conferences.

Qualifications:

- A Ph.D. in Structural Biology, Biophysics, Cell Biology, or a related field.
- Strong background in cryo-ET, cryo-EM, or other electron microscopy-based imaging techniques.
- Experience in visual proteomics, including protein isolation, mass spectrometry, and bioinformatics, is highly desirable.
- Experience in EM data treatment (cryoSPARC, Relion, Amira, Dragonfly).
- Knowledge of GPCRs, their structural biology, and signaling pathways is an advantage.
- Strong problem-solving skills, ability to work independently and as part of a collaborative team.
- Excellent communication skills, both written and oral.
- Demonstrated ability to publish in peer-reviewed journals and present scientific findings effectively.

Benefits:

- Opportunity to work with world-class researchers and advanced cryo-imaging technologies.
- Access to state-of-the-art facilities and resources for structural biology research.
- Competitive salary and benefits package.
- Professional development opportunities, including training in new methodologies and techniques.
- A dynamic and supportive research environment.

Application Instructions:

Interested candidates should submit the following:

1. A cover letter detailing research experience, motivation, and career goals.
2. A CV including a list of publications.
3. Contact information for at least two references.

Please submit your application to sebastien.granier@inserm.fr and aurelien.fouillen@inserm.fr by 15th of april 2025.

The IGF (University of Montpellier/CNRS/INSERM) is committed to diversity and inclusion in its workforce and encourages individuals from all backgrounds to apply.