

Internship Proposition

Master 2 GP Immunology & ImmunolIntervention (I³) 2025-2026



Lab: CR2TI Center for Research in Transplantation and Translational Immunology

Team: 6 Host-pathogens interactions, inflammation and mucosal immunity

Name and position of the supervisor: Dr. LAMRET Fabien (PhD, associate professor),
co-supervisor: Dr. BROQUET Alexis (PhD, research engineer)

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Candidate (if internship filled): x

Title of the internship: Characterization of lung immune landscapes via immunofluorescence imaging

Summary of the internship proposal:

We are offering a 6-month internship opportunity for a motivated student (Master 2) in Immunology, within our research team focused on lung immunology and host-microbiome interactions. The project will involve the development and optimization of fluorescent immunostaining protocols on post-septic mouse lung tissue sections.

The internship will take place at IRS-2 site (22 bd Benoni Goullin). The intern will be responsible for generating lung tissue samples, performing immunofluorescent staining, acquiring high-resolution images (e.g., via confocal microscopy), and analyzing the data using image analysis software. The main goal is to visualize and characterize key anatomical structures of the lung (blood vessels, bronchioles, and immunologically relevant areas) and to identify key epithelial and immune cell populations (such as lymphocytes, macrophages, and their subsets).

This project will provide hands-on experience in animal experimentation, tissue preparation, immunofluorescence techniques and image analysis, within a dynamic and collaborative environment. The ideal candidate should have a solid background in immunology and cell biology, and some prior experience with microscopy or immunostaining techniques will be highly appreciated. Applicants are informed that animal experimentation will be performed during the internship.

The intern will also have the opportunity to perform in vivo techniques such as intratracheal instillation and lung harvesting procedures, as well as advanced imaging technologies. These additional experiences will provide valuable insight into the broader experimental workflow of lung immunology studies.

Option(s) linked to the project:

- ☐ Clinical Research Profile (Recherche Clinique)
- ☐ Data Analyst Profile (Recherche et Analyse de Données Omiques)
- ☒ Experimental Biology Profile (Recherche Expérimentale)

Form to be sent by email to : gpi3@univ-nantes.fr