

Post-doctoral position in immunology for 24 months in Paris at the Center For Research in Inflammation (INSERM, Université de Paris Cité)

Offer:

A post-doctoral position is available starting in **January 2023** at the **Center for Research in Inflammation (CRI)** under the supervision of Heloise Flament (<https://cri1149.fr/en/equipes/monteiro>). This is a fully funded postdoctoral position for 24 months.

Scientific summary:

The project will focus on mucosal-associated invariant T (MAIT) cells in the context of lung fibrosis. Idiopathic pulmonary fibrosis (IPF), the most common type of fibrotic interstitial lung disease, is a devastating chronic and progressive disease characterized by damage to the alveolar structure and the replacement of normal lung tissue by deposited extracellular matrix resulting in respiratory failure and death. MAIT cells are a subset of unconventional T cells representing an abundant population in human blood, liver and gut tissue, and in the lungs. In these tissues, MAIT cells recognize metabolites from bacteria and play antibacterial functions. In addition, cells migrate from the blood to injured tissues in the course of inflammatory disease as shown by our team recently (Flament et al *Nat Immunology* 2021 DOI 10.1038/s41590-021-00870-z). Furthermore, MAIT cells promote fibrosis in the liver. Based on preliminary data and literature data, we hypothesize that MAIT cells could influence the development of IPF. The mechanism may depend on interactions with immune cells and lung microbiota, since the commensal microbiome is the main source of MAIT cells ligands. Two main objectives are proposed:

- To investigate the link between MAIT cell functions and bacterial ligands in the lung during fibrogenesis in both human and mice.
- To evaluate whether inhibiting or activating MAIT cell functions may be beneficial to slow down disease progression.

As a perspective of interest, this may raise the possibility to use peripheral and lung MAIT cell phenotype as a novel biomarker for monitoring PF progression. Data obtained will pave the way for the design of novel therapies targeting MAIT cells in the context of PF.

Candidate profile:

We are looking for a highly motivated and rigorous candidate with creative and collaborative spirit. The candidate should be autonomous, with expertise in immunology and T cells. Applicants should have a strong background in standard techniques of immunology (FACS) and mouse experimentation. He/She should have the required authorization to perform animal experiments. Skills in bioinformatics will be appreciated.

Research environment:

The position is funded by an **ANR grant**. The postdoctoral scientist will work at the CRI under mentoring of Héloïse Flament (MCU-PH) in collaboration with a M2 student, a research engineer, an assistant engineer and a technician. The successful candidate will be required to work with the 2 collaborators of the project: the Lung Inflammation and Fibrogenesis Team (Pr. Bruno Crestani, INSERM U1152) and the Immunology Team at Cochin Institute (Dr. Agnès Lehuen, INSERM U1016).

Application process:

Please send a concise cover letter with a statement of research interest and summary of previous research activity, detailed curriculum vitae, and two reference letters to Dr. Héloïse Flament (heloise.flament@aphp.fr) with the subject line "Postdoc Application".