

Post-doctoral position in INSERM UMR1011 in Lille, France Project: "Drivers of hepatic inflammation Metabolic Dysfunction Associated Steatohepatitis"

Project overview: This project is focused on understanding how altered metabolism drives the progression of metabolic dysfunction associated steatohepatitis (MASH). The team has recently identified changes in various hepatic immune cell populations that associate with the development of MASH in animal models and human cohorts. The fellow's task is to determine how factors like hyperglycemia, insulin resistance, and altered lipid metabolism impact the hepatic immune system and drive MASH development and complications like fibrosis. The fellow will use state of the art tools (Seahorse, metabolomics, 13C flux, unique animal models) to define the metabolic programs that affect hepatic immune function in the context of MASH.

The project will be performed in INSERM UMR1011, a research unit affiliated to the European Genomic Institute of Diabetes (EGID) LabEx, INSERM, Institut Pasteur de Lille, CHU de Lille and Lille University. The unit develops interdisciplinary research at the interface of physiology, cell biology, biochemistry and medicine, hosts state-of-the art scientific services and technological platforms, and attracts students from around the world by offering high-level training in biomedical sciences.

We offer a 1-year contract (renewable) starting between June-Sept 2025 depending on availability of the candidate. This position is supported by the European Research Council for up to 2 years. However, candidates are encouraged to apply for additional funding (Marie Curie, FRM, HFSP, EMBO, etc.). Remuneration and social benefits will be based on the salary scale for public-sector employees considering past experience (available here). The applicant will be involved in a multidisciplinary group including basic scientists, clinicians and bioinformaticians, and integrated in international collaborations. They will have access to various technologies to perform this scientific project with high clinical relevance.

Requirements. Applicants should have a PhD in any biological science with experience in animal experimentation. Excellent written and spoken English are also important. A background in physiology, immunology or lipid metabolism would be highly appreciated.

Your responsibilities will include:

- Molecular and biochemical analysis of cells and tissues of genetically modified mice
- Establishment of new techniques for metabolite analysis using in vivo models
- Bioinformatic/statistical analyses
- Preparation of scientific articles and presentation at local and international meetings

Your application. Candidates should send a CV with a publication list, a short summary of research achievements and mastered techniques, and contact information of at least two references to: Joel Haas joel.haas@pasteur-lille.fr and Delphine Eberle delphine.eberle@univ-lille.fr

Selected publications of the team:

Deprince, et al. Apolipoprotein F is reduced in humans with steatosis and controls plasma triglyceriderich lipoprotein metabolism. *Hepatology* 2023

Deprince, et al. Dysregulated lipid metabolism links NAFLD to cardiovascular disease Mol Metab 2020

Grzych G, et al. Plasma BCAA changes in Patients with NAFLD are Sex Dependent. J. Clin Endo Metab 2020

Haas JT, Vonghia L, Mogilenko DM, et al. Transcriptional network analysis implicates altered hepatic immune function in NASH development and resolution. *Nature Metabolism*, June 2019