

## Postdoctoral position in Cardio-immunology

“Myeloid and Hematopoietic Cell Metabolism in Cardiovascular Protection”

### Work environment:

One postdoctoral research fellow position is open in the newly created ATIP Avenir team led by Alexandre Paccalet, within the CarMeN lab (cardiovascular, metabolism, and nutrition) in Lyon, France. Our group investigates how immune cell metabolism drives inflammatory and tissue remodeling processes in cardiovascular diseases, including myocardial infarction, stroke, myocarditis, and heart failure, combining fundamental, translational, and clinical approaches. The group works within the CarMeN lab infrastructure and collaborates with its researchers and clinical partners, benefiting from cutting-edge platforms.

Team: Cardio-immune interface

<https://carmen.univ-lyon1.fr> (website in construction)

Group leader: Alexandre Paccalet

Address: Laboratoire CarMeN, INSERM U1060

Groupement Hospitalier Est, Bâtiment B13  
59 Boulevard Pinel, 69500 Bron France

Type of contract: Postdoctoral contract funded by the ATIP Avenir program

Contract length: 2 years

Starting date: Fall 2026

Salary and social benefits: adjusted to the official INSERM scales

### Project:

The project addresses the metabolic adaptations in myeloid progenitors and circulating monocytes following acute myocardial infarction (MI). Building on evidence of metabolic switches in these cells, we aim to map metabolic shifts over time, examining how glucose and fatty acid metabolism fluctuate post-MI. We hypothesize that targeting metabolic pathways in a time-sensitive manner could reduce monocyte-driven inflammation and potentially improve cardiac recovery. Using established human cohorts and mouse models, this work aims to elucidate the metabolic evolution in myeloid cells post-MI, identifying biomarkers and therapeutic targets to reduce CVD-related inflammation without compromising immune defense.

To address these questions, we will combine state-of-the-art single-cell transcriptomics, multiparametric flow cytometry, mass spectrometry, and imaging approaches to analyze the heterogeneity and functions of monocytes in wild-type and transgenic mouse models, and in human cohorts.

### Application:

The candidate must have a PhD (ideally junior post-doc level) in immunology, bioinformatics, or physiology. Experience with RNAseq, metabolic assays, gene editing, or imaging would be an advantage. We are looking for a high level of scientific curiosity, with a drive to contribute to interdisciplinary research projects.

The application should be sent to [alexandre.paccalet@univ-lyon1.fr](mailto:alexandre.paccalet@univ-lyon1.fr)

### Selected publications:

1. Zhang & Paccalet *et al.* Bone marrow adipocytes fuel emergency hematopoiesis after myocardial infarction. *Nat Cardiovasc Res.* 2023
2. Paccalet *et al.* Deleterious Anti-Inflammatory Macrophage Recruitment in Early Post-Infarction Phase: Unraveling the IL-6/MCP-1/STAT3 Axis. *JACC Basic Transl Sci.* 2024