

# Open position for a postdoc with a strong background in molecular biology & CRISPR/Cas9 expertise

A funded postdoctoral position for 24 months is available in the Laboratory CarMeN INSERM U1060 department of Cardioprotection (Director: Pr. Michel Ovize) at Lyon, France in the team of Dr. Ludovic Gomez.

CarMeN lab gathers 5 teams dedicated to the research field of cardioprotection, metabolism and nutrition. The main objective of Team 5 is to improve our understanding of cardiovascular diseases and to develop new treatments and preventive strategies for a better care of the patients. Team 5 of Carmen laboratory (<http://carmen.univ-lyon1.fr/team-5-cardioprotection/?lang=en>) studies the cellular and molecular mechanisms of myocardial infarction. We have recently identified that SR/ER-mitochondria interaction sites allow mitochondria to sense SR/ER stress through local delivery of Ca<sup>2+</sup> and other signalling entities (Gomez et al. cell death differentiation 2016, Paillard et al. Circulation 2013). We have identified several proteins enriched at the SR/ER-mitochondria interface, including cyclophilin D and glycogen synthase kinase 3 beta, two potential PTP regulators, with functional and structural significance, thus highlighting the emerging role of this region within the cell.

We are now exploring these regulators in mice and human with the goal to develop novel targeted therapeutics for the vast and growing patient population with myocardial infarction.

This postdoctoral project will focus on target identification using proteomics from human myocardium and mouse followed by in vitro and in vivo target validation experiments using CRISPR/Cas9 assays. The ideal candidate should have solid background in molecular and cell biology (good knowledge in genomic databases, software of design and gene analysis, cloning, adenovirus) with a high expertise in CRISPR/Cas9. Experience with confocal-microscopy imaging is strongly preferred but not mandatory.

The applicant should have excellent team spirit and communication skills in English. The project relies on constant interactions with other team members.

The position should appeal highly motivated and enthusiastic scientists who want to perform cutting edge translational research with target identification, in vitro and in vivo gene editing and the ultimate goal to develop novel therapeutics with an impact on patients.

If you are interested in joining our team please contact Dr. Ludovic Gomez by mailing your CV, letter of intent and 2 recommendation letters at the following address: [carmen.position@gmail.com](mailto:carmen.position@gmail.com)

Environment:

The applicant will benefit from a highly collaborative and diverse environment at the CarMeN lab and the hospices civils de Lyon. The lab is located in the city of Lyon in a culturally and scientifically rich environment.

Contract: 12months contract, renewable based on success.

1. The SR/ER-Mitochondria calcium crosstalk is regulated by GSK3 $\beta$  during reperfusion injury. L Gomez, PA Thiebaut, M Paillard, S Ducreux, M Abrial, C Crola Da Silva, A Durand, MR Alam, F Van Coppenolle, SS Sheu, M Ovize. *Cell Death Differ.* 2015 Jul 24. doi: 10.1038/cdd.2015.101.
2. Paillard M, Tubbs E, Thiebaut PA, Gomez L, Fauconnier J, Da Silva CC, Teixeira G, Mewton N, Belaidi E, Durand A, Abrial M, Lacampagne A, Rieusset J, Ovize M. Depressing mitochondria-reticulum interactions protects cardiomyocytes from lethal hypoxia-reoxygenation injury. *Circulation.* 2013;128:1555-1565.