

## Postdoctoral and engineer positions in cardiac electrophysiology at the [Insitut de Génomique Fonctionnelle](#) (IGF), University of Montpellier, France.

A 2-years based CNRS postdoctoral position sponsored by *Fondation Leducq* and one renewable 1-year position of INSERM Research Engineer sponsored by the *Ageance Nationale pour la Recherche* are available in the team led by Matteo Mangoni at the IGF, Montpellier, respectively from January 1<sup>st</sup> and February 1<sup>st</sup> 2023.

The postdoctoral fellow will work under the responsibility of Matteo Mangoni. His/her project will be focussed on the functional roles of cardiac G protein gated potassium (Girk4) and of L-type Ca<sub>v</sub>1.3 calcium channels in cardiac automaticity. The objective is to establish Girk4 channels as therapeutic targets for managing dysfunction of cardiac automaticity and heart block. The project is integrated into the general objectives of the [Transatlantic Network of Excellence FANTASY](#). The fellow will be integrated in the FANTASY Network et will benefit of internal scientific exchanges and collaborative program in an excellent scientific environment. Application for personal fellowship for years 3-4 will be encouraged and supported by team PI.

Interested candidates must apply formally using the CNRS employment portal:

CNRS postdoc: <https://emploi.cnrs.fr/Offres/CDD/UMR5203-MATMAN-003/Default.aspx?lang=EN>

The portal also contains further information about the position, application process and deadlines. Salary will be commensurate with experience.

The research engineer will work under the responsibility of Dr. Pietro Mesirca and will be integrated in a project based on cardiomyocytes differentiated from human derived induced pluripotent stem cells (iPS) to investigate the effects of variants in pacemaker channels of the sinoatrial node on pacemaker activity and attempt rescuing of automaticity *in vitro* and *in vivo*.

INSERM Research Engineer (IE): [https://rh.inserm.fr/nous-rejoindre/Lists/Emploi%20ITA/Attachments/3531/IGF IE biologie\\_092022.pdf](https://rh.inserm.fr/nous-rejoindre/Lists/Emploi%20ITA/Attachments/3531/IGF IE biologie_092022.pdf)

### Suitable skills.

Experience in patch-clamp recordings of cardiac myocytes, confocal microscopy and imaging of intracellular calcium dynamics would be important.

Suitable experience in basic techniques of molecular biology and biochemistry would be a plus: PCR, Western blot, RNAseq, immunofluorescence and immunohistochemistry.

Ability to write and present in English is a prerequisite.

Previous experience on ECG recording would be suitable.

There will be the possibility of on-site learning of specific techniques of genomics, proteomics, molecular pharmacology, vector-based gene knock-down, small animal imaging and immunohistochemistry via dedicated teaching courses of [Biocampus core facilities](#).

### Working environment.

All necessary instruments and experimental approaches will be rendered available to the postdoc and engineer fellows to ensure project feasibility and success. The IGF is a pluridisciplinary research institute, which combines physiology with neuroscience and cancer biology. Fellows will benefit of a highly stimulating scientific environment within the IGF and the FANTASY Network. The Fellow will work in the team [Physopathology of Heart rhythm and Ischemia](#). The team is member of the LabEx [Ion Channels Science and Therapeutics](#) and associates internationally leading experts in ion channels and heart automaticity with experts in ischemia-reperfusion and harbors a worldwide unique collection of genetically modified mice carrying modified alleles of ion channels involved in pacemaking. For ex vivo experiments, the team will make available two patch-clamp setups, a Langerdorff isolated heart setup, optical mapping of membrane voltage/intracellular calcium and an Ionoptix system to measure contraction and calcium transients. Microscopy suitable for confocal recording of calcium dynamics, FRET and BRET and super-resolution of protein staining is also available in core facilities of the Arnaud de Villeneuve campus. For in vivo experiments, the team has a dedicated room equipped with telemetric recording of ECG, blood pressure, and activity, together with laser assisted echocardiography.