



## JOB OFFER

### Post-doctoral position (M/W) in Neurosciences – Olfaction & fMRI

Duration: 18 months

Level: PhD

Experience: 1 to 4 years

Starting date: 01/09/2023

Working time: full time

Salary: from 2833 euros per month depending on experience

#### Missions

This position is proposed within the framework of the BIODOR-IN project funded by the ANR. The aim of this project is to better understand the function of odors in social communication in humans, in the context of mate choice. The preference for biological odors produced by the body is modulated by factors related to reproductive status, genetics or health. However, human chemical communication remains understudied and its mechanisms are still poorly understood. This project started in 2021 with a large-scale study to investigate the attractiveness of body odors with behavioral/verbal and analytical chemistry approaches coupled with genetic and hormonal measurements. Based on these first results, another part of the project aims to better understand the neurophysiological responses to human body odors with different levels of attractiveness. To achieve this goal, an MRI approach is planned to better understand the neural basis of human olfactory attractiveness: this is the object of this postdoc.

#### Activities

The post-doctoral fellow will be in charge of conducting MRI experiments combined with behavioral approaches and measurements of autonomic nervous system responses in human volunteers. This type of experiment has already been in place in the team for several years and will not require any particular development. An important part of the work will consist in the analysis of functional imaging data and physiological signals (heart rate, skin conductance). The candidate is expected to be autonomous in the analysis of data and will have the opportunity to develop the necessary tools from those already existing in the team. The candidate is also expected to present his/her data to the team and at international conferences, and to valorize his/her work in the form of scientific publication(s).

#### Expected Skills

A PhD in neuroscience or cognitive science is required, and the skills needed for this position are to:

- master the conduct of MRI experiments in humans
- master MRI data analysis techniques
- know how to use a programming language (Python, Matlab, R...)
- master statistical analysis tools (R in particular)
- have good writing skills
- have a good level of English
- have a good ability to work in a team

Experience in research projects in olfaction or social cognition would be highly appreciated.

Training in good clinical practices and first aid would be a plus.

**Work context** - The candidate will work in the Neuropop team of the Lyon Neuroscience Research Center CRNL (at the Vinatier in Bron, Neurocampus building). The CRNL is a research unit of the University Claude Bernard Lyon 1 - CNRS - INSERM. It is one of the largest research centers in Neuroscience in France with more than 400 members. The Neuropop team is composed of 8 permanent researchers as well as engineers and technicians, and several post-doc, PhD students and master students. The research themes of the team, on human and animal models, focus on the plasticity of olfaction. The team's offices are located in a recent building (2019), with a human experimentation area where several rooms are dedicated to olfaction and very well equipped. Some experiments will also take place on the CERMEP imaging platform located at about 10 minutes' walk from the laboratory.

**Constraints and risks** Constraints and risks related to the magnetic field of the MRI apparatus.

**Additional information** - The application must include the following documents: a letter of motivation indicating in particular the research interests and the long-term objectives of the candidate; a curriculum vitae mentioning briefly the main results obtained so far (published or not); and the contact details of a person with whom the candidate has worked and who could write a letter of recommendation if necessary.

**To apply:** <https://emploi.cnrs.fr/Offres/CDD/UMR5292-CAMFER-004/Default.aspx> (before the 30<sup>th</sup> of June 2023)

**Contact:** [camille.ferdenzi@cnrs.fr](mailto:camille.ferdenzi@cnrs.fr)