

JOB OFFER

Two Postdoctoral Positions

Project Title: Sensory Regulation of Energy Homeostasis

Research Fields: Neuroscience, Neuroendocrinology, Physiology

Location: Lille, France

Research Laboratory: Development and Plasticity of the Neuroendocrine Brain, Inserm U1172, University of Lille, Lille University Hospital (CHU de Lille)

Principal Investigator: Sophie Steculorum (sophie.steculorum@sf.mpg.de)

Positions: Two Postdoctoral Positions, 24 to 36 months, full-time

Expected Start Date: Flexible, from December 1, 2026

Research Topic

Food sensory perception is a powerful regulator of feeding behaviour and integrative physiology, capable of engaging neural circuits controlling hunger, motivation, and metabolic homeostasis before a single bite is consumed. Remarkably, the sight and smell of food can rapidly alter the activity of key neuronal populations controlling feeding and whole-body metabolism in anticipation of nutrient intake. These findings have reshaped our understanding of appetite regulation by revealing that feeding circuits are strongly influenced by food-predictive sensory cues, rather than exclusively by post-ingestive or homeostatic signals. Yet, how sensory cues are translated into metabolic and behavioural responses remains poorly understood. The Steculorum Group aims to uncover the regulatory principles linking food sensory perception to physiological and behavioural outcomes, from the earliest stages of sensory processing to whole-body physiology, across development and in health and diseases. To address these questions, we use an integrated technology framework combining advanced genetic and systems neuroscience approaches in mice, including *in vivo* fiber photometry, optogenetics, activity-dependent neuronal labelling, neurocircuit mapping, and molecular approaches such as ribosome profiling and single-cell and bulk transcriptomics. These approaches are complemented by detailed physiological and behavioural analyses. Successful candidates will contribute to this research programme while developing their projects within a highly collaborative and interdisciplinary environment.

Job Description

Applicants should hold a **PhD in neurobiology, neuroscience, neurophysiology** or a closely related discipline, with demonstrated research experience in one or more relevant areas.

Required experience

- Mouse handling and experimentation;
- Stereotaxic surgery and/or other relevant *in vivo* procedures;
- Research experience in systems neuroscience and/or energy homeostasis (i.e., feeding).

Desirable experience

Experience in the following areas would be highly advantageous:

- Neurocircuit mapping;
- Chemogenetics and/or optogenetics;
- Fiber photometry/ *in vivo* calcium imaging;
- Behavioural analysis;
- Metabolic phenotyping;
- Molecular and transcriptomic approaches .

Previous experience in developmental neurobiology and/or developmental programming would be an advantage, but is not required.

Beyond technical expertise, we are looking for a candidate who is:

- Highly motivated and scientifically curious;
- Able to work independently while contributing effectively to a team;
- Enthusiastic about interdisciplinary and collaborative research;
- Comfortable working in a dynamic and interactive research environment;
- Committed to rigorous and reproducible science.

The working language of the laboratory is **English**. Knowledge of French is not required.

How to Apply

Please send your application as a **single PDF document** to Sophie Steculorum:
sophie.steculorum@sf.mpg.de

The application should include:

1. **Curriculum vitae (CV);**
2. **Motivation letter** describing your interest in the position, your relevant research experience, and how your background aligns with the research programme;
3. **Contact information for two academic referees.**

Applications will be reviewed based on the candidate's scientific background, research experience, motivation, and potential to contribute to the research programme.

Application deadline: November 1st 2026

For further information about the position or the research programme, please contact Sophie Steculorum at sophie.steculorum@sf.mpg.de.