SENCKENBERG
NATURE RESEARCH

Job Announcement Ref. #11-26010

Senckenberg – Leibniz Institution for Biodiversity and Earth System Research (SGN), headquartered in **Frankfurt am Main**, is seeking to fill the following position in the **Department of Molecular Ecology** at the **Senckenberg Biodiversity and Climate Research Centre** (SBiK-F) as soon as possible:

PhD (m/f/d) Transcriptional Regulation of Odorant Perception (65%)

Location:	**Frankfurt**
Employment scope:	**Part-time: 65%**
Type of contract:	**Temporary, limited to 3 years**
Remuneration:	**Collective agreement of the state Hesse (TV-H) / E13**

The Senckenberg Society for Nature Research is a member of the Leibniz Association and has been investigating the "Earth System" worldwide for more than 200 years, examining the past, analysing the present, and developing projections for the future. We conduct integrative geobiodiversity research with the aim of understanding nature in all its complexity and diversity in order to preserve it as the foundation of life for future generations and to ensure its sustainable use. Across eight institutes and five research stations throughout Germany, scientists from more than 40 countries conduct research at the highest international level. The city of Frankfurt, where the Senckenberg Society was originally founded, hosts the organization's central administrative services along with two research institutes housing extensive scientific collections and one of Senckenberg's most renowned institutions, the Senckenberg Natural History Museum Frankfurt. Senckenberg is as much a part of the city's identity as its skyline and its traditional apple wine.

Understanding the evolution of complex communication systems requires investigating both signal production and signal perception. In insects, cuticular hydrocarbons (CHCs) are central to chemical communication, yet the genomic mechanisms underlying the ability to perceive particular CHC compound blends remain largely unknown. Odorant receptor (OR) gene expression levels change when their corresponding encoded receptor proteins bind to specific odorants. The aim of this project is to determine the epigenetic mechanisms in regulating OR gene expression, and whether this regulation is consistent across our hymenopteran study species. This multi-omics approach will yield key insights into the genomic basis of the evolution of complex chemical communication systems, revealing how sender and receiver traits have evolved in concert.

The project is in close collaboration with the research groups of PD Dr. Florian Menzel (Johannes Gutenberg University Mainz), PD Dr. Jan Büllesbach (Technical University of Munich), and Prof. Dr. Thomas Schmitt (University of Würzburg) and involves close cooperation with a second PhD student in the project who will lead the chemical ecology and comparative genomics analyses located in the groups of Prof. Dr. Oliver Niehuis and PD Dr. Volker Nehring (University of Freiburg).

We are recruiting a highly motivated PhD candidate with interest in molecular evolution, genomics, epigenetics, and chemical ecology to identify epigenetic mechanisms regulating odorant receptor expression, one of the key traits in chemical communication systems.

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Your tasks

- Conduct experimental work and collect samples from three Hymenoptera species from three different odour blend treatments.
- Perform essential laboratory work (e.g. RNA extraction, library preparation)
- Carry out bioinformatic analyses to analyse multi-omics data gene-expression data with epigenetic regulatory states.
- Publish results in internationally peer-reviewed journals, and present those at international conferences
- Closely collaborate with the comparative genomics counterpart

Your profile

- Master's degree (or equivalent) in Biology, Evolutionary Biology, Molecular Biology, Bioinformatics or a related field
- Strong interest in molecular evolution, genomics, epigenetics, and chemical ecology
- Prior experience with NGS data, R, another programming language is a plus
- Experience with formulating scientific questions, planning and executing a research project
- Very good English communication skills, curiosity, independence, and interest to collaboratively work in an interdisciplinary team

Desirable skills

- Experience in conducting experiments
- Experience in dissection of specific tissues
- Experience in molecular laboratory procedures, including RNA extraction, preparation of Enzyme-seq and CUT&Tag libraries
- Experience in the bioinformatic analyses of transcriptome, methylation and/or histone modification data

We Offer

- Access to an international network of scientists, policymakers, and research organizations
- Integration in an interdisciplinary consortium studying the "GEvol: Genomic Basis of Evolutionary Innovations (GEvol)" with additional training opportunities and collaborations across Germany.
- A dynamic working environment in Frankfurt, a diverse and vibrant city offering a high quality of life
- Flexible working hours – mobile working options – Support with childcare or caring for family members (certified by the "audit berufundfamilie") – employee ID card with free admission to municipal museums – annual special payment – collectively agreed vacation entitlement – company pension plan (ZVK)

Senckenberg is committed to diversity. We benefit from the different expertise, perspectives and personalities of our staff and welcome every application from qualified candidates, irrespective of age, gender, ethnic or cultural origin, religion and ideology, sexual orientation and identity or disability. Applicants with a severe disability will be given special consideration in case of equal suitability. Senckenberg actively supports

the compatibility of work and family and places great emphasis on an equal and inclusive work culture.

How to apply?

Please **upload your application** (letter of motivation with a short description of your previous and current research foci, a CV, certificates of academic achievements, list of publications as well as letter(s) of recommendation, if available) (**as a single PDF file**) **on our website by April 6, 2026**.

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60325 Frankfurt a.M.

If you have any specific questions about the position, please contact Dr. Barbara Feldmeyer at barbara.feldmeyer@senckenberg.de.

For data protection information on the processing of personal data as part of the application and selection process, please refer to the privacy policy on our homepage at https://www.senckenberg.de/en/imprint/

Please visit our website at www.senckenberg.de for further information about the Senckenberg Gesellschaft für Naturforschung.