LiU hereby advertises a Postdoctoral Scholarship in Experimental Psychiatry

Research environment

You will take part in research activities at the Barbier Lab at the Center for Social and Affective Neuroscience (CSAN), Department of Biomedical and Clinical Sciences, Linköping University. Our research focuses on understanding the neural circuits and molecular mechanisms underlying individual differences in behavioral responses to aversive experiences, with particular interest in vulnerability and resilience. We combine rodent behavioral models with molecular, cellular and systems neuroscience approaches, including single-nucleus RNA sequencing, brain-wide neuronal activity mapping and circuit-level investigations.

Research project

Exposure to traumatic events does not affect everyone in the same way. While some individuals develop persistent fear responses, others remain resilient, even when exposed to similar experiences. Understanding the neural mechanisms underlying these individual differences is a major challenge in neuroscience, with important implications for understanding vulnerability to stress-related psychiatric disorders.

To address this question, we use a rodent model of observational fear learning, in which animals witness a conspecific experiencing an aversive event but differ markedly in their subsequent fear responses. Our previous work has identified differences in brain-wide neuronal activity and cell-type-specific gene expression associated with these behavioral responses, providing a foundation for investigating the mechanisms underlying vulnerability and resilience. Building on existing whole-brain neuronal activity mapping and single-nucleus RNA-sequencing datasets, the postdoctoral researcher will investigate candidate brain regions, neuronal populations and molecular pathways associated with these individual differences. Using state-of-the-art molecular, cellular and circuit-level approaches, the postdoctoral fellow will examine their functional contribution to observational fear responses, moving from the identification of potential mechanisms to their experimental investigation.

The postdoctoral fellow will play an active role in advancing the project, contributing to the refinement of hypotheses, experimental design, data analysis, interpretation and scientific publications. The position offers an opportunity to develop expertise in advanced neuroscience techniques and integrative approaches combining behavioral, circuit-level and molecular neuroscience, while contributing to a better understanding of the mechanisms underlying vulnerability and resilience.

Qualifications and requirements

You must have been awarded a doctoral degree or have a foreign degree that is deemed to be equivalent to a doctoral degree. Your doctoral degree must be awarded by a higher education institution other than Linköping University.
If you have not finished your degree, the degree must have been awarded at the latest by the point at which a decision to award you the fellowship is taken.

Your doctoral degree must have been awarded no more than three years before the application deadline for this fellowship. If there are special grounds, applicants who were awarded their doctoral degree earlier may also be considered, for example due to medical internship or specialist medical training, or various types of statutory leave.

The research funded by this scholarship must begin in 2027.

Your doctoral degree should be in neuroscience, molecular biology, behavioral neuroscience, or a related field. We are looking for a motivated and curious researcher with a strong background in experimental neuroscience and an interest in understanding the neural circuits and molecular mechanisms underlying individual differences in fear learning and responsive to aversive experiences. Candidates should demonstrate scientific independence, analytical thinking, and the ability to contribute to hypothesis-driven research in a multidisciplinary environment.

The applicant must have:

- PhD in cell biology, molecular biology, neuroscience, or a closely related field
- Strong experience in stereotaxic surgeries
- Strong expertise in molecular and biochemical techniques, including:
- Immunohistochemistry
- Fluorescent In situ hybridization (RNAscope)
- Microscopy
- Proven experience with tissue processing and handling
- Excellent skills in rat behavioral testing, particularly fear conditioning
- Very good written and spoken English
- Ability to work independently, think critically, and take initiative

Additional skills:

- Experience with high-throughput techniques such as spatial transcriptomics
- Bioinformatics skills, including DeepLabCut and sequencing data analysis
- Strong teamwork and collaboration skills

Appointment and Conditions

This fellowship position is funded by The Catharina Högbom & Michael Cocozza Research Foundation and will provide you a tax-free scholarship of SEK 550,000 per year (appx $ 56,000) which will be paid directly to the postdoctoral fellow.

In addition, your research is supported by an operating grant of SEK 450,000 per year paid to the research environment at the department.

Before the third year, the postdoctoral researcher may apply to the foundation for an individual operating grant of approximately SEK 500,000, intended for those who have the ambition and, in the foundation's assessment, the ability to establish their own research environment. Any operating grant awarded is paid to the department and made available to the research environment for use in the postdoctoral researcher's research project.

Essential information about healthcare, insurances etc. can be found here. Questions are welcome to lisa.dobrosch@liu.se

Application procedure

The following documents (in pdf-format) must be submitted when applying for the scholarship

- Cover letter, max 2 pages, describing your background, research interests in general and in relation to the project, and what makes you interested in the fellowship.
- Qualification plan, max 2 pages, describing clearly what qualifications you want to obtain during the scholarship period.
- Publication list, max 5 pages. List the publications in reverse chronological order under 1) The most important publications 2) Relevant publications from the last years.
- CV, max 4 pages, including contact details to three reference persons.
- The protocol from the defense of the thesis or the PhD degree diploma. Where the defense has not yet taken place, the defense application (if not in Swedish, translated into English) must be submitted and a copy attached to the application.
- Copy of passport and MSc transcripts with grades.

The format for the cover letter, qualification plan and publication list is A4 pages in Arial, font size 11, single line spacing. All documents not issued in Swedish or English must be officially translated into English.

The application should be sent electronically to lisa.dobrosch@liu.se. Mark the email with "Högbom-Cocozza Foundation Postdoc - Dnr. BKV-2026-00935 - Barbier" on subject line.

Applications deadline

January 8, 2027