Come and do research with us!

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Trial and error is a successful problem-solving strategy not only in humans but throughout evolution. How do nervous systems generate novel, creative trials and how are errors incorporated into already existing experiences in order to improve future trials? We use a variety of transgenic tools, mathematical analyses, connectomics and behavioral physiology to understand the neurobiology of spontaneous behavior, learning and adaptive behavioral choice.

We offer a fully-funded postdoctoral position to participate in this research field. The successful candidate not only gets to choose their project between mathematical analyses of spontaneous behavior in transgenic animals or connectomics of interacting learning systems, but they also get to practice open science in an international research team in a brand new building with state-of-the-art infrastructure. To top it off, the duration of the position (underlying German time limits) allows the successful applicant to learn how to write their own grant applications, establish their own research group and, if desired, obtain a German 'habilitation' degree.

Research questions

Our research has discovered evolutionary conserved mechanisms for the generation of spontaneous behavior and feedback-based learning mechanisms. Besides trial and error, spontaneous behavior provides organisms with adaptive unpredictability, crucial in competitive situations such as evolution. The first possible project builds on our work analyzing the spontaneous turning behavior of tethered *Drosophila* and will identify the neurons and their neurophysiological mechanisms mediating behavioral choice.

The second project will identify the connectivity of the mushroom-body output neurons mediating the hierarchical interaction between fact- and skill-learning that regulates habit formation.

Requirements

The successful candidate will have a PhD (or be close to completion) in a relevant field of neuroscience, biology, psychology or physics, coding experience in R, Python, Julia, or equivalent, good written/oral communications skills in English, and also, ideally, practical experience working with *Drosophila*.

Our lab

Our lab prioritizes inclusion and diversity to achieve excellence in research and to foster an intellectual climate that is welcoming and nurturing. We are based at the University of Regensburg, an equal opportunity employer with over 20,000 students and more than 1500 faculty, in Regensburg, Bavaria, Germany.

Please send your application with your CV and a short reference to one of our publications to my institutional address (bjoern.brembs@ur.de). Applications will be considered until the position is filled, but applications before November 1, 2020 will receive preferential treatment.

bjoern.brembs.blog

P.S.: I was told by a reader that I must add the following statement:

> *You should mention that Regensburg is an incredibly nice city with high quality of life! Affordable, safe, cultural, civil, great food, and close to other great cities like Prague and Munich.*