



Postdoctoral position in *Drosophila* Neurobiology and Genetics

We are seeking a postdoctoral researcher to investigate the neuronal and molecular mechanisms of Intellectual Disability (ID) and Autism Spectrum Disorder (ASD) using *Drosophila* as a model. The project focuses on habituation, a conserved form of learning that protects the brain from sensory overload and stands at the base of higher cognitive functions. Deficits in habituation are frequently present in individuals with ID and/or ASD and in the genetic *Drosophila* ID/ASD models ([Fenckova et al., Biol Psy, 2019](#); [Blok et al., Neurosci Biobehav Rev, 2022](#)).

In collaboration with the lab of Prof. Annette Schenck at the Radboud medical center in the Netherlands, the project aims to identify neuronal mechanisms and molecular pathways underlying deficits in light-off jump habituation. It includes (1) identification of the missing components of the otherwise well-described light-off jump circuit at the synaptic-level connectome of the full adult fly brain (FAFB), (2) generation of circuit-specific tools (split-Gal4), (3) manipulation of neuronal activity (possibly also with optogenetics) and of candidate ID and ASD pathways within the light-off jump circuit and testing the effect on habituation, (4) correction (genetic or pharmacological) of the identified pathways to investigate their potential to restore habituation of ID/ASD models and serve as treatment targets.

Requirements:

- Ph.D. in neuroscience or genetics (or close to completion of Ph.D. degree)
- experience with *Drosophila* neurobiology, circuit biology, optogenetics and/or computational neuroscience is a plus
- self-motivation, efficiency and reliability
- great organization and project management skills
- team worker who values a positive work environment
- excellent English written and oral communication skills
- start from 1.10. 2023 (negotiable)

What we offer:

- Fixed-term 1.0 FTE postdoc position for 2 years with the possibility of a 1-year extension
- Flexible working hours, 5 weeks of holiday
- Support for professional development
- Attractive salary, ERC-CZ funded, with the possibility of performance benefits



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- Meal allowance, special mobile phone and bank services, university kindergarten

Our group and research:

[Laboratory of Neurogenetics, led by Dr. Michaela Fencková](#), is situated at the Faculty of Science of the University of South Bohemia in the Czech Republic. We are supported by EMBO Installation Grant, a grant from Czech Science Foundation and a prestigious ERC-CZ grant. We study how genes regulate cognitive function in health and disease with focus on habituation.

Place of employment:

The [region](#) and the city of [České Budějovice](#) (Budweis) have been evaluated as the best places to live in the Czech Republic. The University of South Bohemia (USB) implements the standards of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers, is an HR Award holder and has its own gender equality plan (GEP).

The USB guarantees open international recruitment processes, equal working conditions for men and women, mentorship and professional career development programs, international research mobility and collaboration, special support for parents with children (children group) and foreign researchers (Welcome Office, English speaking environment).

To apply send your CV, a cover letter describing past work and future interests, and the contact information of two referees to jobs@prf.jcu.cz

For informal inquiries, you can contact Dr. Michaela Fencková at fenckm00@prf.jcu.cz
