



PhD position: Genetic dissection of a neuronal circuit under sexual conflict

Job description

The Groningen Institute for Evolutionary Life Sciences ([GELIFES](#)) offers a 4-years NWO-funded PhD position for a project on the *Genetic dissection of a neuronal circuit under sexual conflict*, with *Drosophila melanogaster* as a model system.

The project is coordinated by [Prof. Jean-Christophe Billeter](#), in collaboration with Prof. [Yael Heifetz](#), [Prof Bregje Wertheim](#), and [Dr Philip Kohlmeier](#). The student will join a lively and highly international team of post-doctoral researchers, PhD and master students working on the neurogenetics of social and sexual behaviours in *Drosophila*, supported by laboratory technicians.

Sexual conflict (SC) shapes the evolution of reproductive behaviours. It manifests itself in male traits that limit female reproductive choices, generating selection for female counter-adaptations. This sexual conflict is a hot topic in evolutionary biology because it is hypothesized to fuel fast and exaggerated evolution of neural, behavioural and morphological traits that mediate male-female competition.

This project aims at investigating how a sexual conflict has shaped brain functioning in the fruit fly *Drosophila melanogaster*. During mating, males transfer pheromones in their ejaculate that render a mated female less attractive to other males. As a counteradaptation, females eject that ejaculate which restores attractiveness and facilitates faster remating. We are now interested in identifying the neuronal circuit that modulates ejaculate ejection and to reveal potential counteradaptations of the male. In particular, the PhD student will apply 1) optogenetics and intersectional methods to parse the function of single neurons in female ejaculate ejection, 2) mutant analysis and transcriptomics to identify sensory input 3) trans-synaptic marking and circuit modelling to reconstitute neuronal circuitry and 4) sperm-competition and female sexual receptivity assays to identify the selective drivers that shape the current state of the sexual conflict.

Qualifications

We are looking for an enthusiastic and talented PhD candidate with a Master's degree (or equivalent) in Biology with a strong interest in neurogenetics and behavioural neurosciences, and with an appreciation for evolutionary biology. The ideal candidate has experience with at least some of the following techniques: *Drosophila* genetics, *Drosophila* neuroanatomy, behavioural analysis, confocal microscopy and molecular genetics. We also ask for excellent communication and writing skills in English. Other helpful competences include statistical proficiency (ideally in the R software environment) and bioinformatics.

Conditions of employment

The University of Groningen offers a salary of € 2,325 gross per month in the first year to a maximum of € 2,972 gross per month in the final year (salary scale Dutch Universities as of Feb 1, 2019), based on a fulltime position (1.0 FTE) excluding a 8% holiday allowance and a 8.3% end of the year bonus.

The position is limited to a period of 4 years. A PhD training programme is part of the agreement and the successful candidate will be enrolled in the Graduate School of Science and Engineering. The successful candidate will first be offered a temporary position of one year with the option of renewal for another three years. Prolongation of the contract is contingent on sufficient progress in the first year to indicate that a successful completion of the PhD thesis within the next three years is to be expected.

The preferred starting date is between April and June 1st 2019.

Organisation

Founded in 1614, the University of Groningen enjoys an international reputation as a dynamic and innovative institution of higher education offering high-quality teaching and research. Flexible study programmes and academic career opportunities in a wide variety of disciplines encourage the 30,000 students and researchers alike to develop their own individual talents. As one of the best research universities in Europe, the University of Groningen has joined forces with other top universities and networks worldwide to become a truly global centre of knowledge.

Application

Application should include:

- a letter of motivation to apply for this position
- a curriculum vitae
- a one-page statement of research interests, for instance description of previous research experience, such as bachelor/master research projects.
- contact details for two professional references
- transcripts from your bachelor's and master's degree

The application can be submitted directly by Email to Jean-Christophe Billeter (See Email address below) until 14 February 2019 23:59 h Dutch local time.

Information

For information please contact:

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