Post Title: Research Fellow in Drosophila Neurogenetics
School/department: School of Life Sciences/Department of Neuroscience
Hours: Full Time. Considered up to a maximum of 1 FTE / 36.5 hours. Requests for flexible working options will be considered (subject to business need). Successful candidates will be expected to work full-time (1xFTE) and may need to work long-hours and carry out experimental procedures across several consecutive days, when required.
Contract: Fixed-term until 31 July 2023
Reference: 9424,9426
Salary: starting at £35,333 to £42,155 per annum per annum, pro rata if part time
Placed on: 12 September 2022
Closing date: 20 September 2022. Applications must be received by midnight of the closing date.
Expected Interview date: TBC
Expected start date: 01 October 2022

This job is only available to those working at the University of Brighton or the University of Sussex

The School of Life Sciences at the University of Sussex is at the forefront of research in the UK. In a recent Research Excellence Framework assessment (REF 2021), 100% of our Impact cases in Biological Sciences and Chemistry were rated as world-leading or internationally excellent. The School has received substantial recent University investment and is embarking on an exciting and extensive, muti-million pound refurbishment and improvement project.

A Research Fellow in Neuroscience position is available in the laboratory of Claudio Alonso to study the mechanisms underlying neural development and function in Drosophila. How the molecular biology of neurons relates to the function of neural circuits and behaviour is an open and exciting question in modern neuroscience.

The successful candidate will have a solid background in Drosophila neurobiology and behavioural analyses and demonstrable experience in fly genetics, molecular cell biology, computer coding, and the development of new quantitative behavioural systems.

We will combine molecular biology, Drosophila genetics, transcriptomics, optogenetics, optical neuronal imaging, microscopy and quantitative behavioural approaches. The project involves both experiments and computer-based coding and analysis.

We are a very active research group located in the Neuroscience Department, which also houses a number of other groups using imaging to study neural circuits across vertebrates and invertebrate species (http://www.sussex.ac.uk/sussexneuroscience/).

Please contact Prof. Claudio Alonso (c.alonso@sussex.ac.uk) for informal enquiries. For information about our lab please visit: https://www.sussex.ac.uk/lifesci/alonsolab/.

The University is committed to equality and valuing diversity, and applications are particularly welcomed from women and black and minority ethnic candidates, who are under-represented in academic posts in Science, Technology, Engineering, Medicine and Mathematics (STEMM) at Sussex.

Please note that this position may be subject to ATAS clearance if you require visa sponsorship.

For full details and how to apply see our vacancies page

The University of Sussex values the diversity of its staff and students and we welcome
applicants from all backgrounds.
Please note: The University requires that work undertaken for the University is performed from the UK.
2. The School / Division

Please find further information regarding the school/division at http://www.sussex.ac.uk/lifesci/neuroscience/

3. Job Description

Job Description for the post of: Research Fellow in Drosophila Neurogenetics

Department: Neuroscience

Section/Unit/School: Department of Neuroscience
School of Life Sciences

Location: CRPC Building, School of Life Sciences

Grade: Research Fellow I, Grade 7.1

Responsible to: Professor Claudio R. Alonso

Responsible for: N/A
CORE JOB DESCRIPTION

Job Title: Research Fellow in Drosophila Neurogenetics
Grade: Research Fellow I, Grade 7
School: School of Life Sciences
Location: CRPC Building, School of Life Sciences
Responsible to: Professor Claudio R. Alonso
Direct reports: n/a
Key contacts: Members of research group, members of faculty within the School and University.
Role description: Research Fellow I is an early career-grade research position. Post-holders will be expected to contribute to the work of the research team, and also to develop their research skills with support from more experienced members of staff.

PRINCIPAL ACCOUNTABILITIES

1. To engage in individual and/or collaborative research activity resulting in high-quality publications; and to develop research funding and knowledge exchange income individually or in collaboration with others, as appropriate, depending on the size and scope of the bid.

2. To contribute to School teaching activities.

KEY RESPONSIBILITIES

2. Research, Scholarship & Enterprise

1.1 Develop research objectives and proposals for own or joint research, at acceptable levels, with assistance if required.

1.2 Conduct research projects individually and in collaboration with others.

1.3 Analyse and interpret research findings and draw conclusions on the outcomes.

1.4 Produce high-quality research outputs for publication in monographs or recognised high-quality journals, or performance/exhibition, as appropriate, and contribute to the School's REF submission at acceptable levels of volume and academic excellence.

1.5 Contribute to the preparation of proposals and applications to external bodies, for example for funding purposes.
1.6 Individually or with colleagues, explore opportunities for enterprise activity, knowledge exchange income and/or consultancy, where permissible.

1.7 Build internal contacts and participate in internal networks and relevant external networks in order to form relationships and collaborations.

1.8 Continually update knowledge and understanding in field or specialism, and engage in continuous professional development.

2. Teaching & Student Support

2.1 Undertake teaching duties, if required.

2.2 Assist in the assessment of student knowledge and supervision of student projects if required.

2.3 Assist in the development of student research skills, for example as part of a postgraduate supervision team.

3. Contribution to School & University

3.1 Attend and contribute to relevant School and project meetings.

3.2 Undertake additional duties, as required by the Principal Investigator and/or Head of School.

4. Role-specific duties

4.1 Apply molecular, genetic, transcriptomic, and functional imaging approaches to the study of the cellular basis of behaviour in Drosophila.

4.2 Independently develop and apply neurophysiological and behavioural tests in normal Drosophila strains as well as in genetically-induced conditions with a focus on molecular cellular and physiological/behavioural analysis.

4.3 Apply Drosophila genetics, trans-genesis and genome-editing techniques to manipulate gene and neural activity in particular areas of the Drosophila nervous system.

4.4 Develop and adapt computational code to develop quantitative behavioural approaches in Drosophila.

4.5 Develop transcriptomic analyses from selected tissues and cells in collaboration with other members of the lab.

4.6 Dissect neural tissues for imaging, biochemical and transcriptomic analyses.

4.7 Design experimental plans based on the combined use of genetic, imaging, neurophysiological and behavioural approaches.
4.8 Keeping accurate and complete records of lab work.

4.9 Supervision of younger members of the lab.

4.10 Keeping up with relevant scientific literature

4.11 Presenting results in lab meetings, internal seminars and, if appropriate, external seminars

4.12 Contributing to annual science outreach activity

This Job Description sets out current duties of the post that may vary from time to time without changing the general character of the post or level of responsibility entailed.

INDICATIVE PERFORMANCE CRITERIA

- A PhD (submitted or completed) or equivalent scholarly or relevant professional activity
- Pursuing a line of independent research within a research group.
- Publishing and Communicating (e.g. conference posters) research, either from a recently completed PhD or new original research.
- Other forms of externally-recognised professional practice of creative output of a standing equivalent to regular publication of original research.
- Initiating, developing or participating in links between the University and external bodies such as business and industry, the professions, community organisations and policy-makers.
- Evidence of successful engagement in teaching or supervision.
PERSON SPECIFICATION

ESSENTIAL CRITERIA

1. Normally educated to doctoral level (i.e. with PhD thesis formally submitted or defended when starting the post), or other equivalent qualification, or appropriate level of experience, as appropriate to the discipline (see role-specific criteria below).

2. Evidence of engagement in high-quality research activity.

3. Excellent presentation skills, with the ability to communicate effectively, both orally and in writing, with students, colleagues and external audiences.

4. Ability to work individually on own initiative and without close supervision, and as part of a team.

5. Ability to exercise a degree of innovation and creative problem-solving.

6. Excellent organisational and administrative skills.

7. Ability to prioritise and meet deadlines.

8. Excellent IT skills.

ESSENTIAL ROLE-SPECIFIC CRITERIA


2. Demonstrable experience in Drosophila Neurobiology and Quantitative Behavioural analyses.

3. Demonstrable experience in the use of Drosophila to investigate neural function.


5. Experience in modern approaches for the analysis of neural development and neural circuits.

6. Experience in developing new computer code for quantitative behavioural experiments in Drosophila.

7. Experience in the design and development of new behavioural set-ups/systems.

8. Demonstrable ability to manipulate neural activity by means of thermogenetics, optogenetics, and related methods.


10. Experience in fluorescent microscopy (including confocal microscopy), digital imaging and quantitative imaging methods.
11. Experience in transcriptomics and quantitative gene expression analyses.

12. Ability to work long-hours and carry out experimental procedures across several consecutive days, when required.

13. Demonstrable ability to work co-operatively as a member of a research team and lead a research project.

DESIRABLE CRITERIA

1. Emerging track record of high-quality publications or communications in reputable journals and fora, or other appropriate media of similar standing.

2. Experience of generating research or knowledge exchange income.

3. Experience in the cellular analysis of the nervous system including manipulations of gene expression in specific neurons.

4. Experience in the use of optogenetic/thermogenetic tools and the analysis of neural activity by means of genetically-encoded calcium sensors and/or electrophysiology.

5. Experience in Drosophila genetics, insect neurophysiology and/or behavioural analyses.

6. Interests in the molecular cellular basis of neural function and behaviour.