Post Doctoral Research Associate

Aston University
BIRMINGHAM UK

Reference: 0296-25

Grade: 8

Salary: £38,249 to £45,413, per annum, depending on experience

Contract Type: Fixed term (12 months)

Basis: Full time

Job description

Job Purpose:

Aston University is looking to recruit a PDRA to become part of the interdisciplinary Aston team in the newly established **UK Multidisciplinary Centre for Neuromorphic Computing** (https://www.aston.ac.uk/research/eps/aipt/neuromorphic-computing-centre). The Centre consortium led by Aston University includes world-leading groups form the University of Oxford, University of Cambridge, University of Southampton, Queen Mary University of London, Loughborough University, University of Strathclyde. The Centre focus on impact is supported by a broad network of industry partners, including Microsoft Research, Thales, BT, QinetiQ, Nokia Bell Labs, Hewlett Packard Labs, Leonardo, Northrop Grumman, and a number of SMEs.

The project will focus on determining functional properties and mechanisms of human Induced Pluripotent Stem Cell (iPSC) derived cortical neuronal networks in cortical organoids and planar cultures. Techniques used will include electrophysiological recording (cMOS Multielectrode array) and calcium imaging and optogenetics. The long-term goal is to understand how cortical organoids process information. For this aspect there will be collaboration with statistical physicists for data analysis and experimental design.

The Associate is expected to generate breakthrough ideas in the assigned area of research, as well as to carry out research in line with the project plan. Depending on the results obtained in the first year, post can be extended by at least one and up to three years.

Main Duties/Responsibilities

- Differentiate, grow and maintain hiPSC derived cortical cultures.
- Design and conduct experiments on generated neuronal networks using dynamic fluorescence (Calcium) imaging and single cell patch and population multielectrode array (3Brain).
- Work jointly with other members of the research team in experimental planning and analysis.
- To be the lead contributor to publications of research outcomes in high impact journals and major national and international conferences.
- To contribute to research initiatives with colleagues in and beyond the School as appropriate.
- To engage in training and professional development programmes in the University consistent with personal needs and aspirations and with the strategic goals of the Institute.
- To support the development of further research proposals.
- To assist in the supervision of PhD students and MSc research projects.
- To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

Additional responsibilities

- Engage in continuous personal and professional development in line with the demands of the role, including undertaking relevant training and development activities.
- Ensure and promote the personal health, safety and wellbeing of staff and students.
- Carry out duties in a way which promotes fairness in all matters and which engenders trust.
- Promote equality of opportunity and support diversity and inclusion as well as working to support the University's environmental sustainability agenda and practices.

Person specification

	Essential	Method of assessment
Education and qualifications	1st class or upper second degree in Neuroscience, Physiology, Pharmacology or equivalent. PhD in cellular neuroscience or related subject allied to life sciences.	Application form
Experience	Experience in cellular or network electrophysiological recording or calcium imaging approaches. Experience with data analysis applications. Publication record in international journals and conferences.	Application form and interview
Aptitude and skills	Creative problem-solving skills. Excellent English language communication skills to relay work in spoken and written media. Demonstrated ability to work independently and within interdisciplinary teams.	Application form and interview

	Desirable	Method of assessment
Education and qualifications	PhD or PDRA role in an area of cellular neurophysiology, neural stem cell biology, network activity, astrocyte – neuron interactions and/or optogenetics.	Application form
Experience	hiPSC neuronal differentiation and culture. Lentiviral or AAV transduction.	Application form and interview

	Desirable	Method of assessment
Aptitude and Skills	Excellent communication skills, with a proven ability to present complex technical information to both academic and industry stakeholders.	Application form and interview

University values

All staff are expected to demonstrate/promote the University's values and expectations, which are an integral part of our strategy and underpin the culture of the University. In addition, our leaders are expected to be accountable, help to execute strategic visions of the University and share and set clear expectations that inspire those around them.

How to apply

You can apply for this role online via our website https://www2.aston.ac.uk/staff-public/hr/jobs.

Applications should be submitted by 23.59 on the advertised closing date.
All applicants must complete an application form, along with your CV.

Any CV sent direct to the Recruitment Team and Recruiting Manager will not be accepted.

If you require a manual application form, then please contact the Recruitment Team via recruitment@aston.ac.uk.

Contact information

Enquiries about the vacancy:

Name: Rhein Parri
Job Title: Professor
Email: h.r.parri@aston.ac.uk

Please also CC:

Name: Natalia Manuilovich
Job Title: Manager of UK Multidisciplinary Centre for Neuromorphic Computing
Email: n.manuilovich@aston.ac.uk

Enquiries about the application process, shortlisting or interviews:
Recruitment Team via recruitment@aston.ac.uk or 0121 204 4500.

Additional information

Visit our website https://www2.aston.ac.uk/staff-public/hr for full details of our salary scales and benefits Aston University staff enjoy.

Salary scales: https://www2.aston.ac.uk/staff-public/hr/payroll-and-pensions/salary-scales/index

Benefits: Benefits and Rewards | Aston University

Working in Birmingham: https://www2.aston.ac.uk/birmingham

Employment of Ex-Offenders: Under the Rehabilitation of Offenders Act 1974, a person with a criminal record is not required to disclose any spent convictions unless the positions they applying for is listed an exception under the act.

Eligibility to work in the UK: You should ensure that you meet the eligibility requirements, including meeting the English language standards. If you do not meet the eligibility criteria, any application for a work visa would be unsuccessful. Please see UKVI guidance for further information on eligibility, knowledge of English requirements and approved test centres https://www.gov.uk/tier-2-general

With the end of free movement for EU/EEA/Swiss nationals from 1 January 2021, the UK's new immigration system applies to all non-UK/Irish nationals who require a visa.

Where an individual is subject to UK immigration control, they will require a visa to work in the UK.

The following individuals do not need a visa for the UK, but do still have to prove their right to work before employment can commence:

- **British Citizens or Irish Nationals**
- **EU/EEA/Swiss nationals with Settled or Pre-settled status under the EU Settlement Scheme**
- **Non-EEA nationals with Indefinite Leave to Remain/Settlement in the UK**

The main routes available for those who need a visa to work in the UK are **Skilled Worker**, **Global Talent** and the **Graduate Route**.

You can find further information about each of these visa routes on our candidate immigration page.

If you will conduct research in your role, you may need to apply for and obtain ATAS clearance before Aston can issue a Certificate of Sponsorship for your visa application. Please see below for further details.

Academic Technology Approval Scheme (ATAS):
If you will conduct research in your role and you apply for a Skilled Worker or Temporary

Worker GAE visa, you may need to apply for and obtain ATAS clearance before Aston can issue a Certificate of Sponsorship for your visa application.

This process can take at least 6 weeks to process, and Aston will consider this when confirming your expected start date. Processing times will increase between April and September and can longer to complete.

There is no fast-track option available. ATAS certificates will be processed in order of receipt.

You can find more information about ATAS on our candidate immigration page.

Before you start and Right to Work

90-day entry vignette

If you have applied for your visa outside of the UK, you will receive a vignette in your passport which is usually valid for 90 days. Please make sure to travel to the UK within the 'valid from' and 'valid to' dates on this visa. If you entered the UK before or after these dates, you would not 'activate' the visa and you would need to leave and re-enter the country.

You will also receive a decision letter confirming details about your immigration permission and where to collect your Biometric Residence Permit.

Cost of Living - Estate and Letting Agents

There are numerous Estate and Letting Agents in and around Birmingham that can help you find suitable accommodation. The Midland Landlord Accreditation Scheme provides a list of professional agencies and landlords who have applied with them for accreditation. Whilst accreditation is not a guarantee of quality, it provides some reassurance about the standard of the service they provide.

You can also use property search websites such as Rightmove or Zoopla.

Equal Opportunities

Aston University promotes equality and diversity in all aspects of its work. We aim to ensure, through our admissions policies for students, and our staff recruitment and selection processes that we encourage applications from all groups represented in the wider community at a local, national and international level.

The University will endeavour not to discriminate unfairly or illegally, directly or indirectly, against student or potential students, staff or potential staff. This commitment applies to all functions of the University and to any stage of an individual's career.

An Equal Opportunities Monitoring Form is included within the application form. Data you provide on the Equal Opportunities Monitoring Form will be included in a general database, for statistical monitoring purposes, enabling the University to monitor the effectiveness of its Policy, Codes of Practice and Guidelines on Equal Opportunities in Employment. Individuals will not be identified by name.

Data Protection
Your personal data will be processed in compliance with the Data Protection Act 2018 and the General Data Protection Regulation ((EU) 2016/679) ("GDPR"). The University's Data Protection Policy and Privacy Notices, including the Job Applicant Privacy Notice can be found at https://www2.aston.ac.uk/data-protection. Your application will only be used to inform the selection process, unless you are successful, in which case it will form the basis of your personal record with the University which will be stored in manual and/or electronic files. Information in statistical form on present and former employees is given to appropriate outside bodies.
Full details of our terms and conditions of service and associated policies and procedures are available online at https://www2.aston.ac.uk/staff-public/hr/policies

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