MANCHESTER 1824
The University of Manchester

Job Description

Research Associate in Developmental Cell Biology	
Grade	6
Department	Division of Developmental Biology and Medicine, School of Medicine, Faculty of Biology, Medicine and Health.

Overall Purpose

This three-year, Wellcome-funded Research Associate post will investigate how cytonemes transmit Notch signals within the project 'Cytoneme-mediated signalling in development', a Discovery Award held jointly by the University of Manchester and the University of Exeter. The role holder will combine cell culture, live imaging of endogenous signalling reporters and cell morphology, mouse embryo experiments, and two-dimensional correlative light and electron microscopy (2D CLEM) to define how Notch signalling information is transported and interpreted during development. The post offers the opportunity to contribute mechanistic insight to a collaborative programme at the interface of developmental biology, cell biology and advanced imaging. The appointment is for three years in the first instance, with potential for extension subject to funding and project needs.

Facilities for animal research are first rate and are validated by all the appropriate Home Office licences. However, if you have any medical, social or ethical reasons for avoiding work on experimental animals, then do not apply for this post.

About the Team

The post will be based in the Manning Lab at the University of Manchester and will work as part of a collaborative Wellcome Discovery Award spanning the University of Manchester and the University of Exeter. The successful candidate will contribute to an interdisciplinary research environment that combines quantitative live imaging, developmental models and ultrastructural approaches. They will work closely with investigators and researchers across both institutions, while taking day-to-day responsibility for their research within the Manning Lab.

Key Accountabilities

- Undertaking a programme of research to determine how cytonemes mediate signalling during developmental patterning and cell-fate decisions.
- Developing research objectives and plans for own or joint research, with the assistance of a mentor if required.
- Developing robust image-analysis and quantitative workflows to extract reproducible biological measurements from microscopy data.
- Using initiative to analyse and interpret data and draw conclusions on the outcomes
- Recording, curating and sharing research data and protocols in line with good research practice, open research principles and funder requirements.
- Managing their own research activity, identifying technical challenges and working with collaborators to develop practical solutions.
- Communicating findings through project meetings, conference presentations and high-quality research publications.
- Contributing to preparing
- Contributing to the supportive day-to-day research environment of the Manning Lab, including sharing expertise and supporting students and colleagues where appropriate.
- Undertaking relevant training and contributing to University health and safety, research integrity, equality, diversity and inclusion requirements.

- Participating in public engagement activities that promote a public understanding of science with mutual agreement with team leader

- **Person Specification**

The successful candidate will demonstrate the following essential knowledge, experience, skills and qualifications. Evidence may come from research, employment or equivalent relevant experience.

Knowledge	• Strong knowledge of developmental biology or cell biology • Understanding of cell-cell signalling and the use of imaging-based approaches to address mechanistic biological questions. • Knowledge of experimental design, quantitative image analysis and the principles of reproducible research.
Experience	• High degree of proficiency in one of the following areas: a) developmental model systems b) mouse embryos c) advanced mammalian cell culture Candidates are not expected to bring expertise in every technique, but should be able to demonstrate the capacity to learn complementary methods. • Significant experience in live-cell or live-tissue fluorescence imaging and the quantitative analysis of microscopy data. • Experience in cell and molecular biology techniques such as CRISPR gene editing, immunofluorescence, qPCR, PCR, western blotting • Experience in using image analysis software or pipelines • Experience in statistics packages and software • Experience of independently planning, conducting, troubleshooting and documenting research experiments. • Experience of working effectively in an interdisciplinary team • Experience of communicating research findings through written work and oral presentations.
Skills	• Ability to generate, analyse and interpret complex experimental data with appropriate scientific rigour. • Ability to organise research activity, balance priorities and deliver work to agreed milestones. • Clear and constructive written, verbal and visual communication skills. • Ability to work both independently and collaboratively across disciplines and institutions. • A careful, methodical approach to experimental work, data management and record keeping. • Ability to troubleshoot technical problems and adapt experimental strategies in response to evidence.

Education	• Hold a PhD or due to complete PhD within 6 months in developmental or cell biology
Other	• Strong journal publication record • Must be enthusiastic and highly motivated • Willingness to work with mouse embryos and to complete all required training and competency assessment. • Willingness to travel occasionally between Manchester and Exeter and to attend project meetings or conferences as required. • Commitment to an inclusive, collaborative and respectful research culture.

Key Behaviours

One University: A 'One University' approach, whereby we break down silos and work collaboratively towards furthering the University's strategic goals, vision and values.

Freedom of Speech and Academic Freedom: Support the University's commitment to securing and actively promoting the importance of free speech and academic freedom within our community.

Service Excellence: Committed to prioritising service excellence and high performance to deliver great people-centred experiences.

Agility: Demonstrate a commitment to agility and continuous improvement by embracing change, championing innovation, and being flexible and forward thinking to adapt.

Sustainability: A sustainable approach that safeguards the University of the future by championing environmental practices, advancing digital capability, and supporting financial stability and philanthropic initiatives.

Inclusion: Support the University's ambition to create an inclusive place to work where every person matters, demonstrating a commitment to non-discriminatory conduct and respect for others, and fostering a University where people feel deeply connected to each other, to Manchester, and to the wider world.

Social Responsibility: Promote and champion the University's social responsibility ambitions to advance social inclusion, prosperous communities, better health, and cultural engagement.