

**THE UNIVERSITY OF MANCHESTER**  
**PARTICULARS OF APPOINTMENT**  
**FACULTY OF BIOLOGY, MEDICINE & HEALTH**  
**SCHOOL OF BIOLOGICAL SCIENCES**

**DIVISION OF DIVISION OF CELL MATRIX BIOLOGY AND REGENERATIVE MEDICINE**

**JOBTITLE RESEARCH ASSOCIATE**

**VACANCY REF: 024108**

**Salary:** £36,024-£44,263 per annum depending on experience

**Hours:** Full Time (1 FTE)

**Duration:** Fixed Term for 36 months

**Location:** Oxford Road

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**Enquiries about the vacancy, shortlisting and interviews:**

**Name:** Rachel Lennon

**Email:** [rachel.lennon@manchester.ac.uk](mailto:rachel.lennon@manchester.ac.uk)

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**Introduction to the University of Manchester and the Faculty of Biology, Medicine and Health**

The University of Manchester is the largest single-site university in the UK with around 38,000 students and more than 11,000 staff. We aim to become one of the top 25 research universities in the world and are committed to delivering an outstanding teaching and learning experience; contributing to the social and economic success of local, national and international communities; producing the highest calibre graduates; and developing our staff to be amongst the very best of their peers.

To achieve our ambitious goals we aim to attract and retain the very best people to work across a range of academic disciplines and support functions.

**The Faculty of Biology, Medicine and Health**

The integrated structure of our faculty enables a truly translational approach to biology, medicine and health - from pure discovery science through to clinical application and patient care. It also encourages collaborative working, enabling staff to deliver innovative, world-leading research that has a very real and positive impact on people's lives, as well as high-quality education and training to over 11,000 undergraduate and postgraduate students.

### **Our Strategic Partnerships**

The faculty has established a number of key strategic partnerships that underpin its ambitions to develop ground-breaking research.

Working alongside six local NHS Trusts, the Faculty is a key member of the <https://mft.nhs.uk/withington/research/manchester-academic-health-science-centre-mahsc/> - a federation of equal partners that unites leading healthcare providers with world-class academics and researchers. It aims to be a global centre for the delivery of applied health research and education and provide leadership for our local and regional health systems.

We also play a leading role in <https://healthinnovationmanchester.com/>, which was launched in September 2015, as part of the UK Government's decision to devolve health and social care responsibilities to Greater Manchester. HInM offers a unique opportunity to bring together health and social care, academic and life science related business resources across the region to deliver an innovative health ecosystem that can help accelerate innovation into our local health and social care systems, enhance our global scientific standing and act as a magnet for inward investment.

Key partnerships in the charitable sector include Cancer Research UK; Diabetes UK; and the Wellcome Trust; and the faculty also has research and funding links to a number of commercial organisations including Unilever, AstraZeneca, GlaxoSmithKline and Boots, who help us to bring new drugs and products to the market.

### **Working for the University of Manchester**

The University of Manchester strives to make our community a welcoming, caring and enthusiastic one, fuelling ambition with opportunities and support to help us all achieve our personal and professional goals.

Our diverse job opportunities include an attractive <https://www.staffnet.manchester.ac.uk/people-and-od/benefit/> with family-friendly policies that provide for flexible working. We care deeply about career and personal development, offering a structured induction programme for new staff, an annual performance and development review, staff training for all career stages and mentoring opportunities to support your career development.

We have a genuine commitment to <http://www.manchester.ac.uk/connect/jobs/equality-diversity/awards/> for our staff and students, and are proud to employ a workforce that reflects the diverse community we serve.

As a global institution, situated at the heart of a lively, <http://www.manchester.ac.uk/study/experience/student-life/city/>, we welcome applicants of all nationalities. To help international job applicants plan for life in the UK, we have put together some useful <http://www.staffnet.manchester.ac.uk/employment/joining-the-university/international-staff/> travel to the UK, accommodation and a number of other practical considerations.

## How do tissues connect? Elucidating a newly identified matrix adhesion system

We are recruiting a **post-doctoral research associate** to join this exciting collaborative project between Rachel Lennon at the University of Manchester, UK and David Sherwood at Duke University, USA, who were recently awarded an 8-year Wellcome Discovery Award.

### Background and objectives

Tissues are surrounded and usually separated by basement membranes. However, some tissues connect through adjoining basement membranes. The functional significance and mechanisms underlying these connections remain elusive due to a lack of experimental models and tools.

A basement membrane linkage in the *C. elegans* uterus is essential for maintaining reproductive organ integrity. Using genetic manipulation and endogenous protein tagging, the Sherwood Lab discovered an adhesion complex that connects tissues through adjoining basement membranes. The Lennon Lab have shown that the components of this complex are conserved and present at basement membrane linkage sites in multiple human tissues including kidney filtration capillaries, the blood-brain barrier, lung alveoli, the cochlea and eye. Strikingly, loss of linkage components in the kidney and cochlea results in tissue/basement membrane splitting and organ dysfunction.

With the Discovery Award funding, we will now use our complimentary approaches to explore the structure and mechanisms of this newly identified adhesion system through a platform of animal and cell systems. This research has great potential to transform our understanding of how basement membrane linkages help tissues to function and how this is disrupted through disease. In turn these discoveries will inform new approaches for protecting and repairing tissue connections, ultimately leading to improved human health.

### Location and facilities in Manchester

This role will be based in the [Wellcome Centre for Cell-Matrix Research](#), which brings together over 20 research groups and technologists with collective efforts focussed on understanding the extracellular matrix. Located at The University of Manchester, the Centre incorporates one of eight Discovery Research Platforms recently awarded by the Wellcome Trust. *The Discovery Research Platform for Cell-Matrix Biology* will address a range of practical, technological, and methodological barriers to understanding how changes in the extracellular matrix leads to tissue failure.

### Purpose of the Role

The role will be based in Rachel Lennon's lab and will join a diverse team of over 10 research staff, technical staff, and PhD students.

### Key Responsibilities, Accountabilities or Duties:

- Actively read the scientific literature relating to (and around) the project.
- Design experiments in discussion with team members.
- Perform experiments using cell and animal systems.
- To maintain accurate and complete records of all findings.
- Find solutions to problems and modify working practices.

- To present findings to colleagues.
- Supervise and train staff and students.
- To undertake any necessary training and/or development.
- To attend relevant workshops and conferences as necessary.
- To develop research collaborations within the faculty and the wider community.
- To undertake appropriate administration tasks.
- Manage the efficient and safe operation laboratory areas.
- Comply with current regulations of the School, Faculty and University.
- Any other reasonable duties commensurate with the grade to support the strategies of the School or Faculty.

### **General**

- Have an understanding of and commitment to promote the University's policies and procedures to support and promote Equality & Diversity.
- To maintain confidentiality of information in line with data protection requirements and University policy.
- To comply with Health and Safety requirements, including having an awareness of personal responsibilities to maintain a safe working environment.
- To contribute to the University's agenda for social responsibility, including sustainability.

### **Social responsibility (All Staff)**

You are expected to display commitment to the University's third strategic goal of social responsibility, where the aim is to make a positive contribution to society through our full range of teaching, research, engagements and operational activities.

### **Personal Specification**

Essential Knowledge, Skills, Experience and Qualifications:

- A PhD (or equivalent) in a biological science subject.
- Laboratory experience in cell and molecular biology.
- Knowledge of and compliance with relevant Health and Safety regulation.
- Ability to plan, organise and undertake a complex workload.
- Ability to work independently and as part of a team.
- Ability to liaise confidently and effectively with a range of individuals.
- Ability to meet deadlines.
- Ability to contribute to broader management and administrative processes.
- Competent computer skills including relevant scientific and analytical software.
- Ability to present information verbally, electronically and on paper.
- Ability to follow and deliver clear instructions and communicate effectively and politely with staff and students.
- Ability to work to a high standard with good reproducibility of results.
- Experience of publishing research.
- Commitment to continuing professional development and willingness to undertake any necessary training and deliver in-house training to others.

### **Desirable Knowledge, Skills, Experience and Qualifications:**

- Previous experience of extracellular matrix research.
- Experience of working with a range of animal experimental systems.

- Ability to use a range of microscopy systems.

**Expectations and success factors**

- To be a proactive team member and treat all colleagues and students with respect.
- To seek new knowledge and share ideas.
- To be open and responsive to change and innovation.