THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF BIOLOGY, MEDICINE & HEALTH

SCHOOL OF BIOLOGICAL SCIENCES

DIVISION OF EVOLUTION, INFECTION & GENOMICS

RESEARCH ASSOCIATE IN NEUROVASCULAR SCIENCE

VACANCY REF: BMH-024520

Salary:	Grade 6, £36,024 to £44,263 per annum, depending on relevant experience
Hours:	1 FTE
Duration:	Fixed term asap until 30 June 2025
Location:	Oxford Road, Manchester

Enquiries about the vacancy, shortlisting and interviews:
Name: Professor Tao Wang
Email: tao.wang@manchester.ac.uk

BACKGROUND

Introduction to the University of Manchester

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 by 2020 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.

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.

MANCHESTER 1824
The University of Manchester

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 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.

It also plays a leading role in Health Innovation Manchester (HInM), 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 will also has research and funding links to a number of commercial organisations including Unilever, AstraZeneca, GlaxoSmithKline and Boots, who will 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 Benefits Package 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 equality of opportunity 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, culturally diverse city, we welcome applicants of all nationalities. To help international job applicants plan for life in the UK, we have put together some useful Information on passports and visas, travel to the UK, accommodation and a number of other practical considerations.

Background of the Project
Amyotrophic lateral sclerosis (ALS) is a devastating neurodegenerative disease that primarily affect motoneurons and accompanied by cognitive dysfunction in many cases. The cellular processes involved in ALS are extremely complex. Despite intensive research, the exact molecular mechanisms have not been fully understood, thus, there is no specific nor effective treatment available. Genetic factors play an important role in the development of this condition. Professor Tao Wang's group in School of Biological Sciences have been using extensively the induced pluripotent stem cell (iPSC) models to study genetic neurovascular conditions and vascular dementia. The current project will be creating 3D *in vitro* model systems to uncover novel insights into ALS with the aim of developing future therapies.

Overall Purpose of the Job
We recruit two Research Associates to join Prof Tao Wang's lab to develop *in vitro* 3D models of genetic ALS. One of the two Research Associates should have extensive iPSC culture and

differentiation skills, good experience in conducting CRISPR/Cas9 gene editing techniques, be able to make organoids from iPSCs and familial with organ-on-chip technologies. The other role should have excellent experience in mammalian cell biology with desirable skills in iPSC technology and strong expertise in bioimaging and data analysis.

Key Responsibilities, Accountabilities or Duties

- Actively read the scientific literatures, continually update knowledge and understanding in field or specialism.
- Design and carry out experiments, optimising experimental protocols, and contribute intellectually to the project.
- Maintain accurate and complete records of all findings.
- Communicate complex information, orally, in writing and electronically.
- Contribute to the management of the project, ensuring that milestones and deadlines are achieved, and that work is completed on time and within budget.
- Produce milestone project report for the sponsor.
- Undertake any necessary training and/or development.
- Write manuscripts resulting from this work for publications.
- Assist in the smooth running of the laboratories including general housekeeping duties.
- Be involved in the supervision of student projects.

PERSON SPECIFICATION

Essential Knowledge, Skills, Experience and Qualifications:

- Have, or be about to obtain, a relevant PhD (or equivalent) in biological science subject.
- High levels of motivation and a capacity for independent work
- Specialist knowledge on neurodegenerative disease and vascular contributions to neuronal disorders
- Laboratory experience in cell biology and molecular biology
- Strong experience in iPSC/CRISPR/organoids/organ chip technologies or excellent skills in cell biology and to using a range of microscopy systems.
- Ability to work to a high standard with good reproducibility of results.
- Ability to meet deadlines.
- Good interpersonal, written, and oral communication skills
- Excellent time management and organisational skills
- Ability to work independently and as part of a team.
- Experience of publishing research papers.
- The ability to evaluate complex data.
- Ability to contribute to broader management and administrative processes.