MANCHESTER 1824
The University of Manchester

Job Description

Postdoctoral Research Associate in Proteomics

Salary: Grade 6, £38,448–£46,970 per annum, depending on relevant experience
Hours: Full time (1.0 FTE)
Duration: Fixed term for 36 months, with potential for extension
Probation: 9 months
Location: Michael Smith Building, Dover Street, Manchester
Responsible to: Matthias Trost, Professor of Proteomics

Grade	Grade 6
Department	Division of Molecular & Cellular Function, Faculty of Biology, Medicine and Health

Overall Purpose

To lead the proteomics work for a collaborative Wellcome Discovery Award investigating competitive interactions between microorganisms. The role will generate high-quality data-independent acquisition (DIA) proteomics data from complex microbial samples, operate and maintain the project's mass spectrometry platform, develop reproducible analysis pipelines, and translate findings into publications. Working with the Principal Investigator and collaborators at the Universities of Dundee, Newcastle, Edinburgh and Chicago, the postholder will help characterise proteins secreted by Type VI secretion systems and determine their modes of action.

The successful candidate will work independently while contributing to a team-science approach, supporting colleagues and trainees intellectually and practically. The start date is negotiable.

Related previous publications: https://doi.org/10.1038/s41564-018-0191-x; https://doi.org/10.1371/journal.ppat.1005735; and preprint https://doi.org/10.1101/2025.11.20.689513.

About the Team

The Trost Lab sits within the Division of Molecular & Cellular Function in the Faculty of Biology, Medicine and Health. The laboratory uses mass spectrometry-based proteomics to investigate biological systems and will deliver this project through close collaboration with the wider Wellcome Discovery Award team and research groups at the Universities of Dundee, Newcastle, Edinburgh and Chicago. The postholder will work with Professor Matthias Trost, laboratory colleagues, students and external collaborators, contributing to collaborative decision-making, training and research delivery.

Key Accountabilities

- Preparing proteomics samples and developing and applying DIA methods to complex biological samples.
- Planning and managing research activity in collaboration with the Principal Investigator and project partners.
- Calibrating, operating and maintaining a timsTOF HT or timsTOF Ultra AIP mass spectrometry system and associated liquid chromatography systems.

- Implementing and further developing reproducible proteomics data-analysis pipelines in R.
- Evaluating complex datasets and translating findings into publications in appropriate journals.
- Communicating complex information clearly in oral, written and electronic formats.
- Contributing to research proposals and applications to external bodies, including funding and contractual submissions.
- Developing objectives and proposals for individual or joint research, with mentoring support where required.
- Working closely with the Wellcome Discovery Award team and contributing to collaborative decision-making.
- Supporting the supervision and training of students and PhD researchers.
- Undertaking other duties commensurate with the grade, as directed by the Principal Investigator.

Person Specification

The criteria below describe the essential knowledge, experience, skills and qualifications required to perform effectively in the role. Desirable criteria are listed separately under Other.

Knowledge	• Substantial knowledge of mass spectrometry-based proteomics and DIA workflows. • Knowledge of proteomics analysis software, such as DIA-NN and FragPipe, and statistical computing environments. • Understanding of how to evaluate and interpret complex research data.
Experience	• Hands-on experience of operating and maintaining mass spectrometry platforms. • Significant experience using proteomics data-analysis software and a statistical computing environment. • Experience applying core laboratory techniques and high-quality benchwork. • Evidence of independently planning, optimising and progressing research and communicating findings. • At least one first-author publication in an internationally recognised journal or repository.
Skills	• Excellent technical laboratory skills. • Strong IT skills, including Microsoft Office, Prism and relevant research software. • Excellent written and verbal communication and interpersonal skills, with good written and spoken English. • Excellent time-management and organisational skills.

	• Ability to plan and prioritise work, meet deadlines, use initiative and work both independently and collaboratively. • Ability to present research effectively in written and oral formats.
Education	• A relevant PhD, equivalent qualification, or expectation of obtaining one shortly.
Other	**Desirable** • Experience in microbiology. • Proficiency in handling and analysing large omics datasets using R. • Experience with Bruker liquid chromatography–mass spectrometry systems.

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.