



Job Title: Research Associate
Salary: £39,906 to £46,049 per annum
Grade: 7
Department: Cardiovascular Sciences
Hours/Contract: Full-time, 100% FTE (5 days per week); 15-month contract
Job Family: Teaching and Research
Job Reference: 13423

Role Purpose

To lead the technical development, analytical validation, and regulatory implementation of an ultrafast liquid chromatography-mass spectrometry (LC-MS) workflow for detecting non-adherence to antihypertensive therapy. The postholder will be responsible for extending the current 10-drug proof-of-concept to a comprehensive 25-drug panel, ensuring full compliance with UKAS (ISO 15189) standards. Working within the Non-Adherence Group (NAG) and the van Geest MultiOmics Facility, the PDRA will manage the technical delivery of the project, analyze complex datasets, and contribute significantly to follow-on grant applications (e.g., MRC DPFS) and publications.

Resources Managed

Oversee the day-to-day operation and high-level maintenance of advanced LC-MS instrumentation (e.g., UHPLC-QTOF-MS, TQ-MS systems) within the van Geest MultiOmics Laboratory. Manage project-specific budgets for consumables and service contracts related to the 25-drug panel validation. Provide technical supervision and training to the project technician and students.

Main Duties and Responsibilities

- **Method Development & Optimisation:** Lead the technical transition from a 20-minute to a 2-minute LC-MS workflow for 25 drugs, optimizing chromatography (guard column configurations) and mass spectrometry parameters (MRM window scheduling).
- **Regulatory Validation:** Design and execute validation protocols meeting UKAS (ISO 15189) and ICH M10 (2022) standards, including assessments of sensitivity, linearity, precision, matrix effects, and stability.
- **Data Analysis & Benchmarking:** Conduct comparative statistical analysis between the ultrafast method and the current accredited gold-standard to ensure equivalent analytical performance.
- **Project Management & Dissemination:** Oversee project milestones, manage technical reporting to the grant body, and lead the drafting of peer-reviewed manuscripts and conference presentations.
- **Staff Supervision & Support:** Provide day-to-day supervision and technical guidance to the project technician, ensuring laboratory standards and safety protocols are maintained.





Internal and External Relationships

Internal

- Working closely with all staff and students within the team, including research students, post-doctoral research associates, and technicians
- Interacting with University and UHL Trust staff in relation to assay translation.

External

- Liaising with hospital-based staff relevant to NAG.
- Liaising with manufacturers and vendors

Planning and Organising

- Manage the 17-month project workplan, ensuring key milestones (e.g., full panel validation) are met to support the follow-on grant applications.
- Coordinate multi-center interactions for method setup and verification across the wider NHS network (Birmingham, Manchester, Dundee).
- Organise complex analytical batches to maximize instrument uptime

Qualifications, Knowledge and Experience

Essential:

- PhD in Analytical Chemistry, Biochemistry, or a related discipline with a focus on Mass Spectrometry*
- Expertise in targeted chromatographic and mass spectrometry (e.g., UPLC, TQ-MS, QTOF-MS) method development and troubleshooting*
- Practical experience in bioscience laboratories*
- Experience in bioanalytical method validation according to ISO 15189 or ICH guidelines*
- Handling and processing biological samples (blood/urine)*

Desirable:

- Experience using Waters MS systems/software
- Familiarity with small molecule assay development
- Familiarity with automation
- Experience working within a UKAS-accredited laboratory environment.
- Experience with R
- Experience working with SOPs and assay validation
- Experience in drafting successful grant applications or technical reports for funders like UKRI/MRC

Skills, Abilities and Competencies

Essential

- Ability to lead the development, optimisation, and troubleshooting of complex MS analytical methods*





- Advanced statistical data analysis skills, including the use of software for method comparison and validation (e.g., Bland-Altman, Passing-Bablok).*
- Proven ability to manage project timelines and milestones independently, ensuring delivery of grant objectives*
- Competency in preparing standards and solutions
- Effective time management and organisational skills*
- Excellent written communication skills for the preparation of high-quality manuscripts, technical reports, and future grant applications*
- Able to work with limited supervision, escalating issues when appropriate*
- Strong interpersonal and leadership skills, with the ability to supervise junior staff/technicians and collaborate with multi-center clinical partners*
- Demonstrates inclusive, inspiring, and responsible behaviour in line with University values

Desirable

- Experience in automated sample preparation or high-throughput clinical laboratory workflows.
- Knowledge of the pharmacology of medications and clinical pathways.
- Evidence of engagement in public or clinical dissemination of research findings.

**Criteria to be used in shortlisting candidates for interview*

Reason for Fixed Term Contract

The reason for the fixed term contract is stated in section 1.9 in the summary of contractual terms in your contract of employment.

Criminal Declaration

If you become an employee, you must inform your manager immediately, in writing, if you are the subject of any current or future police investigations/legal proceedings, which could result in a criminal offence, conviction, caution, bind-over or charges, or warnings.

Supporting University Activities

As a University of Leicester citizen, you are encouraged to support key university activities such as clearing, graduation ceremonies, student registration and recruitment open days. We encourage all staff as citizens to work flexibly across the University if required. If supporting these activities is likely to affect your workload, please speak to your line manager in the first instance

University Values





Inclusive - We are diverse in our makeup and united in ambition. Our diversity is our strength and makes our community stronger.

Inspiring - We are passionate about inspiring individuals to succeed and realise their ambitions. We challenge our community to think differently, to get involved, and to constantly embrace new ideas.

Impactful - As Citizens of Change we will generate new ideas which deliver impact and empower our community

Freedom of Speech

The University is committed to upholding freedom of speech and academic freedom within the law throughout our recruitment processes. We ensure that all candidates are considered based on merit and suitability for the role, without regard to their lawful viewpoints or the expression of challenging or controversial ideas. Our recruitment policies and practices are designed to protect applicants from discrimination or adverse treatment on the basis of their opinions, and to foster an environment where open debate and diverse perspectives are valued as essential to our academic mission.

Equity and Diversity

We believe that equity, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equality support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equality, diversity and inclusion.

