

## JOB DESCRIPTION

**Job Title:** Post Doctoral Research Fellow in Microbiology

**Grade:** AC2

**Department:** NRI - Food and Markets Department

**Responsible to:** Senior Lecturer in Food Safety

**Responsible for:** N/A

**Key Contacts:** Lecturer in Food Science, Head of Department and Director of NRI

**Standard Occupational Classification (SoC code):** 2112 (Biological Scientist)

**Non-Contractual Nature of Role Profile:** This role profile is non-contractual and provided for guidance. It will be updated and amended from time to time in accordance with the changing needs of the University and the requirements of the job.

### PURPOSE OF ROLE

A position is open for a Post Doctoral Research Associate (PDRA) in Microbiology based at the Natural Resources Institute, University of Greenwich Medway Campus. The successful candidate will join an MRC-SA/MRC-UK funded project whose objective is to address and understand the role that the water, wastewater, animal waste systems and food, plays in the transmission of antimicrobial resistance (AMR) through an Integrative One Health Surveillance for Antimicrobial Resistance (IOSAR) - Tracking AMR from farm to community. This project aims to develop an innovative approach to integrated AMR surveillance of potential hotspot microenvironments to aid the detection of antimicrobial resistant bacteria associated with human, animal, and environmental health.

Once appointed the PDRA will spend 50% of their time involved in research activities associated with the IOSAR project. They will be using a variety of molecular and microbiological approaches, including microbial culturing, phenotypic antibiotic testing, molecular biology, whole genome sequencing and genomic analyses. The post holder will be expected to document and maintain lab-records to a high standard. Travel will be required for local field-site visits and occasional travel to present research to external audiences.

The remaining 50% of their time will be to support teaching activities on the Applied Food Safety and Quality Management MSc, where they will be expected to contribute to teaching, marking and supervision of MSc project students.

This is a fixed-term position until April 2028 based at NRI on the University of Greenwich's Medway Campus. We particularly welcome applicants who are available for an immediate start.

## **KEY ACCOUNTABILITIES:**

### **Role Specific:**

- Use of microbiological approaches to lead the delivery of the IOSAR research project, including preparation of agar plates and liquid media, microbial culturing, phenotypic AMR testing, DNA extraction, Whole Genome Sequencing analysis.
- Presentation of research to internal and external audiences via verbal updates and presentations.
- Deliver high-quality lectures and support laboratory-based teaching.
- Contribute to the assessment of students by marking coursework, reports, exams, and practical assignments.
- MSc project student supervision.

### **Team Specific:**

- Ensure microbiology labs function as required at all times and refer specific problems to Research Facilities Manager.
- Maintain protocols and procedures to ensure compliance with University of Greenwich Health & Safety regulations.
- Ensure facilities and procedures conform to HSE requirements for BSL2 laboratories.
- Train and supervise postgraduate students in microbiology techniques and pass on experience to enable them to conduct research and learn new skills.

### **Generic:**

- Planning and working to deadlines.
- Working independently and as part of a team.
- Recording data clearly and accurately.
- Communication of progress and issues to team / management.

### **Managing Self:**

- We are seeking a highly motivated individual who can demonstrate the ability to work independently while contributing effectively within a collaborative team environment.
- The successful candidate will be expected to manage their own workload, meet deadlines, and take initiative in both research and

teaching activities. Flexibility is essential, as the role involves balancing responsibilities across laboratory work, field visits, data analysis, and postgraduate teaching.

- The postholder will work closely with two Principal Investigators (PIs) and engage with a wider international research consortium. This requires strong interpersonal and communication skills, as well as the ability to adapt to different working styles and cultural contexts. The candidate should be comfortable navigating complex project demands, responding to evolving priorities, and maintaining high standards of documentation and reporting.
- We value individuals who are proactive, solution-focused, and capable of managing competing tasks with professionalism and integrity. The ability to work autonomously while remaining aligned with team goals and project milestones is critical.
- This role offers an exciting opportunity to contribute to impactful research in antimicrobial resistance (AMR) and to play a key role in delivering high-quality teaching within a dynamic academic setting.

**Core Requirements:**

- Adhere to and promote the University's Equality and Diversity policies.
- Ensure compliance with Health & Safety regulations.
- Support and promote the University's Sustainability policies, including the Carbon Management Plan, and carry out duties in a resource efficient way, recognising the shared responsibility of minimising the university's negative environmental impacts wherever possible

**Additional Requirements:**

- Undertake any other duties as requested by the [e.g. PVC, FOO etc.] or their line manager, commensurate with the grade. This is a professional, demanding role within a complex organisation with an ambitious strategic plan and agenda for change. The role holder will be expected to show flexibility in working arrangements, including working hours, to ensure that NRI delivers the required level of service.

**KEY PERFORMANCE INDICATORS:**

- Delivery of work-packages on funded research project.
- Maintenance of detailed and accurate lab books.
- Reporting of issues and progress in a timely fashion.
- Support teaching activities

**KEY RELATIONSHIPS (Internal & External):**

- Academic colleagues
- Head of Department
- Research group heads
- NRI administrative and technical staff
- NRI partners and collaborators
- University of Greenwich students
- Project Partners

## **PERSON SPECIFICATION**

### **EXPERIENCE:**

#### **Essential Criteria**

- Background in AMR research.
- Experience in microbiological techniques, including microbial culturing and phenotypic antibiotic testing.
- Expertise in molecular biology techniques, such as PCR, qPCR, and DNA/RNA extraction.
- Experience with whole genome sequencing and genomic analysis.
- Experience in data analysis and interpretation relevant to microbiology and AMR.
- Experience in academic teaching, including lecturing, marking, and student supervision.

#### **Desirable Criteria**

- Experience in environmental microbiology, particularly water, wastewater, and animal waste systems.
- Experience in interdisciplinary research involving human, animal, and environmental health sectors (One Health approach).
- Experience with metagenomics and high-throughput sequencing approaches.
- Familiarity with bioinformatics tools for AMR gene detection and microbial community analysis.
- Knowledge of food microbiology and food safety regulations.
- Previous experience in supervising MSc or undergraduate research projects.
- Experience in securing research funding or contributing to grant applications.

### **SKILLS:**

#### **Essential Criteria**

- Ability to work effectively within a team and under own initiative.
- Excellent organisational skills.
- Ability to multi-task and manage competing priorities to agreed deadlines.
- Good analytical skills, problem solving and judgement.
- Effective interpersonal and oral communication skills.
- Ability to document and maintain laboratory records to a high standard.
- A high standard of written and spoken English.

**Desirable Criteria**

- Programming languages e.g. BASH, Python, Perl, R.
- Driver's license.

**QUALIFICATIONS:****Essential Criteria**

- PhD in Microbiology, Molecular Biology or a related discipline.

**Desirable Criteria**

- Track record in publication of research.

**PERSONAL ATTRIBUTES:**

- Desire to expand skills base.
- Willingness to travel for field-site visits and to present research at external meetings.

**Essential Criteria**

- We are looking for people who can help us deliver the [values](#) of the University of Greenwich: Inclusive, Collaborative and Impactful.