

JOB DESCRIPTION

Job Title:	Molecular microbiologist	Grade:	AC1
Department:	Natural Resources Institute	Date of Job Evaluation:	
Role reports to:	Plant & Insect Molecular Biologist		
Direct Reports			
Indirect Reports:	Head of AHED,		
Other Key contacts:	Laboratory facilities staff		
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: Screen samples from rodents, pigs and poultry using molecular methods to identify and characterise viral and bacterial pathogens

The Natural Resources Institute (NRI) requires a researcher in molecular biology to help in detecting and identifying viruses and bacteria present in rodents, pigs and poultry to understand the role of rodents as potential reservoirs, vectors and mechanical spreaders of disease to livestock and poultry populations. Samples collected on farms in Germany, Poland, Belgium, the Netherlands and the UK will be screened at NRI's state of art molecular biology laboratories. Molecular identification of viral and bacterial pathogens will be supported by serological work carried out by colleagues in Poland.

The outcomes of the molecular work will assist in other project research activities on farms to understand transmission dynamics among animals using novel Bluetooth tracking technology and to develop more sustainable rodent control technologies and practices.

This post is for an early career scientist with a background in molecular biology and disease molecular diagnostics. Specifically the candidate will be involved in:

1. Sample preparation
2. Extraction of DNA and RNA from different types of tissue from rodents, pigs and poultry.
3. Testing samples using polymerase chain reaction (PCR)-based methods.
4. Using high-throughput sequencing technologies to detect and characterise viral and/or bacterial pathogens present in samples.
5. Developing and optimizing diagnostic tests for viral and bacterial pathogens.
6. Analyse the results and present the findings to other project partners.
7. Working as part of a multidisciplinary team of molecular biologists, veterinarians, ecologists and European research colleagues based in Germany, Poland, Belgium and the Netherlands.

The role does not require international travel. However, opportunities to travel to partner countries for training, coordination meetings and conferences are possible.

KEY ACCOUNTABILITIES:**Team Specific:**

- Carry out scientific research to a high standard
- Meticulous laboratory work following protocols and risk assessments
- Sample management and maintenance
- Data archiving, interpretation and analysis
- Assist in field collection of animal samples when lab duties permit
- Participating in project progress and planning meetings

Generic:

- Maintain high professional standing within the discipline and to develop further their research skills
- Lead and contribute to manuscripts for refereed academic journals
- Communicate with the general public and scientific community through workshops, conferences and other organised events
- Represent the University at project meetings with partners
- Take part in Faculty activities as required

Managing Self:

- Be able to work effectively as part of a multicultural scientific team
- Be able to work both as part of a team and independently
- Be able to coordinate with collaborators, technicians and researchers to perform the experiments and analysis required
- Be familiar with key literature and be able to identify literature in areas that are less familiar
- Work independently to achieve deadlines
- Regularly communicate progress to identified parties

Core Requirements:

- Adhere to and promote the University's policies on Equality, Diversity and Inclusion and Information Security;
- Ensure compliance with Health & Safety and Data Protection Legislation;
- 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:

Travel to partner meetings in the UK or elsewhere in Europe

Undertake any other duties as requested by their line manager, commensurate with the AC1 grade.

Participation in the university's Early Career Researcher programme

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 to UKRI.

KEY PERFORMANCE INDICATORS:

- Meet project deadlines, including deadlines for sample processing, data preparation and analysis, publications, presentations, research group meetings within agreed timelines and targets
- Development of and familiarity with relevant literature
- Publication of research findings in international peer-reviewed journals
- Work effectively with project partners to produce research outputs

KEY RELATIONSHIPS (Internal & External):

- Academic colleagues
- Head of Department
- Research Group heads
- NRI administrative and technical staff
- Project partners in Germany, the Netherlands, Poland, Belgium
- Research community in area of subject specialism

PERSON SPECIFICATION

Essential	Desirable
<p>Experience</p> <ul style="list-style-type: none"> • Experience with working in a molecular lab • Experience of general molecular biology techniques • Bioinformatic skills, including sequence analysis and phylogeny • Experience of working within a multi-disciplinary team environment • Excellent oral and written communication skills • Computer literacy including word processing, spreadsheets, and databases <p>Skills</p> <ul style="list-style-type: none"> • Nucleic acid extractions • PCR-based amplification techniques • Statistical analyses 	<p>Experience</p> <ul style="list-style-type: none"> • Molecular biology skills to identify infectious diseases in animal tissues • Experience in designing molecular tests for pathogens. • Publishing peer-reviewed papers • Trapping and handling small mammals to collect tissue samples for molecular and serological screening <p>Skills</p> <ul style="list-style-type: none"> • Preparation of libraries for high throughput sequencing. • Handling large sequence datasets from high-throughput sequencing

Qualifications

- PhD in a relevant area

Personal attributes

We are looking for people who can help us deliver the [values](#) of the University of Greenwich: Excellence, Determination, Inclusivity, Ambition and Creativity