

## JOB DESCRIPTION

<b>Job Title:</b>	Research Technician	<b>Grade:</b>	SG5
<b>Department:</b>	NRI - Agriculture, Health, and Environment Department	<b>Date of Job Evaluation:</b>	May, 2022
<b>Role reports to:</b>	Research Facilities Manager, AHED		
<b>Direct Reports</b>	N/A		
<b>Indirect Reports:</b>	N/A		
<b>Other Key contacts:</b>	University professional services staff AHED academic staff and students		
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 Research Technician at the Natural Resources Institute, based at the Medway Campus of the University of Greenwich. The successful candidate will join a HortQFLN project (<https://foodlossnetwork.com>) focussed on the development and optimisation of novel isothermal molecular diagnostic assays for fungi causing storage rots of fruit crops in the UK and worldwide.

Once appointed, the post holder will support the research team in a wide variety of molecular and microbiological approaches. These include microbial culturing, DNA extraction, PCR, RPA (Recombinase Polymerase Amplification) and genomic analyses. The research technician will also be involved in general lab management, including maintaining lab supplies and stocks, maintaining and updating protocols, and interacting with collaborating laboratories.

Where required, the Research Technician post will provide technical support to teaching activities and research projects across the Agriculture Health and Environment Department. They will facilitate effective function of the molecular laboratories at NRI whilst adhering to correct procedures, including health and safety guidelines and plant-health licenses.

### **KEY ACCOUNTABILITIES:**

#### **Role Specific:**

- Use of molecular biology approaches to support delivery of research projects, including DNA extraction, PCR and Sanger Sequencing.
- Use of microbiological approaches to support delivery of research projects, including preparation of agar plates and liquid media, culture maintenance / propagation, spore preparation for pathogenicity assays.
- Optimisation of isothermal detection techniques, particularly Recombinase Polymerase Amplification (RPA) and adaptation of the assay to Lateral Flow Devices (LFDs).
- Undertaking pathogenicity assays, including timecourses of fruit infection by fungal

spores under controlled conditions.

- Active contribution to lab meetings via verbal updates and presentations.

**Team Specific:**

- Ensure molecular labs function as required at all times and refer specific problems to Research Facilities Manager.
- Maintain protocols and procedures to ensure compliance with Health & Safety regulations.
- Ensure facilities and procedures conform to DEFRA licence requirements, where relevant.
- Train and supervise undergraduate and postgraduate students in molecular biology 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.

**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:**

- Timely execution of molecular biology experiments.
- Maintenance of detailed and accurate lab books.
- Reporting of issues and progress in a timely fashion.

**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

<b>PERSON SPECIFICATION</b>	
<b>Essential</b>	<b>Desirable</b>
<p><b>Experience</b></p> <ul style="list-style-type: none"> <li>• Experience of conducting routine molecular biology skills such as DNA extractions, PCR, gel electrophoresis and Sanger sequencing.</li> <li>• Experience of microbiological approaches including aseptic technique, media preparation and culturing micro-organisms.</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Ability to work effectively within a team and under own initiative</li> <li>• Excellent organisational skills</li> <li>• Ability to multi-task and manage competing priorities to agreed deadlines</li> <li>• Good analytical skills, problem solving and judgement</li> <li>• Excellent, effective interpersonal and oral communication skills</li> <li>• A high standard of written and spoken English</li> </ul> <p><b>Qualifications</b></p> <ul style="list-style-type: none"> <li>• BSc or equivalent in a biological or molecular sciences</li> </ul> <p><b>Personal attributes</b></p> <ul style="list-style-type: none"> <li>• We are looking for people who can help us deliver the <a href="#">values</a> of the University of Greenwich: Inclusive, Collaborative and Impactful.</li> </ul>	<p><b>Experience</b></p> <ul style="list-style-type: none"> <li>• Plant pathology and/or working with fungi.</li> <li>• Working with quarantine pests and pathogens.</li> <li>• Primer design.</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Understanding isothermal diagnostic approaches including RPA and LAMP.</li> <li>• Ability to handle Sanger sequence data.</li> <li>• Bioinformatic skills: e.g. MEGA, Geneious or programming languages.</li> </ul> <p><b>Qualifications</b></p> <ul style="list-style-type: none"> <li>• N/A</li> </ul> <p><b>Personal attributes</b></p> <ul style="list-style-type: none"> <li>• Desire to expand skills base.</li> <li>• Reliable and responsible.</li> <li>• Interest in use of whole genome sequence data to develop novel diagnostic assays.</li> </ul>