

JOB DESCRIPTION

Job Title: Research Technician (Molecular Biology and Microbiology)

Grade: SG5

Department: NRI – Agriculture, Health and Environment

Responsible to: Research Facilities Manager, AHED

Responsible for: N/A

Key Contacts: N/A

Standard Occupational Classification (SoC code): N/A

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

The Research Technician at the Natural Resources Institute, will be based at the Medway Campus of the University of Greenwich. The successful candidate will join a BBSRC-funded project focussed on understanding the fungal pathogen *Botrytis cinerea* and developing new strategies to manage this important disease in strawberry cropping. The Research Technician will support Post-Doctoral research staff in identification of new sources of crop resistance, development of molecular diagnostic tools for in-field disease identification and exploring the efficacy of biocontrols application to control disease.

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, preparation of material for genome sequencing and undertaking pathogenicity assays. 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

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 Animal and Plant Health Agency 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.

Managing Self:

- 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.
- Undertaking pathogenicity assays, upon plant material (e.g. fruit, leaf, flower or whole-plant infection) by fungal spores under controlled conditions.
- Active contribution to lab meetings via verbal updates and presentations.

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.
- Adhere to current legal requirements and best practice relating to digital content and accessibility, including Web Content Accessibility Guidelines when creating digital content.

Additional Requirements:

Undertake any other duties as requested by the line manager or appropriate senior 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 the 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

PERSON SPECIFICATION

EXPERIENCE:

Essential Criteria

- Experience of conducting routine molecular biology assays e.g. DNA extractions, PCR, gel electrophoresis and DNA (Sanger) sequencing
- Experience of microbiological approaches including aseptic technique, media preparation and culturing micro-organisms

Desirable Criteria

- Plant pathology and/or working with fungi
- Working with quarantine pests and pathogens
- Bioinformatic experience including processing DNA (Sanger) sequencing data and undertaking Phylogenetic analyses
- Use of isothermal DNA amplification approaches e.g. LAMP, RPA

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
- A high standard of written and spoken English

Desirable Criteria

- Ability to handle DNA (Sanger) sequence data.
- Bioinformatic skills: e.g. MEGA, Geneious or programming languages

QUALIFICATIONS:

Essential Criteria

- BSc or equivalent in the biological sciences

Desirable Criteria

- N/A

PERSONAL ATTRIBUTES:

Essential Criteria

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

Desirable Criteria

- Desire to expand skills base
- Reliable and responsible