University of Nottingham
UK | CHINA | MALAYSIA

Role profile

Job title	Research Fellow	Job family and level	R&T Level 4
School/ Department	Biosciences/ Plant & Crop Sciences	Location	Sutton Bonington Campus

Purpose of role

With this project, we propose to undertake the challenge of developing a holistic platform that recreates in vivo molecular and 3D-structural characteristics of main plant tissue layers, for the study and prediction of key aspects of viral tropism using unique labelled viruses comprising main viral families and novel machine learning pipelines. The role involves working within a team designing and conducting experiments using relevant techniques, analysing and writing reports and publications.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	**% time per year**
1	**Assembly and optimization of cell-type models** • Preparing protoplast from different plant organ cell-types to be added to 3D-printed scaffolds to create cell-type models. • Use Fluorescence activated cell sorting to separate different types of protoplasts. • Characterize cellular identity of the different models using RT-PCR.	40%
2	**Inoculation of the cell-type models** • Use biologic delivery system to inoculate viruses into cell-type models.	15%
3	**Data collection from the models** • Use confocal microscopy to image the progression of viral infection in different cell type models. • Collect samples from cell type models to perform RNA sequencing experiments.	15%
4	**Other research activities** • To independently design, plan, execute, and analyse the experiments pertaining to the project.	10%
5	**Dissemination of research results and interaction with industry partners** • To significantly contribute to the writing up of research papers, reports and presentation of research findings at high level	5%

	international conferences to maintain University recognition; as well as engaging with industrial collaborators and partners.	
6	**Support junior members of the group** • To assist in the supervision and training of undergraduate or postgraduate students, and technical staff as appropriate.	5%
7	**Engage in Professional Development activities** • To continue developing professional research skills, keeping knowledge up to date through attendance at seminars and conferences, and initiate internal/external collaborations where appropriate.	5%
8	**Adhere to H&S regulations** • To contribute to the safe and well-organized functioning of the laboratory.	5%

Person specification

	Essential	**Desirable**
Skills	• Demonstrable laboratory skills including confocal analysis, and transcriptomics. • Careful experimentalist with high attention to detail. • Excellent oral and written communication skills including the ability to clearly communicate complex information. • Excellent problem solving and organisational skills. • Ability to build relationships and collaborate with others. • Ability to work independently and as part of a team. • Ability to write high quality reports and high impact papers for publication.	• Demonstrable ability to analyse and interpret data, evaluate and criticize texts, bring new insights. • A strong commitment to interdisciplinary research. • Flexible, proactive and dedicated approach.
Knowledge and experience	• Experience in scientific writing of reports and peer reviewed publications. • Evidence of sufficient breadth or depth of research methodologies and techniques to work in cell biology and development. • Strong background in plant biology, plant-microbe interactions, and confocal imaging of reporters.	• Experience with grant writing and student supervision. • Experience in transcriptomics. • Experience in protoplast preparation. • Cell biology experience. • Image analysis experience.

	• A relevant publication record in root biology and transcriptomics	
Qualifications, certification and training (relevant to role)	• PhD in Plant biology/plant molecular biology/plant Biotechnology or related biological science.	

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

Valuing people	Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.
Taking ownership	Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.
Forward thinking	Driven to question the status quo and explore new ideas, supporting the team to "lead the way" in terms of know-how and learning.
Professional pride	Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.
Always inclusive	Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

Key relationships with others