### Purpose of role

As part of its ambitious Research Strategy, the University is making a significant investment in its research capacity and capability through six multi-million-pound cross-disciplinary Beacons of Excellence (Beacons). Beacons will represent a critical mass, undertaking a coherent and integrated portfolio of research, doctoral training and knowledge exchange activities in a well-defined research area, carrying out discovery and challenge-led research and related activities, with an objective to be demonstrably amongst the best in the world. The Future Food Beacon has a mission to deliver world-class research to help address the challenge of providing sufficient quantities of nutritious food sustainably and equitably to a growing world population within a changing environment. The Beacon is proactively engaging with the University research ecosystem within and across Faculties, and with stakeholders nationally and internationally.

This two-year, full-time role will be part of a Rhizosphere Microbiome project on understanding the molecular basis and function of microbiome assembly in different plant species, and is part of a larger rhizosphere group within the Future Food Beacon.

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<th><strong>Main responsibilities</strong></th>
<th><strong>% time per year</strong></th>
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<tr>
<td><strong>Bioinformatic Data Analysis and Experimental Work</strong></td>
<td>70%</td>
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<td>▪ Using R, to analyse the microbiome structure in plants and extract pattern of bacterial prevalence, co-occurring network inference, keystone species identification, etc.</td>
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<td>▪ Design and conduct experiments in the area of plant-microbe interactions to validate hypotheses related with the microbiome assembly across a collection of plant species</td>
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<td>▪ Build and characterise bacterial collections</td>
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<td>▪ Creating resources (e.g. data-base with the plant phenotypes and RNASeq data)</td>
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<td>▪ Communicating results through lab talks and seminars</td>
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<td><strong>Coordination of Collaborative Efforts and Lab Management Duties</strong></td>
<td>20%</td>
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<td>▪ Engage with lab members and establish a collaborative platform on this project</td>
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| | Liaise with researchers of all levels, partners, industry and potential new collaborators  
*Lab Management duties:*  
- Health & Safety  
- Induction  

| 3 | **Manuscript Drafting and Supervision of students and staff**  
- Compile all results into an article. Intention for this to be submitted to a relevant, high impact scientific journal by the end of the project term.  
- Supervision of visitors, summer, UG and PG students in lab  
- Commenting on reports by students and researchers | 10% |
## Person specification

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<th>Essential</th>
<th>Desirable</th>
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| **Skills** | | ▪ Experience reviewing a diversity of plant microbiome and ionomic literature to make functional predictions based on novel microbiome data across species.  
▪ RNASEq and 16S rDNA data analysis experience  
▪ Graph theory experience  
▪ Ability to discuss scientific information with a broader, non-specialised audience  
▪ Excellent written communication skills, including the ability to communicate with clarity on complex information and draw relevant conclusions. |
| ▪ Bioinformatic skills in R pipelines.  
▪ Proven experience managing large metagenomic data and 16S rDNA data.  
▪ Skills in microbiology, plant biology, ionomics and library preparation for RNASEq and metagenomic analysis  
▪ Scientific writing experience, including the publication of at least one first author journal article in a generalist (non-plant biology-specific) journal  
▪ Excellent inter-personal skills, open to collaborative working and forming new international relationships  
▪ Excellent verbal scientific communication skills, including experience presenting at international scientific conferences  
▪ Ability to prioritise and meet deadlines | |
| **Knowledge and experience** | | ▪ Proven ability with demonstrated success in drafting manuscripts.  
▪ Proven experience in plant-microbe interactions field. |
| ▪ Extensive plant-related research experience  
▪ Demonstrated experience working with international partners | |
| **Qualifications, certification and training (relevant to role)** | | ▪ PhD or previous postdoc project based at least partially on Plant-microbe interactions or plant nutrition |
| ▪ Degree and a PhD (or close to completion) in Biochemistry, Bioinformatics, Plant Biology or a relevant field | |

The University of Nottingham is focused on embedding equality, diversity and inclusion in all that we do. As part of this, we welcome a diverse population to join our work force and therefore encourage applicants from all communities, particularly those with protected characteristics under the Equality Act 2010.
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