

WESTERN SYDNEY UNIVERSITY



POSITION DESCRIPTION

Position Title:	Postdoctoral Research Fellow in Environmental Microbiome	
Classification:	Academic level A	
Application close.:	15 November	
Reporting to title & establishment / position No.:	Prof Brajesh Singh	
School/Office:	Hawkesbury Institute for the Environment	
Division:	Research and Development	
Employment Type:	Fixed-term – 2 years	FTE: Full-time (1.0 FTE)

Context

Position Purpose

The Institute is seeking to appoint a dynamic researcher to a Level A position. This full-time Postdoctoral Fellowship, initially for two years, will focus on research related to environmental microbiology (plant, soil and water) microbiomes and their response to biotic and abiotic stressors. The overall project seeks to identify (a) the linkage of plant and soil microbiomes to plant physiological conditions, crop productivity and soil health, and (b) the response of soil and water microbiomes to chemical stress.

The successful applicant will conduct research examining how management practices impact the environmental microbiome and consequences for plant productivity and environmental quality. The project will use a range of analytical procedures including state-of-the-art next-generation sequencing, and environmental (soil and water) and plant health measures to characterise how these variables impact microbiomes and their activities. The successful applicant will have expertise in the broad areas of microbiomes and be able to analyse data from next-generation (amplicon and shotgun) sequencing. Statistical skills for analysing microbiome data are highly desirable, but relevant training will be provided to candidates with excellence in other areas of the project. The successful candidate will be expected to participate in training relevant to the position and communicate the findings of the project via journal publications and presentations at scientific conferences and to non-scientific audiences.

Major Responsibilities

- Conducting independent research and meeting agreed research objectives relating to the plant and environmental microbiomes and consequences for plant

Accountabilities

- Execute methods and achieve defensible scientific results
- Prepare manuscripts for publication, and

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productivity and environmental quality.

- Developing and applying analytical methods for quantifying biological health in plants and environments.
- Contributing to the day-to-day development of research projects as part of an interdisciplinary team, including preparation of reports and manuscripts for publication in refereed journals and preparing and presenting research findings at national and international seminars, conferences and workshops.
- Communicating and coordinating with other team members (including external collaborators), technical officers and research staff associated with the Institute's laboratories and field-based facilities.
- Participating in student research supervision and providing advice to students where appropriate.
- Ensuring the Institute's approach to managing research data conforms to the Australian Code for the Responsible Conduct of Research, and University policies and guidelines regarding research data management and eResearch.

reports relevant to the funding agreement

- Meet the delivery of milestones set out in the funding agreement
- Develop and apply methods and achieve defensible/publishable scientific results
- Produce and analyse data that meets standards relevant to the research
- Liaise with research partners to maximise the outcomes
- Liaise with other staff, students, and the technical team
- Collect and maintain data in accordance with the relevant standard and develop a data management plan in conjunction with the Institute's Data Manager
- Supervise or co-supervise undergraduate student Summer Projects, BSc Honours students, and/or Higher Degree Research students
- Ensure a safe and equitable working environment

Selection Criteria

1. A Ph.D. or equivalent professional experience (e.g. progress towards the completion of or recently submitted Ph.D. thesis) in a research field related to plant or environment (soil or water) microbiomes
2. Demonstrated research expertise in the ability to analyse and interpret microbiome (both amplicon and shotgun sequencing) and molecular biology data.

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3. Demonstrated ability to write manuscripts for publication and a track record of publications appropriate for the applicant's career stage;
4. Willingness to be trained in novel analytical procedures and to conduct experimental work in laboratory, glasshouse and field situations;
5. Demonstrated quantitative and computer skills, including demonstrated knowledge of statistics software packages, use of library databases and internet searches, and graphical software for data presentation;
6. Excellent written and oral communication skills in the English language;
7. Demonstrated organisational skills and interpersonal skills including the ability to be self-directed, but also to work effectively and harmoniously as part of a research team.

For more information

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