



POSITION DESCRIPTION

School of Biosciences
Faculty of Science

Postdoctoral Research Fellow - Plant Root Biology

POSITION NO	0045977
CLASSIFICATION	Level A
SALARY	\$69,148 - \$93,830 p.a. (PhD entry level \$87,415 p.a.)
SUPERANNUATION	Employer contribution of 9.5%
WORKING HOURS	Full-time
BASIS OF EMPLOYMENT	Full time (fixed term) position available for 2 years
OTHER BENEFITS	http://about.unimelb.edu.au/careers/working/benefits
HOW TO APPLY	Online applications are preferred. Go to http://about.unimelb.edu.au/careers , select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY	Professor Ute Roessner Tel +61 3 903 53635 Email: u.roessner@unimelb.edu.au <i>Please do not send your application to this contact</i>

For information about working for the University of Melbourne, visit our website:
about.unimelb.edu.au/careers

Position Summary

The research fellow will work under the supervision of Professor Ute Roessner and will be experienced in the field of plant root biology and plant biochemistry. The aim of the project is to decipher the function of plant-root microbe interactions in nutrient and water uptake and abiotic stress response and adaptation using biochemical and cell biology approaches, including microscopy, transcriptomics and metabolomics.

The research fellow's primary responsibility will be to develop and apply molecular, imaging and biochemical approaches to understand how roots and beneficial microbes interact in order to enhance nutrient and water uptake under challenging environmental conditions. A number of postgraduate students are involved in this project, therefore, co-supervision of these students is expected. In addition, the fellow will be a member of an international research consortium and will be required to coordinate activities and collaborate with researchers across the consortium.

1. Key Responsibilities

1.1 RESEARCH AND RESEARCH TRAINING

You are expected to significantly contribute towards the research effort of the team and to develop their research expertise with an increasing degree of autonomy;

- ▶ Under the guidance and support of Senior Academic staff conduct high-level, internationally competitive research, resulting in publications in high impact journals;
- ▶ Present research findings at internal research meetings and national and international conferences;
- ▶ Coordinate international root research consortium activities;
- ▶ Undertake administrative functions and obligations primarily connected with the area of research;
- ▶ Contribute to the preparation of research proposal submissions to external funding bodies;
- ▶ Contribute to the co-supervision and training of postgraduate students involved in the project;
- ▶ Present research to the public to elevate public awareness of educational and scientific developments, and promote critical enquiry and public debate within the community

1.2 TEACHING AND LEARNING

- ▶ Contribute to undergraduate and postgraduate teaching in the plant science field, within the boundaries of research only positions;

1.3 LEADERSHIP AND SERVICE

- ▶ Actively participate at School meetings and with guidance, contribute to planning activities or committee work to support capacity building in the School/discipline;
- ▶ Effective demonstration and promotion of University values including diversity and inclusion and high standards of ethics and integrity;

1.4 OTHER DUTIES

- ▶ Perform other tasks as requested by the supervisor or the Head of Department;
- ▶ Actively participate in the University Professional Development Framework;
- ▶ Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 4.

2. Selection Criteria

2.1 ESSENTIAL

- ▶ Completion of a PhD in plant biochemistry/biology or relevant subjects;
- ▶ Thorough knowledge of modern techniques in omics including metabolomics, transcriptomics, imaging and microscopy techniques and/or molecular biology and their application to plants;
- ▶ Proven ability to undertake scientific research independently;
- ▶ Ability to maintain high quality records;
- ▶ Demonstrated experience in large-scale data analysis, integration and biological interpretation;
- ▶ Excellent organisational/time management skills as well as a proven ability to meet deadlines and manage multiple tasks at once;
- ▶ Advanced computer skills;
- ▶ Excellent interpersonal and communication skills, both oral and written;
- ▶ Demonstrated ability to work both co-operatively and independently in a team environment.

2.2 DESIRABLE

- ▶ Experience in plant and crop physiology and root biochemistry;
- ▶ Experience in abiotic stress physiology;
- ▶ Demonstrated ability to co-supervise postgraduate students.

3. Equal Opportunity, Diversity and Inclusion

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the University's People Strategy 2015-2020 and policies that address diversity and inclusion, equal employment opportunity, discrimination, sexual

harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people's age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to service for excellence and reach the targets of Growing Esteem.

4. Occupational Health and Safety (OHS)

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

<http://safety.unimelb.edu.au/topics/responsibilities/>

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

5. Other Information

5.1 SCHOOL OF BIOSCIENCES

<http://biosciences.unimelb.edu.au>

The School of BioSciences was formed in 2015 through the amalgamation of the School of Botany and the Departments of Genetics and Zoology thus bringing together a critical mass of 160 Academic staff and 240 Research Higher Degree students undertaking world class teaching and research in the biological sciences. Academics within the School are aligned to four research clusters: Ecology, Evolution and Environmental Science; Genetics, Genomics and Development; Plant Science and Computational Biology. Through cross-disciplinary collaborations within the School and with external partners the School is a major recipient of grant and contract funding.

The School is a major contributor to the Bachelor of Science, Bachelor of Biomedical Science and the Environmental Science programs, its teaching program reflecting the research interests within the School.

5.2 FACULTY OF SCIENCE

<http://www.science.unimelb.edu.au>

Science at the University of Melbourne is the most highly ranked Faculty of Science in Australia.* Science is defined by its research excellence in the physical and life sciences and is at the forefront of research addressing major societal issues from climate change to disease. Our discoveries help build an understanding of the world around us.

We have over 150 years of experience in pioneering scientific thinking and analysis, leading to outstanding teaching and learning and offer a curriculum based on highly

relevant research, which empowers our STEM students and graduates to understand and address complexities that impact real world issues and the challenges of tomorrow.

We aspire to engage the broader community with the impact that Science has on our everyday lives. Through the strength of our internships and research project offerings, our students are provided opportunities to engage with industry partners to solve real-world issues.

The Faculty of Science has over 55,000 alumni and is one of the largest faculties in the University comprising seven schools: BioSciences, Chemistry, Earth Sciences, Ecosystem and Forest Sciences, Geography, Mathematics and Statistics, and Physics.

The Faculty is custodian of the Bio21 Molecular Science and Biotechnology Institute, Office for Environmental Programs and home to numerous Centres.

Science manages more than \$315 million of income per annum, with a staff base in the order of 270 professional staff, and more than 580 academic staff.

We offer a range of undergraduate, honours, graduate and research degrees; enrolling over 9,400 undergraduate and 2,000 graduate students. The Faculty of Science is the custodial Faculty for the BSc (Bachelor of Science). The Faculty of Science is a leader in research, contributing approximately \$80 million in HERDC income per annum. The Faculty of Science is highly research focused, performing strongly in the ARC competitive grants schemes, often out-performing the national average. The Faculty of Science is currently growing its competitiveness and standing in the NHMRC space.

The Faculty of Science provides community services and industry partnerships based on a solid foundation of research in the pure and applied sciences. The Faculty has an endowment of approximately \$78 million. The annual income from the endowment supports more than 250 prizes, scholarships and research awards.

*Figures from the latest available data for 2015, including published international rankings data.

5.3 THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia's premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide-range of knowledge-based industries. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at <http://about.unimelb.edu.au/careers>.

5.4 GROWING ESTEEM, THE MELBOURNE CURRICULUM AND RESEARCH AT MELBOURNE: ENSURING EXCELLENCE AND IMPACT TO 2025

Growing Esteem describes Melbourne's strategy to achieve its aspiration to be a public-spirited and internationally-engaged institution, highly regarded for making distinctive

contributions to society in research and research training, learning and teaching, and engagement. <http://about.unimelb.edu.au/strategy-and-leadership>

The University is at the forefront of Australia's changing higher education system and offers a distinctive model of education known collectively as the Melbourne Curriculum. The new educational model, designed for an outstanding experience for all students, is based on six broad undergraduate programs followed by a graduate professional degree, research higher degree or entry directly into employment. The emphasis on academic breadth as well as disciplinary depth in the new degrees ensures that graduates will have the capacity to succeed in a world where knowledge boundaries are shifting and reforming to create new frontiers and challenges. In moving to the new model, the University is also aligning itself with the best of emerging European and Asian practice and well-established North American traditions.

The University's global aspirations seek to make significant contributions to major social, economic and environmental challenges. Accordingly, the University's research strategy *Research at Melbourne: Ensuring Excellence and Impact to 2025* aspires to a significant advancement in the excellence and impact of its research outputs.

<http://research.unimelb.edu.au/our-research/research-at-melbourne>

The strategy recognises that as a public-spirited, research-intensive institution of the future, the University must strive to make a tangible impact in Australia and the world, working across disciplinary and sectoral boundaries and building deeper and more substantive engagement with industry, collaborators and partners. While cultivating the fundamental enabling disciplines through investigator-driven research, the University has adopted three grand challenges aspiring to solve some of the most difficult problems facing our world in the next century. These Grand Challenges include:

- ▶ Understanding our place and purpose – The place and purpose grand challenge centres on understanding all aspects of our national identity, with a focus on Australia's 'place' in the Asia-Pacific region and the world, and on our 'purpose' or mission to improve all dimensions of the human condition through our research.
- ▶ Fostering health and wellbeing – The health and wellbeing grand challenge focuses on building the scale and breadth of our capabilities in population and global health; on harnessing our contribution to the 'convergence revolution' of biomedical and health research, bringing together the life sciences, engineering and the physical sciences; and on addressing the physical, mental and social aspects of wellbeing by looking beyond the traditional boundaries of biomedicine.
- ▶ Supporting sustainability and resilience – The sustainability and resilience grand challenge addresses the critical issues of climate change, water and food security, sustainable energy and designing resilient cities and regions. In addition to the technical aspects, this grand challenge considers the physical and social functioning of cities, connecting physical phenomena with lessons from our past, and the implications of the technical solutions for economies, living patterns and behaviours.

Essential to tackling these challenges, an outstanding faculty, high performing students, wide collaboration including internationally and deep partnerships with external parties form central components of Research at Melbourne: Ensuring Excellence and Impact to 2025.

5.5 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at <http://www.unimelb.edu.au/governance>