

Position Title:	Research Associate
Position Classification:	Level A
Position Number:	NEW
School/Division:	School of Molecular Sciences
Supervisor Title:	Senior Lecturer
Supervisor Position Number:	505404

Your work area

The University of Western Australia is ranked number 85 in the world in the [Academic Ranking of World Universities \(ARWU\)](#), demonstrating its strength and international competitiveness. The School of Molecular Sciences is a large, research intensive school with 100 staff, over 100 postgraduate students, and over 600 undergraduate students. The School is committed to achieving international excellence in research with activity spanning Chemistry, Biochemistry, and Molecular Biology.

The proposed research will be conducted within a cross-disciplinary team led by Dr Mark Waters and supported by Dr Gavin Flematti and Dr Georg Fritz. The Waters group studies the mechanisms of hormone perception and response in plants, and encompasses molecular genetics, protein biochemistry, structural biology and plant physiology. Research in the Flematti group focuses on discovery, characterisation and organic synthesis of diverse natural products. The Fritz group develops synthetic biology approaches to solve problems relating to bacterial gene regulation, antibiotic resistance, and natural product biosynthesis.

The project will take place within modern, well-appointed molecular biology and chemistry laboratories in UWA's Bayliss building. The School's ongoing investment in a synthetic biology platform, which includes a Beckman-Coulter Echo 650 acoustic liquid handler, will facilitate rapid development of high-throughput screens. Experimentation involving plant growth and analysis will benefit from close association of the Waters group with the UWA node of the ARC Centre of Excellence in Plant Energy Biology, which is also housed in the Bayliss building. The project will also be conducted in close collaboration with national and international collaborators.

Reporting structure

Reports to: Senior Lecturer

Your role

As the appointee, you will undertake fundamental research into the role of butenolide signalling in plants and bacteria, as part of a project funded by the Australian Research Council *Discovery Projects* scheme.

You will perform experimentation involving synthetic biology for the development of high-throughput bioassays, and bioassay-guided discovery of active products from plants and bacteria. You will be expected to apply your existing technical knowledge to work independently, with guidance from all three project leads. As a research scientist, your role will involve the preparation and presentation of results for dissemination, to contribute to future research directions, and to seek additional funding opportunities where appropriate.

Key responsibilities

Conduct rigorous, high-quality research and publish in impactful peer-reviewed journals

Contribute to the scientific goals of the Waters, Flematti and Fritz groups through the development of fundamental and applied knowledge in small molecule signalling, plant development and bacterial behaviour

Collaborate effectively with the national and international collaborators of the Waters group and foster new collaborations

Co-supervise and train Honours and PhD students

Contribute to day-to-day running and organisation of a research laboratory

Other duties as directed

Your specific work capabilities (selection criteria)

PhD in plant molecular biology, synthetic biology, microbial molecular biology, chemical biology or related discipline

Experience in molecular cloning methodologies

Experience in bioinformatics and analysis of large datasets of sequence and/or expression data

Experience in analytical chemistry and/or separation chemistry techniques (HPLC, LC-MS, GC-MS)

Demonstrated ability to undertake and publish high quality and impactful research

Demonstrated ability to write and publish manuscripts in high-impact international journals

Excellent written and verbal communication skills

Highly developed research, analytical and problem-solving skills

Demonstrated ability to work effectively both independently and in collaboration with other researchers

Ability to supervise and train Honours and PhD students

Special requirements

There are no special requirements

Compliance

Workplace Health and Safety

All supervising staff are required to undertake effective measures to ensure compliance with the Occupational Safety and Health Act 1984 and related University requirements (including Safety, Health and Wellbeing Objectives and Targets).

All staff must comply with requirements of the Occupational Safety and Health Act and all reasonable directives given in relation to health and safety at work, to ensure compliance with University and Legislative health and safety requirements.

Details of the safety obligations can be accessed at <http://www.safety.uwa.edu.au>

Inclusion and Diversity

All staff members are required to comply with the University's Code of Ethics and Code of Conduct and Inclusion and Diversity principles. Details of the University policies on these can be accessed at http://www.hr.uwa.edu.au/publications/code_of_ethics; <http://matrix-prod.its.uwa.edu.au/inclusion-diversity>