POSITION DESCRIPTION
Academic Positions
*(In addition to the Position Classification Standards)*

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|---|---|---|---|
| Position Title: | Associate Research Fellow | Level: | A |
| Faculty/Division: | Australian Institute for Innovative Materials (AIIM) | | |
| Department/Location: | ARC Centre of Excellence for Electromaterials Science (ACES) | | |

## Primary Purpose of the Position:

A personable and highly motivated individual skilled in electromaterials, biomaterials and associated fabrication technologies is sought to perform multidisciplinary research within the Synthetic Biosystems Program of the ARC Centre of Excellence in Electromaterials Science (ACES). The successful applicant will be involved in development of 3D microtissue constructs (MTCs) for modelling tissue function and establishing fabrication technologies for defined distribution of structural matrix components (reactive centres, electromaterials) in 3D to promote optimal neurofunctional aspects in the MTC.

Specifically, you will:

- utilise soft gel polymers to create a base 3D biomatrix, and integrate bioactive molecular electromaterial structures in defined 3D spatial distributions throughout to identify configurations that promote optimal bioactivity in neural cell lines
- liaise with neurosurgical/neurological and cell biologist members of ACES to construct biomaterials-based biosynthetic CNS microtissue constructs
- conduct the primary additive fabrication and materials science activities required to construct and characterise the nMTCs
- develop protocols required to characterise functional aspects of incorporated bioreactive centres within the 3D nMTC matrix.

## Position Environment:

You will be a member of the Synthetic Biosystems Laboratory of ACES located within the Intelligent Polymer Research Institute (IPRI) at the UoW Innovation Campus in Wollongong. ACES is composed of 6 Australian nodes: UOW, Deakin University, Monash University, University of Tasmania, Melbourne University and Australian National University and 5 international partner organisations: Dublin City University; University of Warwick; Friedrich Alexander University; Hanyang University and Yokohama National University.

The vision is to create the next generation of electrochemical devices via the precision assembly of nano-/micro-dimensional components into macroscopic structures to deliver unprecedented device performance. In doing so we will create the preeminent world centre for electromaterials science.

ACES is steered by Australian Laureate Fellows Wallace as Centre Director and Forsyth as Associate Director, and with the assistance of a group of inspirational researchers and expert guidance by eminent persons drawn from the science, business, academic and government communities. A Research Strategy Group (comprising the Centre Director, Associate Director and 6 Theme Leaders) will review strategic directions for each of the Theme areas on a quarterly basis.

## Major Accountabilities/Responsibilities:

| Responsibilities | | Outcome | Office Use Only |
|---|---|---|---|
| 1. | Designing and implementing an experimental research program related to ACES objectives under limited supervision either as a member of a team or, where appropriate, independently, in the Synthetic Biosystems IPRI Laboratory. | Reproducible, accurate and appropriate experimental data achieving targets or milestone outcomes in a timely manner. | |
| 2. | Preparation of scientific papers, conference presentations and other reports describing the results of the research program. | Original research papers published in ISI journals and conference presentations at national and international events. | |
| 3. | Assistance with project management and administration, including preparation of reports, assisting with workshops, preparation of newsletter items and maintenance of publications records. | Proper functioning of the project and ACES objectives. | |
| 4. | Assistance with training undergraduate and graduate students and supervision of student projects. | Students working in the area of Synthetic Biosystems for ACES are properly supported. | |
| 5. | Contribute towards developing and submitting grant applications for research funding. | Grants submitted towards funding further development of the project | |
| 6. | Assist with management of laboratories used for R&D | Ensure efficient and safe laboratory operations in accordance with OH&S | |
| 7. | Assist to ensure all R&D conforms to GTRC , HREC and AEC approvals | No infringement of approvals | |
| 8. | Supervisory roles: Communicate and consult with staff on workplace and staffing matters. | To foster direct relationships with staff and enhance engagement with the organisation. | Ongoing |
| 9. | Observe principles and practices of Equal Employment Opportunity | To ensure fair treatment in the workplace | |
| 10. | Have WH&S responsibilities, accountabilities and authorities as outlined in the http://staff.uow.edu.au/ohs/commitment/responsibilities/ document | To ensure a safe working environment for self & others. | |

## Inherent Requirements:

This position description outlines the major accountabilities/responsibilities and the selection criteria against which you will be assessed as suitable for the position. As such there will be specific job requirements that we refer to as Inherent Requirements.

Inherent Requirements refer to your ability to:

- Perform the essential duties and functional requirements of the job;
- Meet the productivity and quality requirements of the position;
- Work effectively in the team or other type of work organisation concerned; and
- Do the job without undue risk to your own or others health, safety and welfare at work.

If you have any injuries, illness, disorder, impairment, condition or incapacity that may affect your ability to perform the inherent requirements of the position, we encourage you to discuss this with the University to assist in the process of identifying reasonable adjustments to enable you to perform the duties of the position. The University wants to place you in the best situation to use your skills effectively in the position you are applying for at the University.

## Reporting Relationships:

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|---|---|
| Position Reports to: | Prof Gordon Wallace |
| The position supervises the following positions: | Nil |
| Other Key Contacts: | A/Prof Robert Kapsa, Prof Mark Cook, A/Prof Jeremy Crook, Dr Anita Quigley |

## Key Relationships:

| Contact/Organisation: | Purpose & Frequency of contact |
|---|---|
| A/Prof Robert Kapsa | Weekly - progress technical reporting |
| Prof Gordon Wallace | Monthly - progress technical reporting |
| A/Prof Jeremy Crook | As required - progress technical reporting |
| Dr Anita Quigley | As required - progress technical reporting |
| Prof Mark Cook ACES Synthetic Biosystems (SB) theme leader | ACES group meetings or as required for progress technical reporting |
| Dr Toni Campbell COO | Monthly for ACES reporting matters |

## Key Challenges:

1. Develop 3D Microtissue model structures with defined spatial distribution of reactive centres.
2. Ensuring that research outcomes are in line with the expected outcomes.
3. To achieve the unit's strategic work objectives through direct communication and consultation with staff and colleagues.
4.. Collaborating within a large team on multidisciplinary research to progress results fast.
5.. Preparation of high quality journal papers.

## SELECTION CRITERIA - Knowledge & Skills:

Essential:

- Ability to work both independently and in a team environment.
- Highly developed written and verbal communication skills in English, as evidenced by peer-reviewed research. publications and presentations at conferences.
- Demonstrated knowledge of OH&S regulations and procedures.
- Demonstrated knowledge and skills in use of polymeric materials for tissue engineering applications.

Desirable:

- Knowledge and skills in cell biology and characterisation of functional status in neural tissue/cell systems.
- Experience in characterisation of biomimetic effects of materials on mammalian cells.
- Experience in implantation of device/cell structures into small animal CNS.

## SELECTION CRITERIA - Education & Experience:

Essential:

- PhD in materials science, focused at tissue engineering and associated fabrication technologies.
- Experience in multi-disciplinary research.
- Experience in report writing/manuscript preparation.
- Strong publication track record relative to opportunity.
- Demonstrated capacity to undertake collaborative research.
- Experience training students and co-supervising student projects.

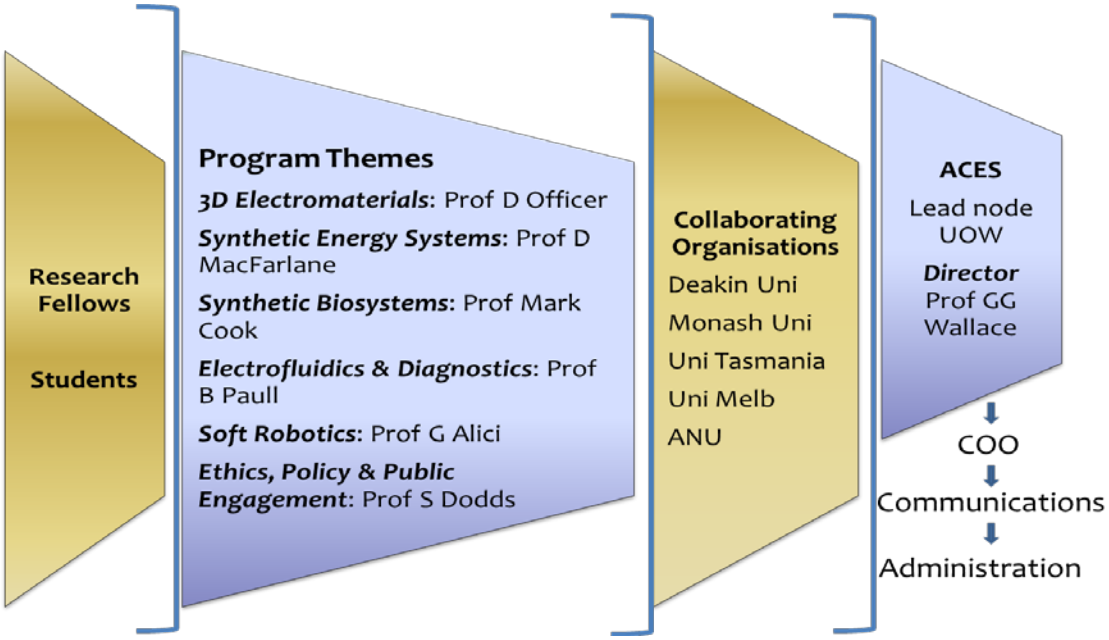
## Personal Attributes:

- Ability to work independently as a collaborative and collegiate member of a multi-disciplinary team without the requirement for constant supervision.
- Motivated approach and enthusiasm for team research outcomes.
- Willingness to receive positive feedback and constructive criticism and to promote constructive input into team research objectives.
- Actively look for and pursue solutions, rather than merely presenting problems and to accept that successful team outcomes lead to success for the individual.
- Flexible, cooperative and collegiate approach to work assignments.
- Responsive and open-minded approach to accommodating necessary change.
- Developed sense of responsibility for timelines and for establishing open communication as necessary to deliver team research objectives in timely manner.

## Special Job Requirements:

- OH&S inductions to workplace and laboratory procedures. This person must adhere to safe laboratory practices of AIIM /IPRI.
- If required they may need to attend work on weekends for the upkeep of cell cultures.

## Organisational Chart:



## Approval:

Approved by Head of Unit: _____

Date: _____

Approved by Human Resources: _____

Date: _____

POSITION CLASSIFICATION STANDARD - Research Only

Level: A

Title: Associate Fellow

## Description

A position classification standard describes the broad categories of responsibility attached to research-only academic staff at different levels. The standards are not exhaustive of all tasks in research-only academic employment, which is by its nature multi-skilled and involves an overlap of duties between levels. The standards provide an adequate basis to differentiate between the various levels of employment and define the broad relationships between classifications.

Progression through an academic career will normally be based on research, teaching, administrative functions and contribution to the profession. The balance of functions will vary according to level and position over time. It is only in exceptional circumstances that promotion would be solely on the research only position classification standards.

- General Standard
- Specific Duties
- Skill Base

## General Standard

A Level A research-only academic is expected to contribute towards the research effort of the institution, and to develop her/his research expertise through the pursuit of defined properties relevant to the particular field of research.

## Specific Duties

Specific duties required of a Level A research-only academic may include

- The conduct of research under limited supervision either as a member of a team or, where appropriate, independently, and the production or contribution to the production of conference and seminar papers and publications from that research.
- Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise.
- Limited administrative functions primarily connected with the area of research of the academic.
- Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff.
- Occasional contributions to teaching in relation to his/her research project(s).
- Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures.
- Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental and/pr faculty meetings and/or membership of a limited number of committees.
- Advice within the field of the staff member's research to postgraduate students.
- A Level A research-only academic shall work with support, guidance and/or direction from staff classified at Level B and above and with an increasing degree of autonomy as the research academic gains in skill and experience.

## Skill Base

A Level A research-only academic will normally have completed four years of tertiary study in the relevant discipline or have equivalent qualifications or research experience. In many cases a position at this level will require an honours degree or higher qualifications or equivalent research experience. Research experience may have contributed to or resulted in publications, conference papers, reports or professional or technical contributions which give evidence of research potential.