POSITION DESCRIPTION

Research Associate

Position Summary

The Research Associate is expected to contribute towards the research effort of UNSW and to develop their research expertise through the pursuit of building a minimal artificial cell that is capable of sustained growth and division. Understanding the evolution of the artificial cell’s properties as it changes composition, synthesises proteins, and encounters nutrients, will be paramount to the success of the project.

The position will work closely with Dr Anna Wang, Senior Lecturer within the School of Chemistry and work in collaboration with Dr Yutetsu Kuruma of JAMSTEC and Associate Professor W. Benjamin Rogers of Brandeis University.

The role of Research Associate reports to the Senior Lecturer and has no direct reports.

Accountabilities

Specific accountabilities for this role include:

- Contribute independently or as a team member in collaborative research with chemists, synthetic biologists, and physicists.
- Undertake specific research project/s under the guidance of Dr Anna Wang and contribute to the development of new research activities
- Support the dissemination of research outcomes through journal articles, conference presentations, and outreach activities relevant to the project as required.
• Assist with the supervision of research students in the research area where required.
• Assist in managing international collaborations.
• Use the PURE system to create artificial cells that incorporate membrane proteins.
• Characterise the bilayer lipid membrane properties such as packing, permeability, rigidity, fluidity, as a function of membrane composition.
• Build apparatus that will enable novel lipid bilayer membrane measurements and extend membrane characterisation methods to related systems.
• Align with and actively demonstrate the **UNSW Values in Action: Our Behaviours** and the **UNSW Code of Conduct**.
• Cooperate with all health and safety policies and procedures of the university and take all reasonable care to ensure that your actions or omissions do not impact on the health and safety of yourself or others.

**Skills and Experience**

• A PhD in a related discipline, such as membrane biophysics, soft matter science, physical chemistry, soft materials, membrane biology, synthetic biology, pharmacology, drug delivery
• Experience in micropipette aspiration and lipid membrane characterisation techniques (such as FRAP, stopped flow experiments, optical trapping, microscopy) will be strongly favoured.
• Proven commitment to proactively keeping up to date with discipline knowledge and developments.
• Demonstrated ability to undertake high quality academic research and conduct independent research with limited supervision.
• Demonstrated track record of publications and conference presentations relative to opportunity.
• Demonstrated ability to work in a team, collaborate across disciplines and build effective relationships.
• Evidence of highly developed interpersonal skills.
• Demonstrated ability to communicate and interact with a diverse range of stakeholders and students.
• An understanding of and commitment to UNSW’s aims, objectives and values in action, together with relevant policies and guidelines.
• Knowledge of health and safety responsibilities and commitment to attending relevant health and safety training.

**Pre-employment checks required for this position**

• Verification of qualifications

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**About this document**

This Position Description outlines the objectives, desired outcomes, key responsibilities, accountabilities, required skills, experience and desired behaviours required to successfully perform the role.

This template is not intended to limit the scope or accountabilities of the position. Characteristics of the position may be altered in accordance with the changing requirements of the role.