RESEARCH FELLOW – PFASs SENSORS

DEPARTMENT/UNIT
Drug Delivery, Disposition and Dynamics

FACULTY/DIVISION
Pharmacy and Pharmaceutical Sciences

CLASSIFICATION
Level A

WORK LOCATION
Clayton campus

ORGANISATIONAL CONTEXT

Everyone needs a platform to launch a satisfying career. At Monash, we give you the space and support to take your career in all kinds of exciting new directions. You’ll have access to quality research, infrastructure and learning facilities, opportunities to collaborate internationally, as well as the grants you’ll need to publish your work. We’re a university full of energetic and enthusiastic minds, driven to challenge what’s expected, expand what we know, and learn from other inspiring, empowering thinkers. Discover more at www.monash.edu.

The Faculty of Pharmacy and Pharmaceutical Sciences is dynamic, innovative and ambitious, engaging in world-class research and being a leading education provider for over 130 years. Our key research initiative is the Monash Institute of Pharmaceutical Sciences, in which we engage some of the best equipped and most experienced pharmaceutical scientists and medicine experts in Australia. From a teaching perspective, our education curriculum - comprised of undergraduate, postgraduate and higher degrees by research programs - is purpose designed for the study of pharmacy and pharmaceutical sciences and taught by discipline experts. Our premises are located in ‘the Parkville Strip’, Australia’s premier health and biomedical precinct, and offer world-class teaching facilities and research laboratories to our students and staff. To learn more about the Faculty, please visit our website: www.monash.edu/pharm/.

POSITION PURPOSE

A Level A research-only academic is expected to contribute towards the research effort of the university and to develop their research expertise through the pursuit of defined projects relevant to the particular field of research.

The purpose of the position is to develop the first enabling sensing technology, with tailored features, to address the intrinsic limitations of benchmark techniques for analysis of per- and poly-fluoroalkyl substances (PFASs) – specifically, to create efficient solutions for integrated, high-throughput, portable quantification and molecular fingerprinting of PFASs in water sources. The new fundamental and applied knowledge will generate critical advances in the development and on-chip integration of cutting-edge materials with precisely engineered properties. This is expected to meet the urgent need for sensing technologies to screen specific emerging toxicants and address major environmental and health treats. This position will be based at the Melbourne Centre for Nanofabrication in Clayton. Travel to and work at the University of Adelaide will also be required.
**Reporting Line:** The position reports to Professor Nicolas Voelcker in the Drug Delivery, Disposition and Dynamics theme

**Supervisory Responsibilities:** Not applicable

**Financial Delegation:** Not applicable

**Budgetary Responsibilities:** Not applicable

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### KEY RESPONSIBILITIES

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

1. Under the direction of senior research scientists, carry out innovative, impactful research of strategic importance to Monash and CSIRO that will, where possible, leading to novel and important scientific outcomes.

2. Develop plasmonic-photonic sensors for PFASs detection

3. Undertake literature and patent reviews, and produce high quality scientific and/or engineering papers suitable for publication in quality journals, presentation at appropriate conferences, for client reports and patent applications

4. Advice within the field of the staff member’s research to postgraduate students, and development of a limited amount of research-related material for teaching with appropriate guidance from other staff

5. Work collaboratively across the research team and across organisations to ensure effective team function and achievement of research and organisational objectives and plans

6. Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of Monash University and CSIRO’s respective reputations.

7. Adhere to the spirit and practice of Monash University and CSIRO’s respective Values, Health, Safety and Environment plans and policies, Diversity initiatives and organisational goals

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### KEY SELECTION CRITERIA

**Education/Qualifications**

1. The appointee will have:
   - A doctoral qualifications in Chemistry, Chemical Engineering or Materials Science

**Knowledge and Skills**

2. Demonstrated experience in optical nanostructures for surface design with knowledge, interest and experience areas including nanofabrication – specifically anodisation and electrodeposition, surface chemistry modification and analysis and microfluidics.

3. The ability to work effectively as part of a multi-disciplinary research team, with the motivation and discipline to carry out autonomous research with a demonstrated capacity to work in a collegiate manner with other staff in the workplace

4. A record of science innovation and creativity, plus the ability & willingness to incorporate novel ideas and approaches into scientific investigations.

5. Ability to solve complex problems by using discretion, innovation and the exercise diagnostic skills and/or expertise

6. Well-developed planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines with demonstrated awareness of the principles of confidentiality, privacy and information handling
7. Excellent written communication and verbal communication skills with proven ability to produce clear, succinct reports and documents.

8. Demonstrated computer literacy and proficiency in the production of high level work using software such as Microsoft Office applications, specified University software programs, XPS and AFM, with the capability and willingness to learn new packages as appropriate.

OTHER JOB RELATED INFORMATION

- Travel to the University of Adelaide will be required
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

GOVERNANCE

Monash University expects staff to appropriately balance risk and reward in a manner that is sustainable to its long-term future, contribute to a culture of honesty and integrity, and provide an environment that is safe, secure and inclusive. Ensure you are aware of and adhere to University policies relevant to the duties undertaken and the values of the University. This is a standard which the University sees as the benchmark for all of its activities in Australia and internationally.