



Job title	Research Associate/Fellow: Bioelectronics	Job family and level	Research and Teaching Level 4 (Appointment will be Level 4 Career training grade where an appointment is made before PhD has been completed)
School/ Department	School of Pharmacy	Location	University Park Campus

Purpose of role

The key research areas of this role will be:

- preparation and characterization of an external patch and relevant electronics using an *in vitro* skin model,
- calibration of the external patch via impedance spectroscopy for fibrosis quantification on an object implanted in living tissue (in conjunction with fellow researcher(s) working on *in vivo* immune characterisation),
- synthesis of nanoantennae for detailed wireless inflammation monitoring (in conjunction with fellow researcher(s) working on polymer chemistry and clinical translation),
- optimization of the electronic sensing of nanoantennae for application in animal models (in conjunction with fellow researcher(s) working on *in vivo* immune characterisation),
- development of a working methodology for the real-time quantification of inflammation (in conjunction with fellow researcher(s) working on *in vivo* immune characterisation).

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	Project <ul style="list-style-type: none"> ▪ Acquisition and interpretation of data. ▪ Source and cost specific consumables and smaller equipment with the aim of maximizing the financial resources available. 	70%
2	Training <ul style="list-style-type: none"> ▪ Training and advising research assistants and postgraduate students in the use of equipment. ▪ Transferring of instrumental skills and ensure correct and robust procedures are carried out in obtaining data for PhD and other research projects. ▪ Providing a range of technical skills and analytical advice to the above projects and training and advice to research workers in the areas of Good Laboratory Practice and in Health and Safety. 	15%
3	Outputs <ul style="list-style-type: none"> ▪ Contribute to internal meetings and work in conjunction with the research team to achieve objectives. 	15%

	<ul style="list-style-type: none">▪ Prepare research results for publication, read relevant literature and offer new insights to the research area.▪ Contribute to dissemination at scientific meetings, resulting in successful outputs.	
--	--	--

Person specification

	Essential	Desirable
Skills	<ul style="list-style-type: none"> ▪ Excellent oral and written communication skills, including the ability to communicate with clarity on complex information. ▪ Evidence of sufficient breadth or depth of research methodologies and techniques to work in research area. ▪ Developing research skills. ▪ Ability to contribute to method improvement. ▪ Analytical ability to facilitate conceptual thinking, innovation and creativity ▪ Ability to build relationships and collaborate with others, internally and externally 	<ul style="list-style-type: none"> ▪ Track record of published work
Knowledge and experience	<ul style="list-style-type: none"> ▪ Bio-nanotechnology ▪ Impedance spectroscopy ▪ Nanoparticle synthesis and fabrication 	<ul style="list-style-type: none"> ▪ Cell culture ▪ Surface analysis incusing UV/VIS spectroscopy, XPS, Circular dichroism, ICP-MS, TEM, SEM ▪ Electroanalytical chemistry techniques including cyclic voltammetry ▪ Molecular surface conjugation ▪ Bioelectronics ▪ Development of skin electronics
Qualifications, certification and training (relevant to role)	<ul style="list-style-type: none"> ▪ PhD (or close to completion) in relevant subject area Engineering/Chemistry/Electrochemistry/Sensors 	<ul style="list-style-type: none"> ▪ Surface chemistry, electrochemistry ▪ Bioelectronics ▪ Biosensors



Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

Valuing people	Is friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.
Taking ownership	Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.
Forward thinking	Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.
Professional pride	Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.
Always inclusive	Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

Key relationships with others



