

## Candidate Information

<b>Position:</b>	Research Fellow
<b>School/Department:</b>	School of Pharmacy
<b>Reference:</b>	23/111001
<b>Closing Date:</b>	Monday 26 June 2023
<b>Salary:</b>	£36,333 per annum
<b>Anticipated Interview Date:</b>	Thursday 6 July 2023
<b>Duration:</b>	Fixed term for 12 months, or until 31 July 2024, whichever is sooner

### JOB PURPOSE:

The work will involve i) the production and analysis of complex nanoparticles using microfluidics for wound healing; ii) the synthesis of a polymeric hydrogel to deliver the nanoparticles and iii) the evaluation of the nanogel in vitro and in vivo. This position is grant funded from the MRC-IAA confidence in concept fund. The post holder will be required to perform a range of cutting-edge methodologies, including physiochemical analysis, polymer grafting and analysis, in vitro functionality and in vivo assays to assess the functionality and safety of the nanogel. The post holder will be an active member of a research project/team assisting in the planning and delivery of the research activity within a specified area, so that the overall research objectives of the project/school are met.

### MAJOR DUTIES:

1. To design, develop and execute experiments related to the above described project under the supervision of Professor Helen McCarthy, Dr Emma McErlean and Prof Nicholas Dunne and in coordination with other members of the research group.
2. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
3. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
4. Prepare, in consultation with the supervisor, material for publication in national and international journals and presentations at international conferences.
5. The appointed individual will be encouraged to formulate, write and submit grants for fellowship awards, project and travel support.
6. To assist with the supervision of postgraduate students, honours or summer students on mini-projects, which will help develop supervisory skills.
7. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget.
8. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines and to maintain awareness of the context of the research project.
9. Any other reasonable duties within the general ambit of the post and competence of post holder.

### ESSENTIAL CRITERIA:

1. Have or be about to obtain a PhD in Pharmacy, Pharmaceutical Sciences, Biomedical Engineering or a closely allied discipline.
2. At least 3 years recent, relevant research experience with polymeric hydrogels.
3. At least 3 years recent, relevant research experience with nanoparticle synthesis and characterisation.
4. Experience and prior knowledge of cellular and molecular biology, histological techniques and biochemical analysis of tissue composition.
5. Experience of assessing nanoparticles safety and efficiency in small animal model.
6. Experience in the use of microfluidic devices to prepare nanoparticles.
7. Must have published paper(s) in quality journals to a level commensurate with research experience.
8. Ability to contribute to broader management and administrative processes.

9. Contribute to the School's outreach programme by links with industry, community groups etc.
10. Possess sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques, where appropriate, to work within established research programmes.
11. High level of analytical capability.
12. Experience in training/mentoring of students or early career staff.
13. Track record of presenting work at international conferences.
14. Ability to communicate complex information clearly in both oral and written formats.
15. Ability to build contacts and participate in internal and external networks.
16. Ability to assess and organise resources.
17. Analytical and problem-solving skills.

**DESIRABLE CRITERIA:**

1. Masters degree in science or pharmacy.
2. Experience of in vivo modelling relevant to wound healing models with a personal licence.
3. Previous track record of high-quality research in the field of nucleic acid technologies.