

## Candidate Information

<b>Position:</b>	Research Fellow in Medical Devices Development
<b>School/Department:</b>	School of Pharmacy
<b>Reference:</b>	20/108263
<b>Closing Date:</b>	Monday 20 July 2020
<b>Salary:</b>	£33,797 per annum
<b>Anticipated Interview Date:</b>	Monday 3 August 2020
<b>Duration:</b>	This post is available for 6 months from 1st October 2020 until 31 March 2021

### JOB PURPOSE:

To be an active member of the planning and delivery of a research programme on the manufacturing of implantable drug delivery systems and medical devices using innovative 3D printing technologies in the School of Pharmacy. This position is suited to a highly ambitious, productive, and collaborative individual.

### MAJOR DUTIES:

1. Undertake research in a programme of implantable drug delivery devices development and conduct the research activities as a member of a research team.
2. Development of new drug delivery systems using additive manufacturing technologies.
3. Evaluate the sterility of medical devices using standard microbiological tests.
4. Carry out critical evaluations, analyses and interpretations using methodologies and other techniques appropriate to area of research, including: FTIR, DSC, XRD, TGA, SEM and HPLC.
5. Contribute to improving existing experimental protocols and introducing new techniques as required in order to obtain reliable data.
6. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
7. Write up results of own work and contribute to the production of research reports, publications and funding proposals.
8. Carry out occasional undergraduate supervision/demonstrating/teaching duties under the direction of a member of academic staff.
9. Carry out routine administrative duties associated with the research project to ensure activities are completed on time and within budget. These may include organisation of project documentation, financial control and risk assessment of activities.
10. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines.

### Planning and Organising:

1. Plan for specific aspects of research programmes. Timescales range from 1-3 months in advance and contribute to research group planning.
2. Plan for the use of research resources, laboratories and workshops where appropriate.
3. Plan own day-to day activity within framework of the agreed research programme.
4. Plan up to 3 months in advance to meet deadlines for journal publications and to prepare posters, presentations and/or papers for conferences.
5. Coordinate and liaise with other members of the research group over work progress.

### Resource Management Responsibilities:

1. Ensure research resources are used in the most effective and efficient manner.
2. Provide guidance as required to support staff and any students who may be assisting with research.
3. Take shared responsibility for the upkeep of lab equipment and replenishment of lab stocks and exercise due diligence when using equipment.

4. Support the development and training of support staff and students.

**Internal and External Relationships:**

1. Communicate openly with lab colleagues the latest research findings/results.
2. Develop contacts with other labs within the research community at Queen's and look to identify potential cross-discipline collaborations.
3. Liaise on a regular basis with colleagues and students.
4. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
5. Join external networks to share information and ideas.
6. Contribute to the School's outreach programme by establishing links with local community groups, industries etc.
7. Join national and international scientifically relevant societies.

**ESSENTIAL CRITERIA:**

1. Have or about to obtain a PhD in Pharmacy, Pharmaceutical Sciences, or a closely related discipline.
2. At least 3 years recent relevant research experience.
3. Experience in additive manufacturing. Specially Fused Deposition Modelling and Bio-printing.
4. Experience developing implantable drug delivery systems.
5. Experience on Computer-Aided Design (CAD).
6. Experience on the following techniques: FTIR, XRD, DSC, SEM and HPLC.
7. Publication(s) in peer-reviewed journals commensurate with career stage.
8. Methodical approach to project management and meticulous in regard to experimental procedures and record keeping.
9. Sufficient breadth and depth of specialist knowledge in 3D printing for transdermal applications.
10. Ability to interact and communicate effectively with research colleagues, support staff and external networks.
11. Ability to present scientific arguments and data in a clear, concise and confident manner.
12. Ability to present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
13. Ability to communicate effectively, both verbally and in writing.
14. Ability to carry out routine administrative tasks associated with the research projects and laboratory maintenance.
15. Practical problem-solving skills and independence of thought are required.
16. Ability to assess and organise resources.
17. A calm and conscientious scientist, able to work in a disciplined manner within a team environment.

**DESIRABLE CRITERIA:**

1. Qualified Pharmacist in EU.
2. Experience on sterility testing of medical devices.
3. Experience on the use of computed tomographic analysis (optical coherence tomography or X ray tomography).
4. Experience teaching/supervising undergraduate students and visiting researchers in the laboratory.
5. Experience in Research project management.