

Candidate Information

Position:	Research Fellow
School/Department:	Mechanical & Manufacturing Engineering
Reference:	19/107499
Closing Date:	Tuesday 25 June 2019
Salary:	£33,199 per annum
Duration:	Until 30 September 2022

JOB PURPOSE:

To undertake research specifically addressing the objectives of Dunhill Medical Trust funded project 'Controlled strontium release from resorbable devices to improve osteoporotic fracture fixation'. To furthermore be an active member of the Bioengineering Research Group, contribute to the development of new research proposals and disseminate research findings to appropriate audiences.

MAJOR DUTIES:

1. Undertake research under supervision within a specific Dunhill Medical Trust funded project 'Controlled strontium release from resorbable devices to improve osteoporotic fracture fixation'.
2. Design, develop and refine experimental apparatus and experiments in order to obtain reliable data for bioresorbable medical devices in laboratory-based project activities.
3. Plan, manage and undertake all necessary aspects of in vivo experiments for evaluation of bioresorbable implants, including histology and ToF-SIMS.
4. Perform biomaterial characterisation work using, for example, mechanical testing, micro-CT, scanning electron microscopy, chemical analysis and gel permeation chromatography.
5. Carry out analysis, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
6. Present regular progress reports on research to members of the research group, stakeholder group and external audiences to disseminate and publicise research findings.
7. Prepare, often in consultation with supervisors, material for publication in international journals and presentations at international conferences.
8. Assist grant holder in the preparation of funding proposals and applications to external bodies.
9. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.
10. Carry out occasional undergraduate supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
11. 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 1-6 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 a year in advance to meet deadlines for journal publications and to prepare presentations and 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 an effective and efficient manner.
2. Provide guidance as required to support staff and any students who may be assisting with research.

Internal and External Relationships:

1. Liaise on a regular basis with colleagues and students.
2. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
3. Join external networks to share information and ideas.
4. Contribute to the School's outreach programme by establishing links with local community groups, industries etc.

ESSENTIAL CRITERIA:

1. Have or be about to obtain a relevant PhD in the field of biomaterials.
2. At least 3 years relevant experience in processing and evaluation of biomaterials or in bone research, to include some awareness of in vivo evaluation.
3. Ability to contribute to broader management and administrative processes.
4. Contribute to the School's outreach programme by links with industry, community groups etc.
5. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
6. Ability to communicate complex information clearly.
7. Ability to build contacts and participate in internal and external networks.
8. Demonstrable intellectual ability.
9. Ability to assess and organise resources.
10. Willingness to travel to meet the requirements of the research project.
11. Willingness to undertake in vivo experiments.

DESIRABLE CRITERIA:

1. Undertaken in vivo experiments on biomaterials and have previously held a personal animal licence.
2. Experience of processing and testing of bioresorbable polymers.
3. Contributed to the supervision of undergraduate project work.