



Candidate Information

Position:	Research Fellow
School/Department:	Patrick G Johnston Centre for Cancer Research
Reference:	21/108664
Closing Date:	Monday 15 March 2021
Salary:	£33,797 per annum
Anticipated Interview Date:	Thursday 25 March 2021
Duration:	3 years

JOB PURPOSE:

To undertake and assist with laboratory based investigation aiming to characterise the mechanistic basis of radiation-induced toxicity in preclinical and cell-based heart model.

This research fellow will work as part of an interdisciplinary team funded through a Medical Research Council grant to Dr Butterworth aiming to investigate the cellular and molecular basis of radiation induced cardiac toxicity.

A range of in vivo procedures and biological assays will be used to interrogate a novel preclinical model of radiotherapy response in the heart. This will include the use of cone-beam CT imaging and small animal radiotherapy.

The researcher work in collaboration with other members of the team to support the interpretation of these data, and the development of new models to understand the basis of radiotherapy response in the heart. They will also collaborate with leading researchers at the University of Manchester and the University of Oxford.

They will also be expected to contribute to the supervision of junior members of the team, including undergraduate and to make an active contribution to the management and maintenance of radiation sources within the group. They will also be expected to contribute to the supervision of junior members of the team, including undergraduate and postgraduate students as well as day to day running of the laboratory.

MAJOR DUTIES:

1. To design, develop and execute experiments related to this project under the supervision of Dr Butterworth and other senior investigators in order to obtain reliable data. Evaluate and interpret these data using appropriate methodologies, and prepare results in suitable formats for dissemination through academic channels.
2. To present regular progress reports on research to members of the research project team and, as appropriate, to other internal or external audiences to disseminate and publicise research findings.
3. To work as part of a collaborative team of cell biologists, clinicians and physicists to ensure optimal progression of the project at all times and to contribute to the achievement of project milestones.
4. To write up results in a timely manner and take a leadership role in writing research manuscripts for publication in high quality journals. To maintain data files appropriate for Institutional Data Repository.
5. The appointed individual will be encouraged to formulate, write and submit grants for fellowship awards, project and travel support.
6. To attend and present new experimental data at national and international meetings as appropriate.
7. To carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget.
8. To assist with the supervision of postgraduate students, honours or summer students on mini-projects, to develop their supervisory skills.

9. To read academic papers, journals and textbooks and keep up to date with developments in own specialism and related disciplines and to maintain awareness of the context of the research project.
10. Any other reasonable duties including public engagement and outreach activities, within the general gambit of the post and competence of post holder.

Planning and Organising:

1. Planning of various aspects of the research project including: Independent day-to day planning of experiments and 1-3 months (short term) planning of research; 6-12 months (long term) organisation of the research direction/targets as well as contingency planning in collaboration with PI.
2. Prioritise and reprioritisation of research/experiments in order to meet deadlines and targets.
3. Organisation of informal project group meetings.
4. Assess and review developments and formulate research and development strategic plans for consideration within multi-disciplinary teams.

Resource Management Responsibilities:

1. Support the development and training of support staff and students by making available their research experience and expertise.
2. Take shared responsibility for the upkeep of laboratory equipment and replenishment of consumable stocks and exercise due diligence when using equipment.

Internal and External Relationships:

1. To help to establish and maintain collaborations with scientific and clinical departments in healthcare organisations nationally and internationally, including Universities and commercial companies.
2. To maintain awareness of current and future developments within radiation oncology by detailed study and review of scientific and clinical literature and attendance at scientific conferences.
3. Communicate openly with lab colleagues latest research findings and exciting results.
4. Develop contacts with other labs within the research community at Queen's and look to identify potential cross-discipline collaborations.
5. Apply the same philosophy to external collaborations and network at conferences and meetings.
6. Join national and international scientifically relevant societies.

ESSENTIAL CRITERIA:

1. Have or be about to obtain a PhD in radiation biology, biophysics, biomedical science or a related subject.
2. At least 3 years relevant research experience.
3. Experience in cellular and molecular techniques including tumour biology, cell culture, confocal microscopy and immunofluorescence, clonogenic assays.
4. Must have published paper(s) in quality journals to a level commensurate with research experience.
5. Experience in radiation biology research.
6. Evidence of proactive organisational capabilities.
7. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
8. Evidence of communication skills.
9. Ability to communicate complex information clearly.
10. Ability to build contacts and participate in internal and external networks and research presentations.
11. Team worker, highly motivated, supportive of junior colleagues within the group.
12. Ability to assess and organise resources.
13. Ability to work hours required of the research which may include evenings or weekends.

DESIRABLE CRITERIA:

1. 1st Class undergraduate degree.
2. Previous track record of high quality research in the field of cancer research.
3. Experience in radiation biology.
4. Experience with in vivo models.
5. Evidence of scientific writing skills.
6. Experience working with radiation response modelling.

7. Evidence of participation in training/mentoring of students or junior staff.
8. Commitment to professional development, as evidenced by Scientific memberships.