Candidate Information

Position: Research Fellow
School/Department: School of Medicine, Dentistry and Biomedical Sciences
Reference: 19/107509
Closing Date: Monday 3 June 2019
Salary: £33,199 per annum

JOB PURPOSE:

To evaluate the in vivo efficacy of a pre-validated nanomedicine, designed for use in combination with radiotherapy, for the treatment of prostate cancer.

MAJOR DUTIES:

1. Develop and execute research plans within the remit of the MRC CiC project with the aid of the PI.
2. Synthesis and physical characterisation of the chemokine targeted nanomedicine.
3. In vivo evaluation of the biodistribution and therapeutic efficacy of the nanomedicine.
4. Establishment and appropriate maintenance of an in vivo colony.
5. Performing relevant analytical techniques e.g. FTIR, ICP-MS and mass spectrometry.
6. Ex vivo processing of tumour and normal tissues to establish changes in target gene expression and nanoparticle localisation.
7. To present regular progress reports on research to members of the research group, external audiences and to disseminate research findings.
8. Prepare, often in consultation with supervisor, material for IP protection and publication. If appropriate present at national/international conferences.
9. Assist grant holder in the preparation of funding proposals and applications to external bodies.
10. Carry out routine administrative tasks associated with the research project and laboratory maintenance.
11. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines. Development of a literature base.

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 6 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.

Internal and External Relationships:

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

ESSENTIAL CRITERIA:

1. Have or about to obtain a PhD in radiation biology, cancer biology, pharmaceutical Sciences or biomedical sciences.

2. 3 years recent relevant research experience to include holding a valid UK Home Office licence, with experience of establishing a sub-cutaneous xenograft models.
3. Competency in in vivo routes of administration (e.g. i.v. administration, intra-tumoural).
4. Competency in use of relevant general anaesthetics.
5. Experience of relevant radiobiology techniques (e.g. clonogenic assays, DNA damage immunocytochemistry), standard molecular biology assays (e.g. Western Blot and qRT-PCR), pk/pd models and expertise in both in vivo and ex vivo imaging modalities
6. Knowledge and experience of establishing and efficiently maintaining an small animal colony.
7. Prepare, often in consultation with supervisor, material for IP protection, publication and presentations at national/international conferences.
8. Experience of undergraduate student supervision. Willingness to assist early stage PhD students establish core assay technical competence.
9. Ability to carry out routine administrative tasks associated with the research projects and laboratory maintenance.
10. Ability to communicate effectively, both verbally and in writing.
11. Practical problem-solving skills, and independence of thought are required.
12. Knowledge of scientific literature pertaining radiotherapapy in the treatment of prostate cancer. Also targeted nanomedicine approaches
13. Ability to present scientific arguments and data in a clear, concise and confident manner.
14. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings
15. A calm and conscientious scientist, able to work in a disciplined manner within a team environment.

DESIRABLE CRITERIA:

1. PhD in radiation biology with specific emphasis on in vivo tumour models
2. Experience small animal radiation treatments
3. Experience in the design, synthesis and physical characterisation of metal nanoparticle formulations.
4. Knowledge and/or experience analytical techniques including FTIR, ICP-MS and mass spectrometry
5. Experience of assisting in preparation of funding proposals and applications to external bodies.
6. Experience in supervision of postgraduate students.
7. Evidence of independent assay development