

Candidate Information

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| Position: | Research Fellow |
| School/Department: | School of Pharmacy |
| Reference: | 22/110322 |
| Closing Date: | Monday 21 November 2022 |
| Salary: | £35,333 - £36,386 per annum |
| Anticipated Interview Date: | Monday 5 December 2022 |
| Duration: | Fixed term for 15 months or until 29 February 2024, whichever is soonest |

JOB PURPOSE:

To be an active member of the TRACER research team, funded through the HEA North South Research Programme. The successful applicant will work within the Coulter research group (School of Pharmacy, QUB), collaborating closely with the Quinn group (UCD – Chemistry). This project will involve the synthesis, physical characterisation and biological assessment of a series of novel smart nanocomposites, used as solo agents and in combination with radiotherapy. This multi-disciplinary project spans the fields of chemical and pharmaceutical engineering, radiobiology and cancer biology, with the successful candidate responsible for assessing in vitro and in vivo biological efficacy.

MAJOR DUTIES:

1. Develop and execute research plans within the remit of the HEA North South Research Programme with the aid of the PI and co-investigators.
2. Evaluate biocompatibility of nanocomposites and degradation products.
3. Design 2 and 3-dimensional cell-based assays to demonstrate nanocomposite efficacy.
4. Use quantitative analytical techniques to assess size dependency on total nanocomposite internalisation.
5. Determine targeting specificity of functional surface ligands using qRT-PCR and western blot techniques.
6. Present regular progress reports on research progress to members of the research group, the wider project consortium and to external audiences. Disseminate research findings.
7. Prepare, often in consultation with supervisor, material for IP protection and publication. If appropriate present at national/international conferences.
8. Carry out routine administrative tasks associated with the research project and laboratory maintenance.
9. Read academic papers, journals and textbooks to keep up to date with developments in own specialism and related disciplines. Development of a literature base.

ESSENTIAL CRITERIA:

1. Have or about to obtain a PhD in cancer biology, cell biology, radiation biology, pharmaceutical sciences or biomedical sciences.
2. 3 years recent relevant experience in standard cell culture assays (e.g. MTT/MTS, clonogenic assays, DNA damage assays).
3. Relevant experience of assessing in vitro biocompatibility and efficacy.
4. Experienced in standard microscopy and analytical techniques e.g. IHC, ICP-MS, flow cytometry (not exclusive).
5. Previous experience working with nanoparticles.
6. Experience of successfully working as part of a wider consortium.
7. Evidence of publication in quality peer reviewed journals, appropriate to career stage.
8. Demonstrable experience of final year undergraduate student supervision. Willingness to assist early-stage PhD/MSc 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.
12. Proven ability to present scientific arguments and data in a clear, concise and confident manner.

13. Demonstrable experience in presenting regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
14. Composed and conscientious scientist, able to work in a disciplined manner within a team environment.

DESIRABLE CRITERIA:

1. PhD with a focus on either radiation biology and/or nanomedicine.
2. 2 – 3 years relevant post-doctoral experience.
3. Experience of 3-dimensional cell culture assays – organoids/spheroids.
4. Hold a valid UK home office personal licence (PIL).
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.