



Candidate Information

Position:	Research Fellow
School/Department:	Wellcome-Wolfson Inst for Experimental Medicine
Reference:	21/109376
Closing Date:	Friday 10 December 2021
Salary:	£34,304 per annum
Anticipated Interview Date:	Wednesday 22 December 2021
Duration:	4 months

JOB PURPOSE:

To join a vibrant research team within the Wellcome-Wolfson Institute for Experimental Medicine, Queen's University Belfast. The successful applicant will employ a broad range of physiological, cell and molecular biological approaches to study human neuronal function.

MAJOR DUTIES:

1. To establish and use novel in vitro models of human neuronal function.
2. To evaluate the role of various environmental and/or endogenous stimuli on neuronal function using a range of in vitro laboratory techniques.
3. To design, develop and refine experimental apparatus or experiments in order to obtain reliable data.
4. To present regular progress reports on research to members of the group, funding body or to external audiences to disseminate and publish research findings.
5. To carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
6. To prepare, in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
7. To assist supervisor in the preparation of funding proposals and applications to external bodies.
8. To carry out routine administrative tasks associated with the research project/s to ensure that projects are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities and HTA activities.
9. To 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.

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. Coordinate and liaise with other members of the research group over work progress.

Resource Management Responsibilities:

1. Routine ordering of research consumables.
2. Ensure research resources are used in an effective and efficient manner.
3. 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 about to obtain* a PhD in cell biology, molecular biology, or a closely related area of biomedicine.
*Must have submitted PhD thesis at the time of application.
2. At least 3-years recent, hands-on, postgraduate research experience in at least two of the following:
 - Differentiation of dental pulp stem cells to a neuronal lineage
 - Luciferin-luciferase assays
 - Immunocytochemistry and immunohistochemistry of neuronal cells, with the capability of obtaining high quality images using wide-field and confocal microscopy.
3. Recent postgraduate research experience in at least two of the following:
 - FlexStation-3 calcium mobilisation assay, confocal calcium imaging and FluoVolt membrane depolarisation assay in bronchial epithelial cells and neurones differentiated from dental pulp stem cells.
 - Confocal calcium imaging of neurones differentiated from iPSCs.
 - Preparation of neuronal cells for RNAseq and interpretation of RNAseq results.
4. Evidence of research career development (experimental skills, communication, knowledge of field) which is commensurate with research training.
5. Evidence of a key role in publication in internationally recognised peer reviewed journals. This list should be commensurate with stage of career and experience.
6. Evidence of a key role in grant applications. This should be commensurate with stage of career and experience.
7. Experience with supervising undergraduate or post-graduate students in a research lab.
8. Ability to contribute to broader management and administrative processes.
9. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
10. Ability to communicate complex information clearly.
11. Ability to build contacts and participate in internal and external networks.
12. Must demonstrate a clear interest in this area of research and show commitment to the specific research topic.
13. Demonstrable intellectual ability.
14. Ability to work independently within the context of a research team.
15. Must be prepared to work outside normal office hours.
16. Must be willing to travel to national and international meetings.

DESIRABLE CRITERIA:

1. PhD includes work on in vitro models of human neuronal function.
2. Recent hands-on research experience in single cell RNAseq and analysis of RNAseq results to address key research questions in the context of ongoing projects.
3. Evidence of having presented at conferences (poster and/or oral presentations).
4. Computing skills especially software commonly used in biomedical research.
5. Contribute to the School's outreach programme by links with industry, community groups etc.
6. Background or research interests which are compatible with the post.
7. Long term goals in research.