

Candidate Information

Position:	Research Fellow (maternity cover)
School/Department:	Patrick G Johnston Centre for Cancer Research
Reference:	24/111592
Closing Date:	Monday 26 February 2024
Salary:	£37,841 per annum
Anticipated Interview Date:	Friday 8 March 2024
Duration:	Available until 30 June 2024

JOB PURPOSE:

To work with the Translational Bioinformatics Research Group led by Dr Jaine Blayney at the Patrick G Johnston Centre for Cancer Research, in collaboration with Dr Guillermo Lopez Campos (Wellcome-Wolfson Institute for Experimental Medicine) and Professor Mark Lawler, Associate Pro-Vice-Chancellor and Professor of Digital Health.

This US-Ireland project, in collaboration with North Carolina State University and National University of Ireland Galway, considers the potential application of transplantable, recording and monitoring devices in patients with cardiovascular diseases eg abdominal aortic aneurysm and ischemic cardiomyopathy. The key objective of this study is to characterise the impact of externally powered devices on the surrounding tissues. In particular, the project will investigate the impact of externally generated and internally focused ultrasound and electric fields on differential cell function at various omics levels. A secondary objective is to develop robust and adaptable bioinformatics analytical pipelines to quality control and process data to facilitate downstream analysis.

MAJOR DUTIES:

1. To design, develop and execute experiments related to the above titled study in order to obtain reliable data and to evaluate and interpret the results using methodologies and other techniques appropriate to the area of the research.
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. Initiate and maintain collaborative links with various project partners.
4. To work as part of a collaborative multidisciplinary team, including external partners, to ensure optimal progression of the project at all times and to contribute to the achievement of project milestones.
5. To write up results in a timely manner and take a leadership role in writing research manuscripts for publication in high quality journals.
6. To assist with the formulation, writing and submission of grants for fellowship awards, project and travel support.
7. To attend and present new data at national and international meetings as appropriate.
8. To assist with the supervision of postgraduate students, honours or summer students on mini-projects, which will help develop their own supervisory skills.
9. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget.
10. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines and to maintain awareness of the context of the research project.
11. Any other reasonable duties within the general ambit of the post and competence of post holder.

ESSENTIAL CRITERIA:

1. Have or be about to obtain a PhD in either Bioinformatics, Maths, Stats or Computing or PhD in Natural Sciences with a significant bioinformatics component.

2. Substantial relevant experience to include:
 - Experience of processing and analysing high-dimensional omics datasets;
 - Experience of curating and analysing clinico-pathological data;
 - Experience of working with and integrating data from multiple, diverse sources;
 - Experience of presenting statistical results to multi-disciplinary audiences;
 - Experience in statistical programming e.g. R or Matlab.
3. Must have published paper(s) in quality journal journals to a level commensurate with their research experience.
4. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
5. Ability to assess and organise resources.
6. Evidence of proactive organisational capabilities.
7. Ability to build contacts and participate in internal and external networks and research presentations.
8. Evidence of communication skills.
9. Ability to communicate complex information clearly.
10. Team worker, highly motivated, supportive of junior colleagues within the group.

DESIRABLE CRITERIA:

1. MSc or BSc/BA in either Bioinformatics, Maths, Stats or Computing.
2. Experience of key statistical methods and approaches eg clustering, classification and survival analysis.
3. Experience of applying and evaluating classification accuracy measures.
4. Experience of developing analytical pipelines for analysis of omics data.
5. Experience of developing/evaluating and applying new biostatistical algorithms to omics data.
6. Experience of identifying and adapting for batch/technical effects.
7. Previous track record of high quality research in a bioinformatics-related field.
8. Evidence of scientific writing skills.
9. Evidence of participation in training/mentoring of students or junior staff.
10. Commitment to professional development, as evidenced by Scientific memberships eg. BCS