Candidate Information

Position: Research Fellow (Molecular Stratification)
School/Department: Centre for Cancer Research and Cell Biology
Reference: 19/107124
Closing Date: Wednesday 27 February 2019
Salary: £33,199 - £39,610 per annum (potential to progress to £43,266 per annum through sustained exceptional contribution)
Duration: Until 31 March 2021

Job Purpose

We have a post-doctoral researcher post to work within the Dunne laboratory as part of the recently-funded 5-year Cancer Research UK International Accelerator programme.

The overarching goals of this research group is to improve survival rates for patients with CRC, through improved understanding of the signalling pathways underpinning initiation, invasion and metastasis in CRC.

The post-holder will join our internationally renowned research team in the Centre for Cancer Research and Cell Biology (CCRCB), at the Queen's University Belfast, Northern Ireland, and will work in collaboration with world leading CRC research teams, including Prof Owen Sansom (Glasgow), Prof Simon Leedham (Oxford), Prof Josep Tabernero (Barcelona) and Prof Alberto Bardelli (Torino).

The post-holder will become an integral member of a dynamic, collaborative and well equipped research group, with a strong focus on interdisciplinary research. The post- holder will work within a stimulating research environment where collaboration and development of new ideas is strongly encouraged, alongside support for career development for emerging talents.

Recent advances in molecular profiling analysis have identified molecular subtypes in CRC, based on previously defined histological subtypes (Consensus Molecular Subtypes; CMS) and neoplastic epithelial biology (ColoRectal Intrinsic Subtypes; CRIS). This molecular subtyping involves a combination of molecular biology, computational analysis and pathological assessment, enabling an integrated evaluation of multiple layers of molecular information. This new ambitious project will have unparalleled access to molecular data from the tumour datasets used to develop both CMS and CRIS, and emerging molecular profiles from state-of-the-art pre-clinical models of disease that, for the first time, recapitulate human tumour subtype in 2D/3D cell lines, organoids and mouse models (PDX and GEMM).

The post-holder will work within an established interdisciplinary team and will already have an understanding of cancer biology, alongside experience in transcriptional data analysis.

The post-holder will utilise the unique data from the Accelerator consortium to develop new, and refine existing, molecular subtypes in CRC through a combination of translational bioinformatics and molecular biology. Overall this project aims to unveil the interplay between the epithelial tumour and surrounding immune/stromal cells to ultimately improving our understanding of CRC.

MAIN ACTIVITIES/RESPONSIBILITIES

- To design, develop and execute molecular stratification studies related to the project in order to obtain reliable data, then evaluate and interpret the results using methodologies and techniques appropriate to the area of the research
- Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
- To regularly present results to the research group as part of routine peer review.
- Initiate and maintain collaborative links with various project partners.
- To write up results in a timely manner and take a leadership role in writing research manuscripts
- To present regular progress reports on research to members of the research group and to external audiences to disseminate and publicise research findings.
- To formulate, write and submit grants for fellowship awards, project and travel support.

- To attend and present new experimental data at national and international meetings.
- Assist grant holder in the preparation of funding proposals and applications to external bodies
- May be required to carry out undergraduate supervision within the post holder's area of expertise and under the guidance of a member of academic staff.
- Assists with the supervision of postgraduate students or summer students on mini-projects, which will help develop their own supervisory skills.
- Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.
- Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines
- Any other reasonable duties within the general ambit of the post.

PLANNING AND ORGANISING:
- Plan for specific aspects of research programmes. Timescales range from 1-6 months in advance and contribute to research group planning.
- Plan for the use of research resources, laboratories and workshops where appropriate.
- Plan own day-to-day activity within framework of the agreed research programme.
- Plan to meet deadlines for journal publications and to prepare presentations and papers for conferences.
- Coordinate and liaise with other members of the research group over work progress.

RESOURCE MANAGEMENT RESPONSIBILITIES:
- Ensure research resources are used in an effective and efficient manner.
- Provide guidance as required to support staff and any students who may be assisting with research.
- Take shared responsibility for the upkeep of lab equipment and replenishment of lab stocks and exercise due diligence when using equipment.
- Support the development and training of support staff and students.

INTERNAL AND EXTERNAL RELATIONSHIPS:
- Communicate openly with lab colleagues the latest research findings/results.
- Develop contacts with other labs within the research community at Queen's and look to identify potential cross-discipline collaborations.
- Liaise on a regular basis with colleagues from national and international research group
- 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.
- Contribute to the School's outreach programme by establishing links with local community groups, industries etc.
- Join national and international scientifically relevant societies.

ESSENTIAL CRITERIA
- Hold (or about to obtain) a PhD in molecular cancer biology, bioinformatics or a related discipline.
- At least three years relevant research experience.
- Experience with transcriptional data analysis and/or bioinformatics.
- Experience of biological signalling in cancer.
- Ability to contribute to broader management and administrative processes.
- Contribute to the School's outreach programme by links with industry, patient advocacy groups etc
- Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
- Ability to communicate complex information clearly.
- Ability to build contacts and participate in internal and external networks.
- Demonstrable intellectual ability.
- Ability to assess and organise resources.
- Team worker, highly motivated, supportive of junior colleagues within the group

DESIRABLE CRITERIA

- 1st Class or 2.1 undergraduate degree.
- Scientific memberships eg. AACR, EACR, IACR, BACR.
- Track postdoctoral record of national/international collaboration.
- Publication of peer-reviewed papers including bioinformatics analysis.
- Experience with colorectal cancer biological signalling.
- Programming experience.
- Evidence of involvement in successful programmes and grant applications
- Presentations at national/international meetings