



## Candidate Information

<b>Position:</b>	Bioinformatician in Patrick G Johnston Centre for Cancer Research
<b>School/Department:</b>	Patrick G Johnston Centre for Cancer Research
<b>Reference:</b>	21/109038
<b>Closing Date:</b>	Monday 30 August 2021
<b>Salary:</b>	£33,797 - £40,322 per annum
<b>Anticipated Interview Date:</b>	Friday 24 September 2021
<b>Duration:</b>	3 years

### JOB PURPOSE:

The post-holder will work alongside the Precision Medicine Centre of Excellence's (PMC) Clinical and Scientific Leads to develop, validate and maintain analytical tools, data analysis pipelines and algorithms to analyse genomic information from cancer specimens, in the context of clinical studies and clinical trials. The PMC provides an integrated cancer diagnostic service, encompassing high throughput genomics, digital pathology and big data analytics in a fully integrated fashion ([www.qub.ac.uk/research-centres/PMC](http://www.qub.ac.uk/research-centres/PMC)).

### MAJOR DUTIES:

1. To develop pipelines for the processing and analysis of raw data from next generation sequencing, calling of variants including structural aberrations and other clinically relevant genomic alterations.
2. To provide analytical expertise for data from genomic and digital imaging analyses for the team.
3. Development and management of bespoke database framework with connections to pertinent public databases.
4. To curate, warehouse and backup data as they are generated in a timely manner.
5. To provide analytical outputs in defined and acceptable formats from sequencing experiments that can be interrogated by research and clinical scientists as required.
6. To support end-users to ensure data is interrogated appropriately and meets all standards for peer-reviewed publications.
7. To prioritise work on a day-to-day basis and liaise with colleagues to co-ordinate the service provision and research projects.
8. To maintain valid records of bioinformatics activities, and organise corrective action as appropriate. To perform routine data checking/cleaning
9. To assist supervising and providing support and mentorship to junior and technical members of staff, post graduate students and PhD students.
10. To work as part of the team and have excellent communication with colleagues and supervisors.
11. To prepare scientific manuscripts and presentations for peer review and publication as directed.
12. To support the team leaders with grant writing and grant reporting.
13. To present progress reports to the team and supervisor regularly as well as external audiences.
14. To keep abreast of the field by reading scientific literature and attending relevant meetings when possible.
15. Any other reasonable duties within the general scope of the post and competence of post-holder.

### Planning and Organising:

1. To plan and deliver the specific goals of research programmes and contribute to research group planning.
2. To plan for the use of research resources, data resources and workshops where appropriate.
3. To plan own day-to day activity within framework of the agreed research programme.
4. To coordinate and liaise with other members of the research group over work progress.

### Resource Management Responsibilities:

1. To ensure research resources are used in an effective and efficient manner.
2. To contribute to informatics hardware and software maintenance and troubleshooting.
3. To provide guidance as required to support staff and any students who may be assisting with research.

**Internal and External Relationships:**

1. To report to the Head of Laboratory Operations on a regular basis.
2. To liaise on a regular basis with colleagues, students and clinical teams.
3. To build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
4. To contribute to the School's outreach programme by establishing links with local community groups, industries etc.

**ESSENTIAL CRITERIA:**

1. Have or be about to obtain a PhD in computational biology, bioinformatics, biostatistics, mathematics or related discipline
2. At least three years relevant research experience in genomics/molecular pathology.
3. Experience of working with Linux/UNIX environments.
4. Significant experience managing and analysing NGS data and other big data.
5. Proficiency with perl, python, bash and/or equivalent languages.
6. Experience creating, querying and maintaining databases, particularly MySQL or PostgreSQL.
7. Experience with suitable analysis and plotting languages, particularly R or Matlab.
8. Publication record in a relevant field commensurate to experience.
9. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
10. Knowledge of high performance computing systems and job scheduling.
11. Excellent organisational and inter-personal skills.
12. Ability to communicate complex information clearly and efficiently.
13. Excellent verbal and written communicational skills.
14. Team worker, highly motivated, supportive of colleagues within the group.
15. Ability to show initiative and work independently when required.
16. Ability to plan, organise & prioritise work and meet deadlines.
17. Excellent attention to detail.
18. Ability to work with clinical specimens and in a clinical environment, conforming to regulatory requirements.

**DESIRABLE CRITERIA:**

1. 1st Class or 2.1 undergraduate degree.
2. Understanding of cancer datasets.
3. Experience in digital pathology.
4. Experience in translational cancer research.
5. Experience of working in cancer genetics.
6. Track record of publications in cancer in high-impact journals.
7. Experience contributing to applications for peer reviewed research funding from national or international granting bodies.
8. Experience of delivering lectures/tutorials on informatics or NGS based approaches.
9. Project management skills.