

Candidate Information

Position:	Bioinformatician
School/Department:	School of Medicine, Dentistry and Biomedical Sciences
Reference:	25/112369
Closing Date:	Monday 17 February 2025
Salary:	£39,922 - £43,605 per annum
Anticipated Interview Date:	Monday 10 March 2025
Duration:	33 months

JOB PURPOSE:

The post-holder will work under the direction of the Precision Medicine Centre of Excellence's (PMC) Bioinformatics lead and collaborate closely with the Scientific and Clinical leads. The primary responsibilities will be to develop, validate and maintain data analysis pipelines and algorithms that enable the comprehensive analysis of genomic information derived from cancer specimens, within the context of clinical studies. The PMC is an ISO 15189:2012 accredited medical laboratory (Ref 20634), providing an integrated cancer diagnostic and clinical research service that combines high throughput genomics and digital pathology (www.qub.ac.uk/research-centres/PMC).

MAJOR DUTIES:

1. To develop and maintain pipelines for the processing and analysis of data generated from next generation sequencing (NGS) platforms, calling of clinically relevant genomic alterations.
2. To implement, validate and integrate software tools as part of an analysis pipeline.
3. To perform routine quality control tasks (quality check of data, code review, software validation), data checking/cleaning and taking remedial action when required.
4. To support end-users on technical issues relating to in-house analysis workflows and analytical procedures.
5. To provide analytical expertise for genomic data analyses.
6. To prioritise work on a day-to-day basis and liaise with colleagues to co-ordinate the service provision and research projects.
7. To write documents describing analytical procedures and software validation process/outcomes.
8. To ensure adherence to the various standards and accreditations required for clinical laboratory practice.
9. To contribute to discovery tasks during the initial phase of new developments.
10. To maintain valid records of bioinformatics activities and organise corrective action as appropriate.
11. To present regular progress reports to the team and external audiences.
12. To supervise and provide support and mentorship to junior and technical members of staff, when required.
13. To keep abreast of the field by reading scientific literature and attending relevant meetings when possible.
14. To work as part of the team and have excellent communication with colleagues and supervisors.
15. Any other reasonable duties within the general scope of the post and competence of post-holder.

ESSENTIAL CRITERIA:

1. * Hold or be about to obtain* a PhD in Computational biology, Bioinformatics, computing science or related subjects. (*must be obtained within 3 months of the closing date for the post) OR MSc equivalent with at least 3 years' work experience in a relevant role.
2. * Significant relevant research experience in genomics or work experience in a relevant technical/scientific role.
3. *Significant experience in managing and analysing NGS data and other big data.
4. * Experience in developing and maintaining analysis pipelines.
5. * Experience working with Linux/UNIX environments.
6. * Proficiency with python, bash, R and/or equivalent languages.
7. * Compliance with data protection policies.
8. Publication record in a relevant field commensurate to experience and career stage.

9. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
10. Comprehensive technical knowledge and experience in own scientific or technical specialism.
11. Knowledge of high performance computing systems and job scheduling.
12. Demonstrable skills in collecting, reviewing, analysing, and interpreting data and ability to assess data quality.
13. Excellent organisation and time management skills and ability to plan and organise short term activities.
14. Be responsible for ensuring work is completed to the required timescales and standards.
15. Excellent verbal and written communication and inter-personal skills.
16. Excellent team working skills.
17. Ability to work independently and on own initiative.
18. Ability to communicate complex information clearly and efficiently.
19. Ability to plan, organise and prioritise work to meet targets and deadlines.
20. Ability to work with clinical specimens and in a clinical environment, conforming to regulatory requirements.
21. Proven analytical and problem-solving skills and experience.
22. Team worker, highly motivated, supportive of colleagues within the group.
23. Willingness to work in a clinical environment, conforming to regulatory requirements.
24. Willingness to work outside normal working hours occasionally, when and as required.

DESIRABLE CRITERIA:

1. * PhD in Computational biology, Bioinformatics, Data science, Biostatistics, Genomics, Computing science or related discipline.
2. * Experience with high throughput data analysis or genome analysis.
3. * Experience of workflow management framework and/or containerisation systems.
4. * Experience with high performance computing systems.
5. * Experience of using version control system such as Git.
6. * Experience of Cloud computing.
7. Good working knowledge of high-throughput sequencing data analysis methods.
8. Good working knowledge of high-performance computing systems and job scheduling.
9. Good working knowledge of large-scale data analysis e.g. WGS, ctDNA.
10. Knowledge of machine learning.
11. Evidence of experience in disseminating research findings.
12. Ability to work in a multi-disciplinary environment as part of a team.