

Candidate Information

Position:	Research Fellow (Bioinformatics)
School/Department:	Faculty Office MHLS
Reference:	26/113469
Closing Date:	Monday 7 September 2026
Salary:	£41,519 per annum
Anticipated Interview Date:	Wednesday 16 September 2026
Duration:	Available until 2 August 2027

JOB PURPOSE:

The Future Medicines Institute (FMI) is a new, industry-led research and innovation hub for Life and Health Sciences in Northern Ireland, based at Queen's University Belfast (QUB). Co-founded by a consortium of Northern Ireland's leading pharmaceutical, diagnostics, and health analytics companies, together with QUB and Ulster University, FMI brings together world-class expertise and state-of-the-art facilities in a collaborative, translational research environment. Our goal is to tackle today's most urgent health challenges through cutting-edge advancements in precision medicine, novel therapeutics, next-generation diagnostics, and transformative healthcare technologies.

The ambition is to grow and develop the FMI to achieve long term sustainability. It will work collaboratively with other regional investments such as our new clinical research facility iREACH, data science hub Momentum 1.0, the Centre for Digital Healthcare Technologies (CDHT) and the Artificial Intelligence Collaboration Centre (AICC). Collectively, these investments will transform the capabilities and competitiveness of the NI Life and Health Sciences sector, mapping and collaborating with other clusters in UK and Ireland.

The post holder will develop bioinformatics tools, workflows, and cloud-based infrastructure to support genomics and multi-omics data analysis across FMI projects. Working closely with biologists, bioinformaticians, and software developers, this role focuses on integrating advanced computational methods with scalable cloud platforms to streamline data processing, analysis, and sharing. The successful candidate will have a strong foundation in software engineering, data engineering, and cloud computing, with a proactive attitude and eagerness to collaborate in a multidisciplinary team environment.

MAJOR DUTIES:

1. Design and implement scalable cloud-based infrastructure for genomics data processing and storage.
2. Develop bioinformatics pipelines and workflows for genomics and proteomics datasets (e.g., RNA-seq, single-cell RNA-seq, exomes, and CRISPR screens) using cloud-native tools.
3. Create and optimise software tools for data integration, analysis, and visualisation in genomics and multi-omics.
4. Automate data workflows for large-scale genomics and proteomics datasets.
5. Deploy containerised applications and tools using technologies such as Docker and Kubernetes.
6. Develop APIs and web-based interfaces for efficient data sharing and collaboration among FMI partners.
7. Maintain up-to-date knowledge of cloud platforms (e.g., AWS, Azure, GCP) and implement cost-effective solutions.
8. Support the FMI team in integrating public domain datasets and creating bespoke cloud-based solutions.
9. Collaborate with FMI partners to develop customised cloud architectures tailored to specific projects.
10. Write technical documentation, contribute to publications, and support grant applications as required.
11. Present regular progress updates to the FMI team and external collaborators.
12. Other duties that fall within the general ambit of the post.

ESSENTIAL CRITERIA:

1. Degree in computer science, bioinformatics, data engineering, or a related discipline.
2. Have or about to obtain* a relevant PhD (*must be obtained within 3 months of interview date).

3. Significant, relevant research experience.
4. Demonstrated experience in designing and deploying scalable cloud-based infrastructures (AWS, Azure, GCP).
5. Demonstrated experience in bioinformatics pipeline development (e.g., RNA-seq, single-cell RNA-seq, exomes).
6. Demonstrated experience as an expert level user of HPC infrastructure / Linux systems.
7. Demonstrated experience implementing key R and / or Python packages.
8. Track record of publications commensurate with stage of career.
9. Experience of project supervision.
10. Ability to plan and manage own workload and contribute to requisite administrative tasks.
11. Ability to design and maintain secure cloud architectures.
12. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
13. Ability to work across multidisciplinary teams.
14. Ability to communicate complex information clearly.
15. Ability to build contacts and participate in internal and external networks.
16. Ability to assess and organise resources according to adjusting priorities.
17. Team player, proactive, highly motivated and supportive of other team members.
18. Interest in driving research focussed programmes.
19. Willingness to travel to partner sites and collaborate with industry partners.

DESIRABLE CRITERIA:

1. Bioinformatics experience in an academic or industrial setting.
2. Experience in working within industry.
3. Experience working with proteomics datasets.
4. Experience developing web applications and APIs for bioinformatics tools.
5. Experience developing and deploying machine learning workflows in cloud environments.
6. Data handling expertise e.g. cloud storage and SQL.

ADDITIONAL INFORMATION:

Informal enquiries may be directed to: James Mawhinney at j.mawhinney@qub.ac.uk.