

THE UNIVERSITY OF MANCHESTER
PARTICULARS OF APPOINTMENT
FACULTY OF BIOLOGY, MEDICINE & HEALTH
RESEARCH AND INNOVATION
PROFESSIONAL SERVICES

Translational Research Bioinformatician

VACANCY REF: BM&H-017649

Salary:	Grade 7 £42,149-£51,799 per annum depending on experience
Hours:	Full time
Duration:	Fixed term 36 months from the start date
Location:	Oxford Road, Manchester

Enquiries about vacancy shortlisting and interviews:

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The University of Manchester

Translational research at the University of Manchester (UoM) and in particular in the Faculty of Biology, Medicine and Health (FBMH) encompasses a wide range of activities stemming from discoveries in the fundamental sciences and progressing through a pipeline that includes hypothesis testing and elucidation of disease mechanisms, preclinical research in animal models, through to clinical trials in humans of new drugs, devices and diagnostic procedures and ultimately delivery and adoption within the NHS and third sector organisations. Health Innovation Manchester (HInM) is a unique academic health science system operating within the recently devolved Health and Social Care budget to Greater Manchester and is designed to accelerate the rate of adoption and diffusion of research and innovation across the Greater Manchester conurbation.

Wellcome Trust Institutional Translational Partnership Awards (TPA)

In 2017, as part of an 'Innovation for Impact' strategy, Wellcome announced that it would provide up to £500 million over the next five years to help researchers and organisations from around the world turn great ideas, discoveries and inventions into treatments, products and cures for disease. As a part of this strategy, UoM was awarded TPA funding aimed at building better links between science, technology and innovation by removing barriers between disciplines and making it easier to take the first translational step. The TPA is delivered through [Translation Manchester](#), which provides an agile approach to supporting and enabling innovation, tailored to the needs of individual institutions and their varying ecosystems. A major focus for UoM following this award has been the development of cross-cutting initiatives to improve knowledge

transfer and build interdisciplinary programmes across HInm, and create a more joined up approach to translation by bringing together all the translation infrastructure and resource available.

Overall Purpose of the Role

The University of Manchester is seeking to appoint an individual as a Translational Research Bioinformatician to join the [Translation Manchester](#) team and support the delivery of the Wellcome Trust TPA. The post will be based in the Research Strategy and Innovation Team within the Faculty of Biology, Medicine and Health working across the faculty, university and with NHS and industrial partners to unblock bottlenecks to translational research. This support and enablement role will primarily focus on providing expertise in bioinformatics to the benefits of the translational research community, building capacity and capability in this area.

The successful candidate will provide bespoke training in bioinformatics skills for research groups pursuing translational research. The ideal candidate will be an experienced bioinformatician with biomedical research experience in academia or industry. A key part of this role is providing informatics training and upskilling lab-based research staff to enable them to analyse data sets generated through their wet lab experiments. Experience working with data sets generated from techniques such as RNAseq, genome analysis, multi-parameter flow cytometry and CYTOF will be valuable.

You will also provide advice to research groups on their experimental design plans and provide data management guidance. This role will focus on training PhD students and post-docs, optimising processes and structures, putting biological data into context, and feeding into wider research strategy rather than hands-on data processing and analysis.

You will act at the interface between research groups across the University. This will include supporting research groups working across multiple disciplines within, but not limited to, the Wellcome Centre for Cell Matrix Research and the Lydia Becker Institute for Immunology and Inflammation. You will have oversight on the data sets held and generated within the University and you will be responsible for facilitating connections and collaborations between research groups with the help of the Translational Research Managers and the wider Translation Manchester team. This role is ideal for a bioinformatician who enjoys collaborative working across multi-disciplinary teams and training early career researchers and staff.

Key Responsibilities, Accountabilities or Duties

- To train and advise biologists in how to conduct bioinformatics analyses and assist with experimental design covering techniques such as RNAseq, genome analysis, multi-parameter flow cytometry and CYTOF.
- To train others to enable them to conduct data analysis using state-of-the-art statistical and bioinformatic methods.
- To proactively initiate and facilitate collaborations between research groups and disciplines.
- To support researchers with data management and ensure they can maintain accurate and complete records of all findings.
- To support those leading in the planning of research and work with researchers to develop new concepts and research objectives to drive progress in translational research.

- To contribute to the writing of reports as required by the University and Wellcome Trust.
- To advise researchers on statistical and bioinformatic data analysis.
- To take responsibility for organising data management resources and effective decision making in support of research.
- To be an active team-member and set positive examples by showing a commitment to achieving results, encouraging and supporting students and raising suggestions for continuous improvement.
- To identify funding opportunities and support the development of grant applications for research funding from competitive external sources.
- Providing oversight and mentoring to help further develop and build capacity.
- Working with researchers to help interpret data and optimise experimental approaches.
- Build and nurture a cohesive team of bioinformaticians across research disciplines.
- Implement new pipelines, ensure teams are properly trained and competency maintained.

This job description is not intended to be exhaustive and it is likely that duties may be altered from time to time in the light of changing circumstances and after consultation with the post holder.

PERSON SPECIFICATION

Essential Knowledge, Skills and Experience:

- PhD(or equivalent) in a relevant discipline
- Good working knowledge of modern Bioinformatics data analysis methods (e.g. methods for RNA-seq, genome analysis, multi-parameter flow cytometry and CYTOF)
- Good working knowledge of programming languages and environments commonly used in bioinformatics (R, python, linux, bash etc.)
- Experience of using high performance computing environments (e.g. ethernet clusters, cloud computing environments, GPUs etc.)
- Experience of producing publication-quality images to visualise complex data
- Proficiency in use of modern software engineering tools, e.g. version control with git
- Good communication and team-working skills, enabling working with diverse teams including academics, students and industry researchers
- Good track record of scientific publication given career stage
- Good time management skills
- Experience of reproducible research and data sharing

Desirable Knowledge, Skills and Experience:

- Relevant postdoctoral research experience
- Advanced statistical data analysis skills
- Machine learning skills
- Experience of developing and delivering training materials
- Experience of biology and issues relating to biological sample preparation