

**THE UNIVERSITY OF MANCHESTER**  
**PARTICULARS OF APPOINTMENT**  
**FACULTY OF BIOLOGY, MEDICINE & HEALTH**  
**SCHOOL OF MEDICAL SCIENCES**  
**DIVISION OF CANCER SCIENCES**  
**RESEARCH ASSOCIATE IN BIOINFORMATICS**  
**VACANCY REF: BMH-027209**

**Salary:** Grade 6 £36,924 to £45,163 per annum, depending on relevant experience

**Hours:** Full Time (1 FTE)

**Duration:** Fixed Term Until 30 September 2027

**Location:** The Paterson Building, Cancer Research UK Manchester Institute

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**Enquiries about the vacancy, shortlisting and interviews:**

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**Introduction to the University of Manchester and the Faculty of Biology, Medicine and Health**

The University of Manchester is the largest single-site university in the UK with around 38,000 students and more than 11,000 staff. We aim to become one of the top 25 research universities in the world and are committed to delivering an outstanding teaching and learning experience; contributing to the social and economic success of local, national and international communities; producing the highest calibre graduates; and developing our staff to be amongst the very best of their peers.

To achieve our ambitious goals we aim to attract and retain the very best people to work across a range of academic disciplines and support functions.

**The Faculty of Biology, Medicine and Health**

The integrated structure of our faculty enables a truly translational approach to biology, medicine and health - from pure discovery science through to clinical application and patient care. It also encourages collaborative working, enabling staff to deliver innovative, world-leading research that has a very real and positive impact on people's lives, as well as high-quality education and training to over 11,000 undergraduate and postgraduate students.

**Our Strategic Partnerships**

The faculty has established a number of key strategic partnerships that underpin its ambitions to develop ground-breaking research.

Working alongside six local NHS Trusts, the Faculty is a key member of the <https://mft.nhs.uk/withington/research/manchester-academic-health-science-centre-mahsc/> - a federation of equal partners that unites leading healthcare providers with world-class academics and researchers. It aims to be a global centre for the delivery of applied health research and education and provide leadership for our local and regional health systems.

We also play a leading role in <https://healthinnovationmanchester.com/>, which was launched in September 2015, as part of the UK Government's decision to devolve health and social care responsibilities to Greater Manchester. HInM offers a unique opportunity to bring together health and social care, academic and life science related business resources across the region to deliver an innovative health ecosystem that can help accelerate innovation into our local health and social care systems, enhance our global scientific standing and act as a magnet for inward investment.

Key partnerships in the charitable sector include Cancer Research UK; Diabetes UK; and the Wellcome Trust; and the faculty also has research and funding links to a number of commercial organisations including Unilever, AstraZeneca, GlaxoSmithKline and Boots, who help us to bring new drugs and products to the market.

### **Working for the University of Manchester**

The University of Manchester strives to make our community a welcoming, caring and enthusiastic one, fuelling ambition with opportunities and support to help us all achieve our personal and professional goals.

Our diverse job opportunities include an attractive <https://www.staffnet.manchester.ac.uk/people-and-od/benefit/> with family-friendly policies that provide for flexible working. We care deeply about career and personal development, offering a structured induction programme for new staff, an annual performance and development review, staff training for all career stages and mentoring opportunities to support your career development.

We have a genuine commitment to <http://www.manchester.ac.uk/connect/jobs/equality-diversity/awards/> for our staff and students, and are proud to employ a workforce that reflects the diverse community we serve.

As a global institution, situated at the heart of a lively, <http://www.manchester.ac.uk/study/experience/student-life/city/>, we welcome applicants of all nationalities. To help international job applicants plan for life in the UK, we have put together some useful <http://www.staffnet.manchester.ac.uk/employment/joining-the-university/international-staff/> travel to the UK, accommodation and a number of other practical considerations.

### **Manchester Cancer Research Centre**

[The Manchester Cancer Research Centre \(MCRC\)](#) was established in 2006 by three founding partners: The University of Manchester, Cancer Research UK and The Christie NHS Foundation Trust. Since its creation, the MCRC has widened its reach to drive forward cancer research in other NHS trusts within Greater Manchester and to link with other cancer-specific funding bodies.

The vision of the MCRC is to be a world-leading comprehensive centre for translational cancer research – transforming the clinical care of cancer patients by developing and implementing an integrated personalised medicine strategy.

Our strategy harnesses the power of basic and discovery research within the CRUK Manchester Institute, the wider scientific community within The University of Manchester, including the chemical and physical sciences, as well as the research taking place within the clinic.

We are home to disease specific Centres of Excellence and lead a number of research networks. Our researchers contribute to consortia involving academic and commercial organisations.

### **Epigenetics of Haematopoiesis Lab**

The Epigenetics of Haematopoiesis Group within the Division of Cancer Sciences is led by Drs. Daniel Wiseman and Kiran Batta. The focus of the lab is to understand the biology of a type of leukaemia called Chronic Myelomonocytic Leukaemia using a range of multi-omic approaches. The Group wish to appoint a Bioinformatic Research Associate to an exciting project analysing and integrating multi-omic datasets generated within the lab. This post is funded by a Oglesby Charitable Trust awarded to Drs Batta and Wiseman. During this position, the post-holder will develop bioinformatic pipelines analyse and integrate multiomic datasets.

### **Background & Context**

Chronic myelomonocytic leukaemia (CMML) is a blood cancer with few therapeutic options and dismal prognosis. It is characterised by epigenetic and transcriptional dysregulation, exemplified by the presence of recurrent mutations in epigenetic and splicing factors in >90% and >70% of cases, respectively. Epigenetics of Haematopoiesis group is jointly led by Dr. Kiran batta and Dr. Daniel Wiseman investigating the mechanistic basis of this disease.

Epigenetics of Haematopoiesis group is located within the Patterson Building, and is highly integrated with a tertiary referral clinical practice based at the adjacent [Christie Hospital](#). There are numerous active collaborations with leaders in the field of CMML biology, both nationally and internationally. The group has core funding from the Oglesby Charitable Trust, supporting the UK's only dedicated CMML research group.

### **Overall Purpose Of The Job**

We are seeking a Bioinformatician preferably with wet lab skills to join a research programme in Epigenetics of Haematopoiesis group at the University of Manchester. You will contribute high-quality computational biology and bioinformatics support with an option of carrying some wet lab work.

The post holder will be dealing with multi-omic data analysis and storage, focusing particularly on data from single/bulk cell RNA/DNA/epigenome analysis. Tasks range from low-level QC and mapping through to statistical analysis, data visualization and biological interpretation.

A crucial element to the role is the ability to develop tools and workflows, contribute to experimental design prior to data collection and will contribute to writing up work for journal papers and presentations.

There will also be opportunities to contribute to training and education activities e.g. through attendance at courses, workshops and conferences.

### **Key Responsibilities, Accountabilities or Duties:**

- Perform high quality analyses in R/Bioconductor, and with reference to other software tools, as required
- Record and document data analysis workflows in order to allow other researchers to reproduce results
- Accurately store and annotate data; responsibility for quality control and troubleshooting
- Keep comprehensive and up-to-date records of projects and report to the Group Leaders
- Conduct individual and collaborative research projects agreed with the Group Leaders
- Communicate material of a specialist or highly technical nature
- Write up data and code for publication in high impact journals
- Ensure successful completion of the projects and maximise publication output
- Write up research work for presentations and publication with appropriate acknowledgement, address referees' comments
- Continually update skills, knowledge and understanding in field; keeping up with scientific literature
- Present work at the Institute and at domestic and international meetings
- Manage time efficiently to bring multiple concurrent projects to completion within a range of deadlines
- To perform other functions consistent with the position, nature of the post and as determined by the Group Leaders

**General:**

- Understand and commitment to promote the University's policies and procedures to support and promote Equality & Diversity
- To maintain confidentiality of information in line with data protection requirements and University policy
- To comply with Health and Safety requirements, including having an awareness of personal responsibilities to maintain a safe working environment
- To contribute to the University's agenda for social responsibility, including sustainability

**PERSON SPECIFICATION**

**Knowledge, Skills and Experience**

**Essential:**

- Have, or be about to obtain, a PhD in Computational Biology/Bioinformatics, Mathematics, Biological sciences or related discipline
- Demonstratable experience in analysing genomic/transcriptomic/epigenomic data
- Familiarity with Next Generation Sequencing (NGS) and/or proteomic data analysis tools
- Demonstrable experience in applying appropriate statistical approaches to data analysis

- Substantial experience writing complex code in at least one of the following: R/Bioconductor, Perl, Python
- Substantial experience with troubleshooting and debugging software
- Ability to select and apply the correct statistical methodologies to complex data sets
- Attention to detail with coding and annotation
- Knowledge in the field of bioinformatics, and computational biology
- Understanding of current statistical techniques applied to imaging and deep sequencing data analysis
- Demonstrable ability in manuscript writing with evidence of generating high quality publications and presentations at conferences

**Desirable:**

- Degree in Statistics, Computational Biology/Bioinformatics, Biology or related discipline (or equivalent) plus significant relevant experience.
- Demonstrable experience in applying machine learning approaches to the analysis of high-throughput omics data sets.
- OR strong statistical knowledge, including power analysis as well as analysis of quantitative and qualitative data, including multi-factorial designs.
- Experience of delivering result reports in a service environment.
- Proficiency in the use of high-performance computing clusters.
- Ability to inspire and motivate colleagues, including students and technicians.
- Innovative.
- Able to clearly explain statistical and bioinformatics concepts to scientists.
- Knowledge in the field of cancer biology

**Expectations and Success Factors:**

- To be a proactive team member and treat all colleagues and students with respect in accordance with the established PS Behaviours
- To be willing to work across organisational boundaries
- To seek new knowledge and share ideas
- To be open and responsive to change and innovation

**The above particulars are intended as a general guide to the duties of the post and the conditions of service. They do not constitute a contract of employment between the University and the person appointed. The successful applicant will, however, receive a full set of conditions of service on appointment.**