THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF BIOLOGY, MEDICINE & HEALTH

SCHOOL OF BIOLOGICAL SCIENCES

EVOLUTION, INFECTION, AND GENOMICS

RESEARCH FELLOW

VACANCY REF: BMH-021862

Salary:	Grade 7 £44,414-£54,421 per annum, depending on relevant experience
Hours:	Full Time
Duration:	Fixed term for 22 for 22 months starting 1st June 2023.
Location:	Oxford Road, Manchester

Enquiries about the vacancy, shortlisting and interviews:
Name: William Newman
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BACKGROUND

Bill Newman and his research team at the University of Manchester have a longstanding interest in pharmacogenetics and its implementation into clinical practice to reduce adverse drug reactions and improve drug effectiveness. Recently they have demonstrated the use of a point of care test generating a genetic result in 26 minutes at the bedside to avoid antibiotic induced hearing loss. This work is now leading to routine implementation of this test across neonatal units in the UK within the NHS. Supported by the Genomic Medicine Service they are assessing ways to introduce pharmacogenetics testing in primary care in the NHS for commonly prescribed classes of drugs including antidepressants, proton pump inhibitors and statins.

With these strong foundations they have created a two year work program funded by the Greater Manchester Innovation Accelerator. Working with colleagues across the NHS, academia and industry they will deliver the DEVOTE programme.

The DEVOTE programme will deliver three exemplar projects with industry partners, each of which will transition a genetic biomarker along the translational pipeline towards a commercially viable product. The projects all address major clinical needs where thousands of individuals may benefit and current diagnostic tools are limited by turnaround times. Project 1: development and commercialisation of a bedside point of care genetic test to improve outcome from stroke. Project 2 - development of an ultra-rapid point genetic assay to prevent antibiotic induced hearing loss. Project 3 - project to develop comprehensive pharmacogenetics assay to improve efficacy and safety of prescription of many

commonly prescribed drugs, including analgesics.
There is a major unmet clinical need to develop diagnostics capable of delivering clinically relevant genetic results within critical timeframes. This programme will allow industry partners to seize this emerging innovation market opportunity. Each of the exemplar projects will create new intellectual property (IP) and will harness novel technologies, including the leveraging of advanced materials for diagnostics.
By increasing the availability of genomic testing through these technologies, DEVOTE will lead to more equitable access to potentially lifesaving results, reflecting the Greater Manchester Strategy to build a fairer region for its population. The DEVOTE programme and the industries it supports will drive investment in the local economy and lead to innovation-led productivity improvements in the city region's economy.

Overall Purpose of the Job

The research fellow will work on a number of pharmacogenetics research projects within the DEVOTE program considering different approaches to generate pharmacogenetic data; bioinformatic approaches to interrogate sequencing datasets to leverage these resources for pharmacogenetics and link them to clinical outcomes; explore functional approaches to aid classification of variants in genes relevant to pharmacogenetics. The fellow will work closely with the PI and co-applicants to design and execute relevant studies and support other members of the research team in delivering the DEVOTE programme.

Key Responsibilities, Accountabilities or Duties

The range of duties will include:

- Contribute to the teaching and learning programmes in the Evolution, Infection and Genomics Division within the School of Biological Sciences.
- Supervise postgraduate research students.
- Develop research objectives, projects and proposals.
- Conduct individual or collaborative research projects within the DEVOTE programme.
- Identify sources of funding and contribute to the process of securing funds for allied pharmacogenetics studies.
- Extend, transform and apply knowledge acquired from scholarship to research and appropriate external activities.
- Write or contribute to publications or disseminate research findings using other appropriate media.
- Make presentations at conferences or exhibit work in other appropriate events.
- Routinely communicate complex and conceptual ideas to those with limited knowledge and understanding as well as to peers using high level skills and a range of media.
- Collaborate actively within and outwith the University to complete research projects and advance thinking.
- Participate in external networks, for example to build relationships for future activities.
- Mentor colleagues with less experience and advise on personal development.
- Coach and support colleagues in developing their research techniques.
- Supervise the work of others - undergraduate an postgraduate students.
- Take lead responsibility for a small research project or identified parts of a large project.
- Develop productive working relationships with other members of staff.
- Co-ordinate the work of colleagues to ensure equitable access to resources and facilities.
- Deal with standard problems and help colleagues resolve their concerns about progress in research.
- Assess, interpret and evaluate outcomes of research.

- Develop new concepts and ideas to extend intellectual understanding.
- Resolve problems of meeting research objectives and deadlines.
- Develop ideas for generating income and promoting research area.
- Develop ideas for application of research outcomes.
- In collaboration, decide on research programmes and methodologies.
- Plan, co-ordinate and implement research programmes.
- Manage the use of research resources and ensure that effective use is made of them.
- Manage or monitor research budgets.
- Help to plan and implement commercial and consultancy activities.
- Plan and manage own consultancy assignments.
- Balance the pressures of research and administrative demands and competing deadlines.
- Conduct risk assessment and take responsibility for the health and safety of others.

PERSON SPECIFICATION

Essential

- Hold a relevant PhD (or equivalent)
- Hold a high academic standing with a growing reputation in research.
- Specialist knowledge in pharmacogenetics to develop research programmes and methodologies with expertise in assay design, experience of working in a world leading pharmacogenetics group
- Experience of working in industry and liaison between academia and the commercial sector
- Experience in planning, working in a team and delivering results.
- Evidence of ability to use a range of delivery techniques to enthuse and engage students.
- Experience of developing research methodologies and devising models, approaches, techniques, critiques and methods.
- Excellent communication and interpersonal skills
- Excellent time management and organisational skills
- Ability to work independently and as part of a team
- Ability to present in both written and oral publications
- Ability to meet deadlines
- The ability to evaluate complex data
- Ability to liaise confidently and effectively with a range of individuals
- Flexible approach to dealing with research problems as they arise
- Willingness to learn and develop
- Ability to assess and organise resources
- Contribute to a wide range of administrative tasks within the School such as recruitment, and management of resources.
- Understand equal opportunity issues as they may impact on areas of research content.

Desirable

- A sustained publication record in pharmacogenetics