THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF BIOLOGY, MEDICINE & HEALTH

SCHOOL OF BIOLOGICAL SCIENCES

DIVISION OF IMMUNOLOGY, IMMUNITY TO

INFECTION, AND RESPIRATORY MEDICINE

RESEARCH ASSOCIATE

VACANCY REF: BMH-030796

Salary:	Grade 6: £37,694 - £46,049 per annum, depending on experience
Hours:	Full Time
Duration:	Fixed term for 8 months
Location:	Oxford Road, Manchester

Enquiries about the vacancy, shortlisting and interviews:
Name: Sheena Cruickshank
Email: sheena.cruickshank@manchester.ac.uk

Applications should be made online. If you are unable to apply on line please request an application form by emailing peopleservices@manchester.ac.uk quoting the reference number or by calling 0161 306 4059.

The University of Manchester values a diverse workforce and welcomes applications from all sections of the community.

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BACKGROUND

Severe skin conditions and skin inflammation are incredibly common in patients with the autoimmune gut condition Crohn's disease (CD). Around one third of patients will develop severe skin problems like abscesses before their CD is diagnosed further complicating and worsening their patient experience. This is known as metastatic cutaneous Crohn's disease (MCD). What drives MCD is really poorly understood. This is important, because the lack of awareness about MCD hugely affects diagnosis, treatment options and quality of life. A better understanding and clinical definition of MCD is a major unmet need. Our pilot data has revealed changes in the microbes that are found on the skin. We also see changes in the epithelial cells and immune cells in the skin of affected patients but we don't know whether this in response to or is a driver of the skin inflammation. We will use a range of methods to better understand what triggers the inflammation in the skin, what the immune cells are producing and how skin cells react to the altered microbiome with a view to better understanding MCD and work towards biomarkers to better diagnose it.

This project is based in the Immunology lab in AV Hill. The candidate will work closely with the multi-disciplinary academic team as well as the clinical team and a clinical PhD student working on related research.

The University of Manchester

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 by 2020 and are committed to delivering (a) an outstanding teaching and learning experience; (b) contributing to the social and economic success of local, national and international communities; (c) producing the highest calibre graduates; (d) and developing our staff to be amongst the very best of their peers. Our trajectory is excellent, evidenced by recently being named as the world number one university in the THE Impact rankings.

We are unique in the UK higher education sector in having Social Responsibility as one of our three core strategic goals, sitting equally alongside our commitments to research and teaching. 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 University of Manchester strives to make our community a welcoming, caring and enthusiastic one, fuelling ambition, combined with opportunities and support to help us all achieve our personal and professional goals. Our diverse job opportunities include an attractive benefits package 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 equality of opportunity for our staff and students, and our ambition is to employ a workforce that reflects the diverse community we serve.

As a global institution, situated at the heart of a lively, culturally diverse city, we welcome applicants of all nationalities. To help international job applicants plan for life in the UK, we have put together some useful information on passports and visas, travel to the UK, accommodation and a number of other practical considerations.

Faculty of Biology, Medicine and Health (FBMH)

The Faculty of Biology, Medicine and Health has an integrated structure to deliver a truly translational approach to the life sciences, ensuring smooth research pathways - from pure discovery science through to clinical application and patient care. With a total annual income of over £300 million, and over 3,000 members of staff, the Faculty is comparable in size to a medium-sized UK university. Thirty undergraduate and 90 postgraduate programmes offer our 11,000 students opportunities to develop the skills and knowledge they need for a successful career. The integration of discovery biology, clinical application and patient care within a single Faculty, particularly in a region with notable health inequality, provides us with a real opportunity to have a very significant and positive impact on people's lives.

Working for the University of Manchester

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At the University of Manchester we are committed to the development of all staff and through-out this post will offer training and personal development opportunities relevant to your skills, experience and career aspirations.

Overall Purpose of the Job

The candidate will work with the clinical PhD student to investigate altered bacterial cross talk with skin cells in the context of Metastatic cutaneous Crohn's disease. This will involve cell culture, microbial co-culture, flow cytometry analysis of skin and blood cells and functional outputs such as viability and cytokine production. Additional roles will involve helping support the collection of human samples for the project and processing of samples. An ideal candidate would have an understanding of tools such as R to get involved in assessment of the data available on metagenomics, mass cytometry or spatial transcriptomic data of tissue responses.

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Key Responsibilities, Accountabilities or Duties

The range of duties will include:

- Conduct cell culture experiments to look at function of immune subsets and/or epithelial cells
- Conduct microbial co-culture experiments with human cells
- Support analysis of microbiome and blood cells
- Support human tissue collection and processing and record keeping in line with good HTA practice
- Be involved in the assessment of student knowledge and supervision of projects.
- Conduct individual and collaborative research projects.
- Write up research work for publication.
- Continually update knowledge and understanding in field or specialism.
- Translate knowledge of advances in the subject area into research activity.
- Liaise with colleagues and students.
- Manage own research and administrative activities, with guidance if required.
- Work with colleagues on joint projects, as required
- Collaborate with academic colleagues on areas of shared research interest.
- Attend and contribute to relevant meetings.
- Use creativity to analyse and interpret research data and draw conclusions on the outcomes.
- Contribute to collaborative decision making with colleagues in areas of research.
- Use research resources, laboratories and workshops as appropriate.
- Plan and manage own research activity in collaboration with others.
- Balance with help the competing pressures of research and administrative demands and deadlines.
- Be aware of the risks in the work environment and their potential impact on their own work and that of others.

PERSON SPECIFICATION

Essential

- Have, or be about to obtain, a relevant PhD (or equivalent)
- Specialist knowledge in immunology
- Experience in research methods such as cell culture, human tissue analysis and microbial culture. The ideal candidate would be familiar with some coding skills to support the omic analysis.
- Excellent communication and interpersonal skills
- Excellent time management and organisational skills
- Ability to work independently and as part of a team
- 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 present in both written and oral publications
- Ability to meet deadlines
- Strong journal publication record.
- The ability to evaluate complex data
- Ability to contribute to broader management and administrative processes.
- Ability to assess and organise resources.