THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF SCIENCE & ENGINEERING

SCHOOL OF NATURAL SCIENCES

DEPARTMENT OF CHEMISTRY

FUTURE BIOMANUFACTURING RESEARCH HUB - RESEARCH FELLOW:

SCALE UP OF BIOCATALYTIC PROCESSES FOR BIOMANUFACTURING

(2 POSTS AVAILABLE)

VACANCY REF: SAE-019721

Salary:	Grade 7, £43,414 to £53,353 per annum, depending on relevant experience
Hours:	2 full time posts
Duration:	Fixed term available from 1 October 2022 until 31 March 2026
Location:	Oxford Road, Manchester

Enquiries about the vacancy, shortlisting and interviews:
Name: Prof Nigel Scrutton, Director of the Future BRH
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Name: Dr Rosalind Le Feuvre, Director of Future BRH Operations
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Project Title: Future BRH: scale up of biocatalytic processes for biomanufacturing

Project Description

The University of Manchester is leading the Future Biomanufacturing Research Hub (Future BRH, https://futurebrh.com/) with reseach Spokes at Imperial, UCL, Nottingham, IBioIC, CPI, and the UK Catalysis Hub. At the Future BRH we are developing industrial biotechnology towards efficient and sustainable bio-based manufacturing for key UK sectors: Pharmaceuticals; Chemicals; Engineering Materials and Fuels. By connecting interdisciplinary discovery science together with industry we are devloping innovative biomanufacturing solutions to help support the growing bio-economy.

We are looking for a Research Fellow to join our interdisciplinary team, where you will be supported to combine your individual talents with the wider team's breadth of skills.

You will be based in the Manchester Institute of Biotechnology (MIB) at the University of

Manchester which is a cross-disciplinary research Centre that brings together diverse expertise including: molecular biology; chemistry; biochemical-engineering; materials science; synthetic biology; analytics and computer science.

We are committed to creating a fully inclusive and flexible culture, one where everyone can realise their potential and make a positive contribution to our organisation. We believe that if we can positively diversify our staff we will be able to collaborate more effectively and create a more productive environment. If you think you will be a good fit for this role we look forward to hearing from you!

Overall Purpose of the Positions

The position will focus on the bioproduction of small-molecule chemicals and monomers, and associated down-stream processes. We seek applications from diverse candidates with a relevant background, and demonstrable experience, in **developing and employing biocatalysts, and the scale up of biocatalytic processes.**

We are looking for someone with new insights, fresh perspectives and the research experience to deliver our collaborative science programmes, and to work with both academic and industrial partners. In this role you will be encouraged to develop your research and professional skills for career development (e.g. towards an independent career in academia, or in industry). As a member of an interdisciplinary research team, you will have the interpersonal skills and a strong ethos for team-based working.

For further information on our activities to date see our website: https://futurebrh.com

Key Responsibilities, Accountabilities or Duties

You will work on a number of research projects alongside academic and research staff, management team and industrial partner(s) to realise the scientific vision of the Hub.

Main Responsibilities:

Scale up of biocatalytic processes for biomanufacturing: Supporting our research theme "*realising the value of industrial biotechnology at scale"*, this Research Fellow position will drive the development of scaled up biocatalytic processes for biomanufacturing applications, with a particular focus on the chemical and materials sectors.

As a Research Fellow you will:

- Develop and undertake high quality research according to your area of expertise across multiple science projects within the Future BRH portfolio.
- Work closely with the Future BRH management team and scientific research leads to ensure timely delivery of research outputs.
- Provide new insights and perpectives, using your experience to establishing innovative experimental protocols to deliver high quality research.
- Work as part of our diverse research team and collaborate with our Spoke institutions: University College London, Imperial College London, Nottingham, CPI, Catalysis Hub and IBioIC.
- Use your initiative to manage your time and work independently towards timely research dissemination and publication (contributing experimental data, writing and review) in high quality academic journals, and through presentations at conferences and seminars.

- Help develop Future BRH collaborations through participating in internal/external networks to exchange information and explore research ideas.
- Provide technical training and support to fellow researchers and students in the Future BRH.
- Work closely with industry partners to ensure delivery of industry focused outputs.

Person Specification

Essential Knowledge, Skills and Experience

As someone who is highly motivated and experienced in your research field, you will have a PhD (or equivalent) in a relevant background, with additional research knowledge gained in either an academic or industry setting. We are open to candidates who can meet our requirements from diverse backgrounds and differing levels of seniority, and actively encourage individuals from under-represented groups to apply.

Experience

- A demonstrable record of research in the application of biocatalysts for chemicals production and biomanufacturing, with a background in biocatalysis, organic and analytical chemistry, downstream processing and bioprocess engineering, or related disciplines. Specialist knowledge is expected from a PhD and post-doctoral research (or through relevant experience in industry).
- Evidence of developing innovative experimental protocols and devising novel approaches, techniques, critiques and methods.
- An ability to work collaboratively as part of a team, with a strong collaborative ethos and a flexible approach to dealing with research problems as they arise.
- A wide interest in industrial biotechnology/ biomanufacturing approaches.

Research and Scholarship

- The ability to effectively plan and manage your research projects in collaboration with others.
- An openness to collaborate with academic / industrial colleagues on areas of shared research interest.
- Interpersonal skills to attend and contribute to, and where appropraite lead, relevant research meetings.
- Initiative and creativity to identify areas for research, develop new research methods and extend the Future BRH research portfolio.
- Creativity to analyse and interpret research data and draw conclusions on the outcomes, and evaluate and communicate complex data.
- Ability to translate knowledge of advances in the subject area into research activity.
- Skills to contribute to publications and disseminate research findings.

Communication

- Excellent interpersonal and communication skills (both written and oral).
- A willingness to speak at national and international conferences; you could represent the Future BRH at appropriate events.
- Ability to communicate complex information and material of a specialist or highly technical nature, orally, in writing and electronically.
- Experience to communicate complex and conceptual ideas to diverse audiences including those with limited scientific knowledge and understanding, as well as to peers using a range of media.

Liaison and Networking

- Ablity to demonstrate and evidence a heartfelt commitment to diversity and inclusion
- A self-motivated attitude with the ability to work independently and creatively as part of a diverse interdisciplinary team.
- Capability to work across multiple research projects and organise your workload accordingly.
- Skills to actively collaborate within and out-with the University to complete research tasks.
- Initiative to participate in and develop external networks, for example to identify sources of funding, or build relationships for future activities.
- Ability to bring your individuality and breadth of background experience and skills to make a positive contribution to our University.

Teaching and Learning Support

- Ability to support and train other researchers including post-doctoral research associates, technicians and postgraduate research students.

Managing People

- Ability to advise colleagues with less experience and provide assistance on professional development.
- Ability to supervise the work of others and in developing their research techniques, for example in research teams or projects.

Teamwork

- Responsibility for smaller research projects or identified parts of a large project.
- Ability to develop productive working relationships with other members of staff, understanding our commitment to creating a fully inclusive and flexible culture where everyone can realise their potential and make a positive contribution.
- Ability to co-ordinate the work of colleagues to ensure equitable access to resources and facilities.

Pastoral Care

- Ability to deal with standard problems and help colleagues resolve their concerns about progress in research.
- Have an open collaborative ethos.

Initiative, Problem Solving and Decision Making

- Ability to assess, interpret and evaluate outcomes of research.
- Ability to resolve problems to meet research objectives and deadlines.
- Initiative to develop ideas for generating income, promoting research and application of research outcomes.
- Ability to develop new research programmes and methodologies, often in collaboration with colleagues, and subject to the approval of the Future BRH management team.

Planning and Managing Resources

- Capability to plan, co-ordinate and implement research programmes.
- Ability to manage the use of research resources and ensure that effective use is made of them.
- Opportunities for scientific project management of industry-interfaced projects (working with academics and Future BRH management)
- Opportunities to help to plan and implement commercial and consultancy activities.

Sensory, Physical and Emotional Demands

- Ability to balance the pressures of research and administrative demands and competing deadlines.
- Ability to engage and collaborate with our diverse team.

Work Environment

- Responsibility for conducting research related risk assessments that contribute to the health and safety of others.
- Use your individual skills to help us develop a fully inclusive and flexible working environment.

Applications are very welcome from candidates who wish to re-establish themselves in active research after a career break, or other period of absence due to circumstances such as maternity, paternity, long term illness, or caring responsibilities. There are no nationality restrictions for these positions.

As an equal opportunities employer we expect and actively encourage applicants from all sections of the community regardless of age, sex, gender (or gender identity), ethnicity, disability, sexual orientation and transgender status. All appointments are made on merit. Our University is positive about flexible working – you can find out more here.

We hope that by working with us you will be part of something where you feel included, valued and proud.

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.