THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF SCIENCE & ENGINEERING

SCHOOL OF NATURAL SCIENCES

DEPARTMENT OF CHEMISTRY

RESEARCH FELLOW (SYNTHETIC BIOLOGY)

VACANCY REF: SAE-022889

Salary:	Grade 7 £45,585 to £56,021 per annum depending on relevant experience
Hours:	Full time
Duration:	Fixed term from 1 September 2023 until 31 August 2026
Location:	Manchester Institute of Biotechnology

Enquiries about the vacancy, shortlisting and interviews:
Name: Patrick Cai
Email: yizhi.cai@manchester.ac.uk

Background

We are looking for an experienced Research Fellow to join the synthetic biology research group of Professor Patrick Cai in the Manchester Institute of Biotechnology and work closely with the Synthetic Genomics team at the Wellcome Trust Sanger Institute.

The Research Fellow will get to work on this high-profile, ground-breaking project and make use state of the art techniques and technologies (e.g. chromosome synthesis, directed evolution, nanopore sequencing) in a collaborative working environment within and across institutions. The ideal candidate will be experienced with synthetic biology, yeast cell biology and genome engineering. Being familiar with mitochodrial genetics, chromosomal biology and DNA assembly technologies (e.g., Golden Gate Assembly) would be advantageous.

Applicants should have a PhD in synthetic biology, genome engineering or yeast cell biology (or equivalent) for appointment at Research Fellow level.

This post offers an excellent opportunity for career advancement at the number one hub for synthetic biology and synthetic genomics in Europe. The selected researcher will join a friendly and inclusive team that champions diversity and prioritises the career growth of its researchers

over everything else. The group is internationally regarded for its research, for its positive nature and for the excellent outcomes of its alumni, many of whom are now group leaders of their own or founders of start-up companies.

Please see the job description and person specification document associated with this advert for the full list of criteria.

Overall Purpose of the Job

This EPSRC-funded role is available for a Research Fellow that will work on developing big DNA technologies to allow flexible yet efficient engineering of synthetic mitochondrial genomes and synthetic chromosomes.

Key Responsibilities, Accountabilities or Duties

The range of duties will include:

- Supervise postgraduate research students.
- Develop research objectives, projects and proposals.
- Conduct individual or collaborative research projects.
- Identify sources of funding and contribute to the process of securing funds.
- 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 and develop external networks, for example to identify sources of funding, generate income, obtain consultancy projects, or 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
- 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 the discipline to develop research programmes and methodologies in engineering mitochondrial genomes
- A sustained publication record, to RAE standards.
- 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 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
- Contribute to a wide range of administrative tasks within the School such as assessment exercises, recruitment, and management of resources.
- Ability to assess and organise resources
- Understand equal opportunity issues as they may impact on areas of research content.

Desirable

- Experience of handling large/complex high throughput biology projects, evaluate and communicate complex data (D).
- Ability to translate knowledge of advances in the subject area into research activity (D).
- Ability to communicate complex information and material of a specialist or highly technical nature, orally, in writing and electronically (D).
- Intention to attend and contribute to relevant meetings (D).
- Use initiative and creativity to identify areas for research, develop new research methods and extend the research portfolio (D).
- Use creativity to analyse and interpret research data and draw conclusions on the outcomes (D).
- Contribute to collaborative decision making with colleagues in areas of research (D).