

Research Associate in Bacteriophage Biomanufacturing (Fixed Term for 9 months)

Job Ref: REQ260148

School/Department summary: The Chemical Engineering Department is a vibrant and welcoming research community undertaking fundamental and applied research addressing global challenges including climate, sustainable manufacturing and health care technologies. We are committed to achieving equality for all those who learn and work here and providing a diverse and inclusive working environment. We will consider reasonable adjustments commensurate with the project requirements.

Job Description

Job Family and Grade: Specialist and Supporting Academic Grade 6

Job Purpose

This project aims to develop new bacteriophage-based therapeutics for the treatment of antibiotic resistant infections. The work involves manufacturing and purification of bacteriophages using scalable manufacturing platforms using bioreactors and downstream purification using membrane and chromatography process technologies. Furthermore, the project will involve extensive testing of phage nebulization and assessment of dose delivery in an in vitro lung simulator model to develop phage therapeutics targeting infections in cystic fibrosis patients. The project will involve working with a commercial industrial partner.

The project is led by Professor Danish J Malik.

Job Duties

- To undertake development of phage bioprocessing and test nebulization of phage formulations using a next generation impactor and breathing simulator model.
- To undertake experimental work on the production of bacteriophages therapeutics including their purification and enumeration.
- To implement standard operating procedures for phage manufacture and nebulization testing.
- Be responsible for conducting the day to day running of the project.
- To formulate and implement detailed plans for the project based on broad guidance.
- To feed back to the project team on progress and to make recommendations for next steps.
- Write up regular progress reports and present outcomes to the investigators and sponsors.
- Attend meetings and make presentations within the project partners working group.
- Maintain confidentiality at all times and ensure that intellectual property (IPR) agreements are not violated.
- To perform risk assessments, develop method statements and implement safe working practices.
- To assist the academic staff in the project team with the supervision of undergraduate MSc and PhD project work and day-to-day supervision and support of other researchers.
- To assist in the development of research proposals and grant applications for follow-on project funding.

- General team organization and coordination.
- Undertake other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.
- To work effectively with relevant administrative, technical and academic staff in the School and across the University.
- To engage in training programmes in the University (e.g. through Staff Development) which are consistent with the RA's ongoing professional development, and the needs and aspirations of the project team and those of the School.
- To support Chemical Engineering teaching delivery as required
- To carry out specific other duties as may be reasonably requested by the project leaders and that are commensurate with the nature and grade of the post.

Points To Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility outlined in the document.

Organisational Responsibility

Reports to: Professor Danish Malik

Person Specification

Your application will be assessed based on the essential and desirable criteria listed below.

Applicants are strongly encouraged to explicitly demonstrate how they meet each essential (and desirable) criteria at the application stage. The criteria that you need to demonstrate in your application will be listed as Stage 1 in the table below.

Stages of assessment are as follows:

- 1 – Criteria measured within the Application
- 2 – Criteria measured at Test/Assessment Centre/Presentation
- 3 - Criteria measured at Interview

Essential Criteria

Area	Criteria	Stage
Experience	Experience in microbiology techniques and working in a microbiology lab.	1, 3
	Experience in using excel to collate and analyse data.	1, 3
	Experience in writing technical reports for presentation to industry.	1
Skills and abilities	Aseptic technique and handling of microorganisms at BSL2	1, 3
	Ability to design and implement an experimental plan with relevant controls	1, 3
	Ability to set up and execute a work program and communicate to various stakeholders	1, 3
	Excellent written and oral communication skills	1, 3
	Self-motivated with ability to meet deadlines	1, 3
	Excellent interpersonal, and organisational skills	1, 3
	Ability to write project reports and make technical presentations to industrial partners	1

	Knowledge of relevant Health & Safety issues	1, 3
Training	Demonstrate evidence of having undertaken further training	1
Qualifications	A good honours degree in an Science or Engineering subject. A PhD in a Science or Engineering subject.	1
Other	Uphold and actively contribute to the University's commitment to Equity, Diversity and Inclusion.	1,3

Desirable Criteria: These are skills, experience and competencies that are additional extras that may be used to narrow the pool down if we receive a high volume of applications that meet the essential criteria.

Area	Criteria	Stage
Experience	Knowledge of upstream bioprocesses and culturing microbial systems	1
Skills and abilities	Authoring original work, in the highest quality refereed academic journals	1

Conditions of Service

The appointment will be subject to the [University's Terms and Conditions of Employment](#) relevant to the job grade.

Shared University Responsibilities

As a member of the Loughborough community, you are expected to:

- Take reasonable care of yourself, others and the environment, and to prevent harm by your acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Sustainability Policies & Procedures.
- Support and contribute to the University's commitment to Equity, Diversity, and Inclusion (EDI), while carrying out all duties in a way that respects these principles and upholds the right to free expression. Further information about EDI at Loughborough and our strategic aims is available on our website.

Our Purpose, Vision, and Values

Our purpose, Vision and Values underpin all that we do and shape how we work together at Loughborough.

We're proud to promote our values: **Adventurous, Collaborative, Creative, Authentic** and **Responsible**. Our people bring these values to life every day, and they are central to the positive and supportive culture that makes Loughborough unique.

If you join us, you'll be encouraged to bring these values to life in your own work and contribute to the positive, supportive culture that makes Loughborough unique.

Read more about our [vision and values](#).

Our Accreditations



We strive to create a culture that supports equity and celebrates diversity throughout the campus. The University holds a [Bronze Athena SWAN award](#) which recognises the importance of support for women at all stages of their career.



We are proud to be a [Race Equality Charter Member](#). The Charter aims to improve the representation, progression and success of all minority ethnic staff and students within higher education and address issues of racism within higher education institutions (HEIs).



We are proud to be a Disability Confident Employer and have adopted a proactive approach to employing disabled people and to creating a more diverse workforce. We ensure that our recruitment processes are inclusive and accessible. We guarantee to offer an interview to all applicants who have declared a disability, provided that the essential criteria for the role are met. We proactively anticipate and provide reasonable adjustments and support existing employees who acquire a disability or long-term condition to thrive in the workplace.



We are a real living wage employer, and our Living Wage Employer Mark shows our commitment to paying our staff according to the cost of living.



We are proud supporters of the [City of Sanctuary movement](#) and delighted to be recognised as a University of Sanctuary. This national network brings together, university staff, lecturers, academics, and students, who together work to make Higher Education institutions places of safety, solidarity and empowerment for people seeking sanctuary.

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.