

Research Assistant in Biological Engineering

REQ190604

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

CENTRE FOR BIOLOGICAL ENGINEERING

Now that the human genome, amongst others, has been sequenced and now that some of the roles of each gene have been understood many of the proteins that they encode will have to be produced in sufficient quantities for the predicted benefits in human healthcare and welfare to be realised. Additionally, within the pharmaceutical and healthcare functions there is an immediate worldwide need for the development of replacement human tissue *via* the regenerative medicine approach and the application of stem cells. Indeed continued improvements in the nation's health depend upon the efficient development of new generations of bioscience-based therapies and techniques. In line with Loughborough's long-term strategy to help to 'improve the nations quality of life' the University created a fully integrated 'innovation-to-product' shared 'Centre for Biological Engineering' (CBE) between the Department of Chemical Engineering and The Wolfson School of Mechanical, Electrical and Manufacturing Engineering. This initiative has built capability and capacity in biological engineering in the UK and by maximising the amount of resource available, will enable Loughborough to compete with the best in the world. The 650m² facility is made-up of a suite of Class 2 laboratories for animal and human cell growth and an analytical suite to service all laboratories. In particular the facility is entered *via* a dedicated restricted access laboratory transfer area which will enable controlled operation for the whole area. Equipment available includes a range of new cell culture vessels, an automated cell culture platform, flow cytometry as well as other state-of-the-art imaging and analytical techniques. Additionally, open plan postgraduate/postdoctoral writing and meeting rooms are located adjacent to these laboratories. The activities within the CBE are positioned in the translational space between scientific discovery and the production of cell based/biological products, techniques and therapies. This makes us one of the major national centres for late stage, process oriented research. The CBE is also home to the Loughborough led EPSRC Centre for Doctoral Training (CDT) in Regenerative Medicine which is funding the training of >100 PhD students over >10 years. This CDT is held jointly with Keele and Nottingham Universities but is led from Loughborough.

Job Description

This short term 12-month post will focus on basic research within a project exploring whether a novel biological matrix can be used to encapsulate cells and their hypothermic storage and transport.

The successful applicant will be based in the Centre for Biological Engineering (CBE) described above. They will be supervised by Dr Karen Coopman and Dr Marijana Dragosavac and join a team of research associates and students working at the interface between engineering and the life sciences.

Job Grade

Specialist and Supporting Academic Grade 5

Job Purpose

To support the testing of a biological matrix for its ability to encapsulate cells and support them during ambient or refrigerated storage and transportation.

Job Duties and Responsibilities

- To routinely culture and grow mammalian cells (including mesenchymal stem cells) in T flasks and well plates.
- To establish the best conditions for encapsulating cells in the matrix supplied by our collaborators.
- To determine the ability of the matrix supplied by our collaborators to support hypothermic storage of mesenchymal stem cells under either ambient or refrigerated conditions.
- To participate in joint discussions with the company supplying the matrix.
- To write progress reports and attend regular project progress meetings to present results.
- To contribute to the writing and delivery of scientific papers describing the outcomes of the project.
- To assist in the day-to-day supervision of students working in a related scientific area.
- Engage in training programmes at the University (e.g. through Staff Development) that are consistent with their needs and aspirations and those of the School.
- To undertake such other duties as may be reasonably requested 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 entailed.

Special Conditions

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Respecting Diversity and, where appropriate, Recruitment and Selection.

Organisational Responsibility

Reports to Dr Karen Coopman

Person Specification

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

- 1 – Application
- 2 – Test/Assessment Centre/Presentation
- 3 – Interview

Essential Criteria

Area	Criteria	Stage
Experience	Some research experience in an academic or industrial environment	1, 3
	Experience of mammalian cell culture and cell characterisation techniques	1, 3
Skills and abilities	Ability to communicate complex technical concepts and requirements	3
	A demonstrated ability to write project reports and make technical presentation to industrial and academic research groups	1, 3
	Observance of health and safety rules	3
Training	Demonstrate evidence of having undertaken further training	3
Qualifications	A 2.1 or higher first degree in Biochemical engineering or a related discipline	1
Other	Commitment to observing the University's Equal Opportunities policy at all times	3

Desirable Criteria

Area	Criteria	Stage
Experience	Experience of cryopreservation or hypothermic storage of cells	1, 3
	Experience of working with hydrogels	1, 3
	Experience with membrane emulsification	1, 3
Skills and abilities	Ability to develop experiments and analyse resulting data	1, 3
	Ability to present research findings to a variety of audiences	1, 3
	Ability to analyse data	1, 3
	Ability to work as part of a team	3
Qualifications	A higher qualification in Biochemical engineering or related area or relevant research based experience	1

Conditions of Service

The position is **full time** and **fixed term** for 12 months. Salary will be on a Specialist and Supporting Academic Grade 5, (£24,771 - £29,515 per annum), at a starting salary to be confirmed on offer of appointment.

The appointment will be subject to the University's normal Terms and Conditions of Employment for Grades 1-5 staff, details of which can be found [here](#).

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which are available at <http://www.lboro.ac.uk/services/hr/a-z/family-leave-policy-and-procedure---page.html>.

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available at: <http://www.lboro.ac.uk/services/hr/a-z/childcare-information---page.html>)

In addition, the University is supportive, wherever possible, of flexible working arrangements. We also strive to create a culture that supports equality 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 academic career. For further information on Athena SWAN see <http://www.lboro.ac.uk/services/hr/athena-swan/>

Applications

The closing date for receipt of applications is **16 August 2019**.

Interviews to take place on 30 August 2019.