Wolfson School of Mechanical, Electrical and Manufacturing Engineering

Research Associate - Epigenetic cell ageing marker in a cell therapy product

REQ231173

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

As part of the project "A volatilome-based signature for age-related recovery & resilience" funded by the Wellcome LEAP Dynamic Resilience Program (https://wellcomeleap.org/dr/)
the group of Prof. Alexandra Stolzing aims to establish and deploy advanced 3D tissue models and for research on the volatilome signature of aging in cells and humans.

The main tasks focus on wet lab experiments, establishing and operating advanced 3D models under your stewardship, incorporating the unique dimension of volatilome, and biogerontology assays and pathway analysis.

The project involves interactions with colleagues in the Chemistry, Sports Science and Computer Science Departments of Loughborough University and liaison with other investigators working for the programme and well as with some third-party suppliers and collaborators. The role requires timely, effective study management skills and reporting to the Principal Investigator.

Alongside your core tasks, you will be encouraged and supported in establishing collaborative research in ageing research, and to engage in collaborations locally, nationally, and internationally. We are committed to supporting your career development with mentoring and training opportunities to enhance your skills and experience.

We are seeking a highly motivated, results-oriented, self-starter who thrives on increasing levels of responsibility. Applicants should have completed -or be very close to completion of- a PhD in a relevant subject such as 3D in-vitro model systems, microfluidics, tissue engineering, or cellular biology and have interest in applying this knowledge to ageing research. We are open to appointing applicants from other backgrounds with the ability and motivation to acquire the required skills.

Job Description

Job Grade: Specialist and Supporting Academic Grade 6

Job Purpose: This role is responsible for activity B and C of the Wellcome Leap project. This includes the development and use of in vitro models of BBB, skeletal muscle and bone with features of aging, pathway analysis and research on volatiles. To generate high quality scientific reports and papers suitable for publication in International Journals.

Job Duties:

Research

The role will include:

- Establishing and operating 3D models of the blood-brain-barrier, muscle (mimicking sarcopenia) and bone (mimicking osteoporosis).
- Provide biological context on the volatile ageing biomarkers measured from these cell models and from human participants.
- Assistance with target development for interventions into the ageing process.
- Design and conduct experiments in line with the above objectives.
- Providing initiative to ensure project goals are met in the face of technical challenges and tight deadlines.
- Presenting, publishing, and discussing the outcomes of the research.

Teaching

- The Research Associate will be expected to contribute to the supervision of student projects, as appropriate.

Other

- Engage in training programmes at the University (e.g. through Staff Development) that are consistent with the candidate's 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 Prof. Alexandra Stolzing, the Principal Investigator.

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	Experience in cell biology techniques and in cell and tissue culture	1, 3
	Experience in microfluidics	1, 3
	Experience of complex interdisciplinary projects in an industrial or academic environment	1,3
	Experience of writing technical reports & scientific publications	1, 3
Skills and abilities	Ability to work independently and as part of a team	1, 3
	Self-motivated	1, 3
	Basic IT skills	1, 3
	Excellent interpersonal, communication and time-management skills	1, 3
	Good laboratory and analytical skills	1, 3
	Training in scientific record keeping	1, 3
Training	Be prepared to undertake further training both internally and externally	3
Qualifications	Postgraduate degree in cell biology, tissue engineering, microfluidics, or other discipline relevant to the role	1
	Good honours degree in a biological discipline	1
Other	To observe the University's Equal Opportunities policy at all times	3
	To comply with Health and Safety regulations	3
	Commitment to maintain confidentiality at all times	3
	Willingness to work in a Containment Level 2 cell culture laboratory	3

Desirable Criteria

Area	Criteria	Stage
Skills and abilities	Knowledge of relevant health & safety issues including biological safety techniques, practices and sterile procedures	1, 3
Experience	Experience in endothelial and/or skeletal muscle cell culture	1, 3
	Experience with 3D chip based cell models including BBB, bone or skeletal muscle	1, 3
	Experience with ImageJ (or similar software)	1, 3
	Experience with biogerontology /senescence	1, 3
	Experience with pathway analysis	1, 3
	Experience of cell modification	1, 3
	Willingness to travel	3

Conditions of Service

This is a full-time post until 7 September 2026. Salary will be on Research Grade 6, £33,966 to £ 44,263 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 Technical staff, details of which can be found http://www.lboro.ac.uk/services/hr/a-z/conditions-of-service.html.

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 http://www.lboro.ac.uk/services/hr/athena-swan/.