

**Faculty of Biological Sciences
School of Biomedical Sciences**

**Summer Research Placement
8 weeks, between 24th June – 16th August**

Job Summary

Stipend is £270 per week.

Informal enquiries may be made to Dr Miriam Hurley (M.E.Hurley@leeds.ac.uk)

To apply, please send your CV and a covering letter (200-300 words maximum)

Closing Date: Noon on 2nd February 2024

Interviews: 9th February 2024

Job Description

Reports to: Dr Miriam Hurley

Main Duties and Responsibilities

With age, the heart is exposed to pressure overload. As a result, the heart can undergo structural remodelling which can subsequently alter calcium handling. This project will specifically study the orientation of Piezo-1 within the heart. Piezo-1 is a mechanosensitive ion channel which is known to have a greater expression with age and when activated can elevate calcium signalling.

The project will utilise confocal microscopy to map the global location of Piezo-1 across the heart, knowledge which is currently unknown within the rat. In addition, application of a super-resolution microscopy technique, known as expansion microscopy, will be applied to visualise the nanoscale orientation of Piezo-1 in relation to specific calcium handling proteins within hearts from 6-, 12- and 24-month old rats to evaluate structural remodelling across age.

Overall, understanding the structural heterogeneity of Piezo-1 within the heart across age in relation to calcium handling proteins will provide a mechanistic insight into how the heart's structure-function relationship alters with age.

The main methods used in the project will be:

- Sectioning cardiac tissue
- Immunofluorescence staining, confocal and expansion microscopy
- You will also have responsibility for the analysis and presentation of your data

Person Specification

Essential

- Basic laboratory skills
- A basic understanding of the cardiovascular system at a cellular and organ level

Additional Information

Details of the terms and conditions of employment for all staff at the university, including information on pensions and benefits, are available on the Human Resources web pages accessible via the links on the right hand side, or at <http://www.leeds.ac.uk/hr/index.htm>

Criminal Record Disclosures

A Criminal Records Disclosure is not required for this position. However, applicants who have unspent convictions must indicate this in the 'other personal details' section of the application.

Disabled Applicants

The post is located in the Faculty of Biological Sciences. Disabled applicants wishing to review access to the building are invited to contact the department direct. Additional information may be sought from the Recruitment Officer, email disclosure@leeds.ac.uk or tel + 44 (0)113 343 1723.

Disabled applicants are not obliged to inform employers of their disability but will still be covered by the Disability Discrimination Act once their disability becomes known.

Further information for applicants with disabilities, impairments or health conditions is available in the applicant guidance.

University Values

All staff are expected to operate in line with the university's values and standards, which work as an integral part of our strategy and set out the principles of how we work together. More information about the university's strategy and values is available at <http://www.leeds.ac.uk/comms/strategy/>