Candidate Information

Position: Technician (Grade 4)
School/Department: School of Medicine, Dentistry and Biomedical Sciences
Reference: 25/112401
Closing Date: Monday 24 March 2025
Salary: £28,456 per annum
Anticipated Interview Date: Friday 4 April 2025
Duration: 38 Months

JOB PURPOSE:

To become part of the Wellcome-Wolfson Institute for Experimental Medicine working on a project funded by an NIH program grant for at least 5 years. The project aims to identify the molecular background of calcification in the eye that leads to irreversible sight loss in retinal and brain degeneration.

MAJOR DUTIES:

1. Preparation and Handling of Experimental Animals: Managing transgenic animal colonies; maintaining and handling mice models of soft tissue calcification; collecting blood samples; ensuring proper care and monitoring of the mice throughout the study.
2. In Vivo Preclinical Measurements: Assisting in conducting visual performance (Optomotry), vascular permeability, and electroretinography (ERG) measurements; participating in studies inducing retinopathy models; closely collaborating with other research staff to ensure accurate and unbiased data collection and recording.
3. Laboratory Studies: Preparing samples and conducting immunohistochemistry and ELISA assays; collecting tissue samples for metabolomics analysis in collaboration with overseas partners; assisting in single-cell transcriptomic analyses using 10X Genomics scRNAseq. Start and maintain human primary cells in long term culture.
4. Laboratory Maintenance: responsible for maintaining a clean and organised laboratory workspace; assisting in the preparation and storage of reagents and experimental materials; supporting the upkeep and maintenance of laboratory equipment. Participate and lead on maintaining cell culture lab and equipment.
5. Documentation and Record Keeping: Ensuring accurate and detailed documentation of experimental procedures, data, and results; monitoring and advising on project costs and stock levels relating to the programme of work; collaborating with the research team to maintain organised records of the project's progress.
6. Training and Guidance: Providing help and guidance to research students and newly appointed staff on equipment use and laboratory procedures/techniques.
7. Protocol Improvement and Compliance: contributing to improving existing lab protocols and introducing new techniques as required; understanding and complying with health and safety Regulations and helping to develop standard operating procedures for new experimental protocols.
8. Collaboration and Communication: Actively contributing to laboratory meetings and teleconferences with external partners.
9. Professional Development: attending training courses as required to enhance skills and knowledge relevant to the research project and personal growth.
10. Miscellaneous: carrying out any other duties that are appropriate to the post as may be reasonably requested by the academic leadership team.

ESSENTIAL CRITERIA:

1. Academic and/or vocational qualifications e.g NVQ3, 2 A Levels, ONC/OND, City and Guilds level 3 or equivalents in a relevant subject.
2. 2 years work experience in a relevant role to include:
   - Experience in handling and maintaining experimental animal models, particularly mice.
   - Experience in handling and maintaining cells in culture.

3. Ability to work as part of a team.
4. Good communication and interpersonal skills.
5. Must be able to grasp concepts and ideas quickly.
6. Must demonstrate a clear interest in this area of research.
7. Must be prepared to work with experimental animals and pass an animal licence training course.
8. Must be prepared to work outside normal office hours occasionally.
9. Must be willing to work with human tissues.

DESIRABLE CRITERIA:
1. Degree level qualification or equivalent in a relevant subject.
2. Home Office modules 1-3.
3. Demonstrated experience in conducting laboratory experiments and procedures, preferably in the field of biomedical research or ophthalmology.
4. Experience in conducting visual performance assessments, such as Optomotry, and electroretinography (ERG) measurements.
5. Proficiency in immunohistochemistry (IHC) techniques and ELISA assays for the analysis of biomarkers and molecular endpoints in tissues.
6. Knowledge of single-cell transcriptomic analyses and experience in using technologies such as 10X Genomics scRNAseq for studying gene expression profiles.
7. Experience using nicroscopy methods.

ADDITIONAL INFORMATION:
Informal Enquiries to Pietro Bertelli: p.bertelli@qub.ac.uk