

Job Description

Job Title	
Research Technician in the Circadian Biology of Asthma (Durrington Group)	
Grade	5
Department	Faculty of Biology, Medicine and Health, Division of Immunology, Immunity to Infection & Respiratory Medicine, Technical Services
Overall Purpose	
To provide technical support for the Durrington Group's research into the circadian biology of asthma. The post-holder will provide technical support with minimal supervision, including the running and troubleshooting of experiments and maintaining, using and teaching the use of research associated equipment. We are seeking help with the downstream processing of both mouse and human samples on several projects. Downstream processing will include RNA Sequencing, cytokine bioplex (elisa), histology and immunohistochemistry, flow cytometry, cell culture (development of air liquid interface) and lung slice models. An important aspect of the job will be an ability to work in a team. The technician will be expected to oversee the maintenance and breeding of our mouse lines. The technician will be expected to support members of the group, help to supervise and teach undergraduate and postgraduate students. Note keeping, particularly for our human samples is crucial and maintenance of our HTA -80 Freezer. It should be noted that since this is a circadian group, some out of hours work (usually evenings or overnight) will be necessary. The post-holder will be expected to assist team members in ensuring that staff and students operate safe working practices, ensuring health and safety compliance within the laboratories. The role will help generate high-quality data for research outputs including presentations and publications, while supporting studies that aim to improve understanding of the mechanisms underlying asthma. The role will offer the opportunity for the applicant to project manage a public engagement campaign alongside VOCAL to communicate our research to the public, to patients and to policy makers.	
About the Team	
The role sits within the Durrington Group in the Division of Immunology, Immunity to Infection and Respiratory Medicine. The role will be supporting Prof Hannah Durrington's programme of projects, including the following: • MRC Funded Project to investigate the circadian mechanism underlying lung function in allergic airways disease (in vivo study). • Why does time of day of dosing with inhaled corticosteroids impact the management of asthma? (using clinical samples collected during a Chronotherapy Clinical Trial) (BRC Funded PhD Project) • Are women with asthma more affected by shift work than men? (Epidemiology) • How does Glycine affect inflammation in Allergic Airways Disease (A+LUK) Asthma is common (1:11 adults have asthma in the UK); Asthma is a disease with a marked circadian signature; symptoms of asthma are worse in the early hours of the morning and overnight. Measurements	

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of lung function also show marked circadian variation in asthma, with airway calibre being markedly narrower overnight compared to during the day. Airway narrowing is controlled by the circadian system and the circadian clock is important in the pathogenesis of asthma, and consequently our group is working to elucidate the circadian mechanism underlying asthma.

Our team currently consists of PI (Hannah Durrington), PDRAs (Dr Chakraborty and Dr Maidstone), 1 lab-based PhD student, 2 clinical PhD students and several undergraduate and postgraduate students.

Key Accountabilities

- Supporting research delivery by contributing to pilot and main projects, organising and running experiments, and reporting research outcomes for the Principal Investigator.
- Managing animal research activity including breeding strategies, genotyping, and maintaining accurate ARMIS records for transgenic mouse lines in line with licence requirements.
- Operating and maintaining laboratory equipment, and training staff and students in its safe and effective use.
- Ensuring smooth day-to-day laboratory operations, including stock control, procurement of consumables, and maintaining a well-organised working environment.
- Maintaining accurate records and documentation across experiments, samples, and laboratory processes using electronic and paper-based systems.
- Preparing and contributing to research outputs, including data for presentations, publications and reports.
- Ensuring full compliance with health and safety, regulatory and governance requirements, including carrying out risk assessments and supporting others to meet these standards.
- Supervising and supporting staff, students and visitors, including delivering inductions, providing training, and contributing to performance development processes.
- Taking full responsibility for organising and coordinating laboratory meetings, including scheduling, room bookings and maintaining the meeting rota.
- Monitoring laboratory budgets in liaison with the Faculty Finance Team, providing updates and advising the Group Lead on resource use.
- Using initiative to improve working practices, contributing to public engagement activity, and participating in out-of-hours work when required.

Person Specification

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Knowledge	• Extensive knowledge of molecular, cellular and translational laboratory techniques, including primary airway epithelial cell culture, histology and immunohistochemistry, flow cytometry, cytokine assays, PCR/qPCR, RNA preparation and microscopy. • Knowledge of laboratory sample processing and storage, including handling of tissues, blood, bronchoalveolar lavage fluid (BALF) and cell-based samples. • Knowledge of safe laboratory working practices, the Data Protection Act, Standard Operating Procedures and risk assessments including COSHH risk assessments. • Knowledge of relevant regulatory and governance requirements, including data protection and human tissue legislation. • Knowledge of animal research practice and welfare requirements relevant to mouse models.
Experience	• Extensive experience of delivering laboratory-based experimental work to a high and reproducible standard using a range of techniques, including: - Primary cell culture of airway epithelial cells (AEC) and development of epithelial models - Histology workflows, including tissue collection from in vivo models, fixation, embedding, micro-sectioning (FFPE) and staining (e.g. H&E and IHC) - Flow cytometry (FACS), including antibody staining and analysis - Bio-plex and ELISA-based cytokine assays - Molecular biology techniques, including PCR/qPCR, gel electrophoresis, nucleic acid extraction and RNA preparation - Microscopy techniques, including light, confocal and electron microscopy - Barrier function assays, such as TEER measurements • Experience of handling, processing and managing biological samples, including human samples. • Experience of mouse handling and welfare monitoring, with a strong understanding of regulated procedures (e.g. S1), including tissue collection for downstream analysis, and in vivo techniques such as intraperitoneal injections (including anaesthesia), intranasal and intratracheal dosing, and the induction and maintenance of general anaesthesia. • Experience of working within a regulated research environment, including the use of SOPs and risk assessments. • Experience of training, supervising or supporting staff, students or visitors in a laboratory environment. • Experience of working with specific IT packages/software e.g. Microsoft Access databases, LIMS project specific.

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Skills	• Ability to plan and prioritise a complex workload, working independently and using initiative. • Strong attention to detail with the ability to maintain accurate and reliable records. • Ability to communicate clearly and professionally with a range of stakeholders. • Ability to follow and deliver clear instructions while supporting others to do the same. • Problem-solving skills and the ability to identify and implement improvements to working practices. • Ability to work collaboratively as part of a research and technical team.
Education	• Higher Education Qualification such as a QCF level 6 in a relevant biological science subject (e.g. Bachelor's degree) or QCF 7 (e.g. Master's degree or Higher National Certificate or Diploma in a relevant science subject). • Home Office Personal Licence (PIL A & B) for mice and rats.
Other	• Willingness to work flexibly, including out-of-hours work where required. • Commitment to continuing professional development and undertaking role-specific training.
Key Behaviours	
One University: A 'One University' approach, whereby we break down silos and work collaboratively towards furthering the University's strategic goals, vision and values. Freedom of Speech and Academic Freedom: Support the University's commitment to securing and actively promoting the importance of free speech and academic freedom within our community. Service Excellence: Committed to prioritising service excellence and high performance to deliver great people-centred experiences. Agility: Demonstrate a commitment to agility and continuous improvement by embracing change, championing innovation, and being flexible and forward thinking to adapt. Sustainability: A sustainable approach that safeguards the University of the future by championing environmental practices, advancing digital capability, and supporting financial stability and philanthropic initiatives. Inclusion: Support the University's ambition to create an inclusive place to work where every person matters, demonstrating a commitment to non-discriminatory conduct and respect for others, and fostering a University where people feel deeply connected to each other, to Manchester, and to the wider world. Social Responsibility: Promote and champion the University's social responsibility ambitions to advance	

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social inclusion, prosperous communities, better health, and cultural engagement.

People Leadership: Demonstrates effective leadership by empowering, motivating, and developing teams to achieve high performance. Builds a collaborative and inclusive work environment and provides clear direction, support, and feedback.