Job Description

Senior Technician

Salary: Grade 6
Contract: Part time, fixed term
Location: Medway Campus
Responsible to: Dr Fani Papagiannouli
Job family: Technical

Job purpose

The role of Senior Technician helps to deliver timely and effective specialised research and technical support to the following project, *The makeup of squamous epithelia: from the landscape of squamous cell function to the origins of squamous cell carcinoma*, recently funded by the **Academy of Medical Science Springboard Award**. The research will be based at **Medway School of Pharmacy** and the Universities of Kent and Greenwich at Medway Campus.

A Senior Technician will demonstrate an in-depth technical knowledge gained from extensive experience and training, working with complex technical equipment and processes. This particular research program offers hands-on experience on state-of-the-art fly genetic and advanced protein-interaction techniques as well as high-resolution light and electron microscopy and the chance to contribute to impactful research that advances our understanding the key role squamous epithelia in fertility and in building functional tissue. You will be responsible for assisting in managing experiments under the guidance of the group leader, which might include: Husbandry of fruit-flies (Drosophila), Genetics, Dissections of the Drosophila male flies, Antibody stainings, Microscopy, and Molecular biology techniques (e.g. PCR, CRISPR/Cas9, etc). You will have access to fully operational fly and molecular lab, shared microscopy and proteomic facilities, and will work alongside our world-renowned collaborators with complementing expertise.

You will carry out experimental work, data analysis and contribute to the publication of findings emerging from this project. You will report directly to Dr Fani Papagiannouli at Medway School of Pharmacy and will be responsible for (i) the day-to-day running of the project, allocating resources and planning, (ii) maintenance of the lab *Drosophila* fly stock (iii) provide technical support in in Fly, Molecular and Cell Biology techniques, and practical support to PhD and undergraduate students working on related projects within the lab.

Key accountabilities

The following are the main duties for the job. Other duties, commensurate with the grading of the job, may also be assigned from time to time.

- Use in-depth technical knowledge, and experience to supervise PhD and Master students in the lab and to provide specialist support across a range of activities. Work with limited guidance and instruction.
- Support teaching activities for lab students including day-to-day lab operations, and oversee the correct administration processes and procedures
- Assist with purchasing specialist technical products and services for the project. Use knowledge and experience to provide recommendations and quotations, advising on specification and price.
- Management of one or more lab-specific devolved budgets, monitoring resource usage and negotiate with suppliers for a range of items

- Establish and maintain a safe and compliant working environment. Understand, promote and apply relevant legislation and guidance including COSHH, risk assessments and departmental health and safety protocols ensuring procedures are followed at all times.
- Participate in regular lab experiments, provide support and technical training to students and other lab members
- Plan and perform activities independently using a range of techniques, apply knowledge to solve complex problems and use initiative
- Provide technical training to students and other lab members
- Work collaboratively with other members of the team
- Assist with purchasing including ordering and distributing goods. Use knowledge and experience to provide recommendations and quotations and help adhering to any grant conditions.
- Report on progress at lab meetings on a regular basis.
- Support the PI in preparing manuscripts for publication based on the outputs of the project.
- Ensure current and future consumable needs are maintained to meet demand.
- Direct the diagnosis of faults, maintain & repair lab-specific equipment & systems of a technical nature.
- Use appropriate computational methods to analyse data to agreed timeframes; providing appropriate interpretation and evaluation. Ensure accurate completion of documentation, data and reports.
- Draft and provide inductions, training and demonstrations of the technical service, ensuring compliance with safety and regulatory guidelines to lab students and collaborators
- To actively demonstrate a commitment to professional development by continuing to advance knowledge, understanding and competencies
- Maintain up-to-date knowledge of the relevant fields; investigate and propose improvements to services, advocating best working practices

Key challenges and decisions

The following provide an overview of the most challenging or complex parts of the role and the degree of autonomy that exists.

- Role holder uses both theoretical knowledge and practical experience to provide technical advice and support.
- Supervising technical staff in small teams to deliver excellent student and staff experience.
- Establish and maintain health and safety in the given work area. Review activities and procedures. Undertake inductions and presentations to ensure a safe working environment.
- Communicating in a timely and effective manner to ensure the professional delivery of technical support to lab members, students and visitors, with varying levels of competency.
- Trouble shooting faults in all areas. Being able to methodically problem solve in a high-pressure environment as part of the team is vital to a successful outcome.
- Trouble shooting faults on technical equipment and resources. Work independently and as a team. Being able to work in a high-pressure environment to short time frames.
- Provide excellent communication, passing specialist knowledge and skills to the lab members.

Facts & figures

You will carry out experimental work, data analysis and contribute to the publication of findings emerging from this project. You will report directly to Dr Fani Papagiannouli at Medway School of Pharmacy and will be responsible for (i) the day-to-day running of the project (ii) maintenance of the lab *Drosophila* fly stock (iii) provide technical and practical support to a small group of a PhD, undergraduate students and visiting collaborators working on related projects within the lab.

As Medway School of Pharmacy is affiliated with both Universities of Kent and Greenwich, depending on funding source, will require learning both operating, finance systems and corresponding deadlines.

Internal & external relationships

Internal: Staff at all levels within the academic division and professional services areas, PhD and master students

External: Specialist equipment and software suppliers; collaborators, contractors, visitors and visiting academic researchers, alumni

Health, safety & wellbeing considerations

This job involves undertaking duties which include the following health, safety and wellbeing considerations:

- Regular use of Screen Display Equipment
- Working with machinery (please specify any vibration hazards)
- Working with toxic reagents and chemicals (inc. requirement to wear latex gloves and inc. work with CO2 gasses)
- Biological Agents/Scientific Hazards (experiments/lasers etc, and waste/sewage)
- Working in confined spaces (e.g. dark confocal microscopy room)
- Exposure to animals (invertebrate *Drosophila melanogaster*)
- Pressure to meet important deadlines such as might be inherent in high profile projects
- There may be a requirement to work evenings and weekends
- Ability to occasionally travel in a timely and efficient manner between campuses
- Manual handling (*Drosophila* fly stocks)

Further Technical Specialisms

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Person specification

The person specification details the necessary skills, qualifications, experience or other attributes needed to carry out the job. Applications will be measured against the criteria published below.

Selection panels will be looking for clear evidence and examples in an application, or cover letter (where applicable), which back-up any assertions made in relation to each criterion.

Essential Criteria:

- Educated to A level in a relevant subject or equivalent qualification or experience (A)
- General laboratory experience including aseptic technique, handling of DNA and protein samples (A, I)
- Experience in DNA and RNA manipulation techniques such as PCR, restriction digests, etc. (A, I)
- Experience in carrying through and writing up a laboratory-based project (I)
- Good general organisational skills (with the ability to manage time effectively, support lab operations and maintain good laboratory records) (I)
- Ability to take direction, follow protocols and pick up new techniques quickly (I)
- A proactive approach to problem-solving and technical troubleshooting, with the confidence to take initiative and work independently (I)
- Ability to set up experiments with due care and attention to detail (I)
- Ability to work well both independently and in a small team, collaboratively and collegially (I)
- Good IT skills and competency with numerical data and data processing (I, T)
- A proactive, flexible approach and willingness to learn new skills and techniques required in the team (I)
- Proven experience of working in a Technical support role (A, I)
- Experience operating and maintaining complex technical equipment (I, T)

- Excellent working knowledge of safety regulations, legislation, and procedures. For example, Risk assessment, COSHH A, (I)
- Experience in supporting the procurement of high value, technical equipment (A, I)
- Experience managing OR having oversight of budgets and flexibility to follow two operating systems (University of Kent and University of Greenwich) (A, I)
- Excellent verbal and written communication skills, including clear and effective facilitation and presentation skills and the ability to produce clear and concise written materials (T)
- Excellent troubleshooting, advanced problem solving and diagnostic skills, with an ability to assess highly technical problems and implement solutions within own expertise (I)
- Good interpersonal skills with the ability to liaise independently with students and staff at all levels and build and maintain good working relationships with staff in many different departments. (I)
- Organised with the ability to prioritise a wide range of workload with competing priorities (I)
- Ability to work under independently but also collaboratively within teams (I)
- Firm commitment to achieving the University's vision and values, with a passion for a transformative student experience and multidisciplinary, impactful research (I)
- Commitment to deliver and promote equality, diversity and inclusivity in the day-to-day work of the role (I)

Desirable Criteria:

- Masters' level qualification in an appropriate area
- Experience in handling and maintaining Drosophila fly stocks and basic genetic techniques (A, I)
- Good understanding of cell biology and/or reproductive biology (A, I)
- Experience in working with advanced imaging systems, like confocal or electron microscopy (A, I)
- Experience with image processing software (e.g. ImageJ, Amira) (A, I)
- Experience in genomics, proteomics, scRNAseq (A, I)
- Experience with data analysis (in particular image analysis) & in a programming language (ideally Python) (A, I)
- Experience of working within, and knowledge of, the Higher Education (or related) sector (A)
- Professional registration or willingness to work towards for example, RSciTech, EngTech, ICTTech (A)

Assessment stage: A - Application; I - Interview; T - Test/presentation at interview stage