Research Technician

1 JOB DESCRIPTION

Faculty / School or Division: Faculty of Health and Life Sciences, School of Psychology and Neuroscience

Faculty/School or Division Address: Biomedical Sciences Building University Walk, Bristol, BS8 1TD

Job Family:	Technical Services		
Grade:	F	**Salary range:**	£29, 354 - £32, 722p.a
Hours of work:	35 hours per week	**Contract type:**	Open ended with funding until 31/12/2028
Work pattern:	Full time	**Vacancy Reference Number:** SUPP113886	

1.1 Main Job Purpose

To fully support research laboratory activities, ensuring that the laboratories are prepared for experimentation and are compliant with relevant Health and Safety and other legislative or policy requirements. Will carry out specialised techniques and train others in these and essential core functions.

Working as part of a multidisciplinary research team, the successful candidate will contribute to cutting-edge translational research using advanced induced pluripotent stem cell (iPSC)-based models, and blood samples from UK patients with A-T, to develop and evaluate our gene therapy approach. This will involve maintaining iPSC cultures in accordance with relevant International Society for Stem Cell Research (ISSCR) guidelines, generating and characterising HSCs and microglia from iPSCs, and applying molecular and cellular techniques to assess gene therapy efficacy and safety. The project aims to investigate whether correcting HSCs can improve neuroimmune function and provide a potential therapeutic strategy for the neurological complications of A-T.

The post holder will play an important role in the delivery of this research, contributing to experimental design and implementation, the generation and analysis of experimental data, and the effective day-to-day running of the laboratory, while ensuring compliance with relevant health and safety requirements and institutional policies.

1.2 Main Statement of Responsibilities[1]

Professional Practice

Fully supports core essential functions and assists in support of specialist/more complex activities for laboratory or a designated suite of laboratories. Typical duties would include:

- Carrying out experimental techniques, and recording data outputs.
    - For example, maintain multiple iPSC lines in accordance with relevant ISSCR guidelines ensuring culture quality, pluripotency and appropriate documentation.
    - Differentiate iPSC lines into HSCs and microglia using established protocols, and characterise the resulting cell populations using appropriate molecular and cellular techniques
    - Perform functional assays to assess microglial phagocytosis, dynamics, morphology and interactions with neurons, using techniques including spinning-disk confocal microscopy.
    - Perform multiparametric flow cytometry to characterise cell populations and assess relevant phenotypic markers.
- Operating, servicing, maintenance and calibration of research equipment
- Recognise and resolve problems, including complex issues, e.g. fault diagnosis, process improvement
- Maintaining stocks of lab materials and consumables
    - e.g. Have input into larger purchases, liaising with relevant internal contacts and suppliers to ensure cost effectiveness
- Understanding Health & Safety requirements, contributing to risk assessments, and ensuring compliance with all relevant guidelines
- Training others in processes and procedures, e.g. use of equipment and experimental techniques
- Responsive and flexible based on service need. Give task direction to others when necessary

The Student Experience

- Interacting with and providing guidance, support and training to students conducting research studies or projects.

Planning & Organising Resources

- Some autonomy to prioritise own daily/weekly workload (and of technical assistants where applicable).
- Ensure key daily and weekly tasks are completed in a timely manner whilst allowing time to respond to urgent requests.
- Planning resource requirements in advance e.g. ensuring availability of functional research equipment, data handling, consumables availability; to meet scheduled support activities.

Governance and Compliance

- Thorough understanding and application of local rules, University Health & Safety policies and legislative requirements; ensuring compliance and setting standards, e.g. safe working, good laboratory practices, relevant legal frameworks.
- Report any incidents of non-compliance as appropriate.

Leadership and Management

- No formal line management responsibility but will undertake day to day supervision of Technical Assistants or apprentices where appropriate.

1.3 Relationships

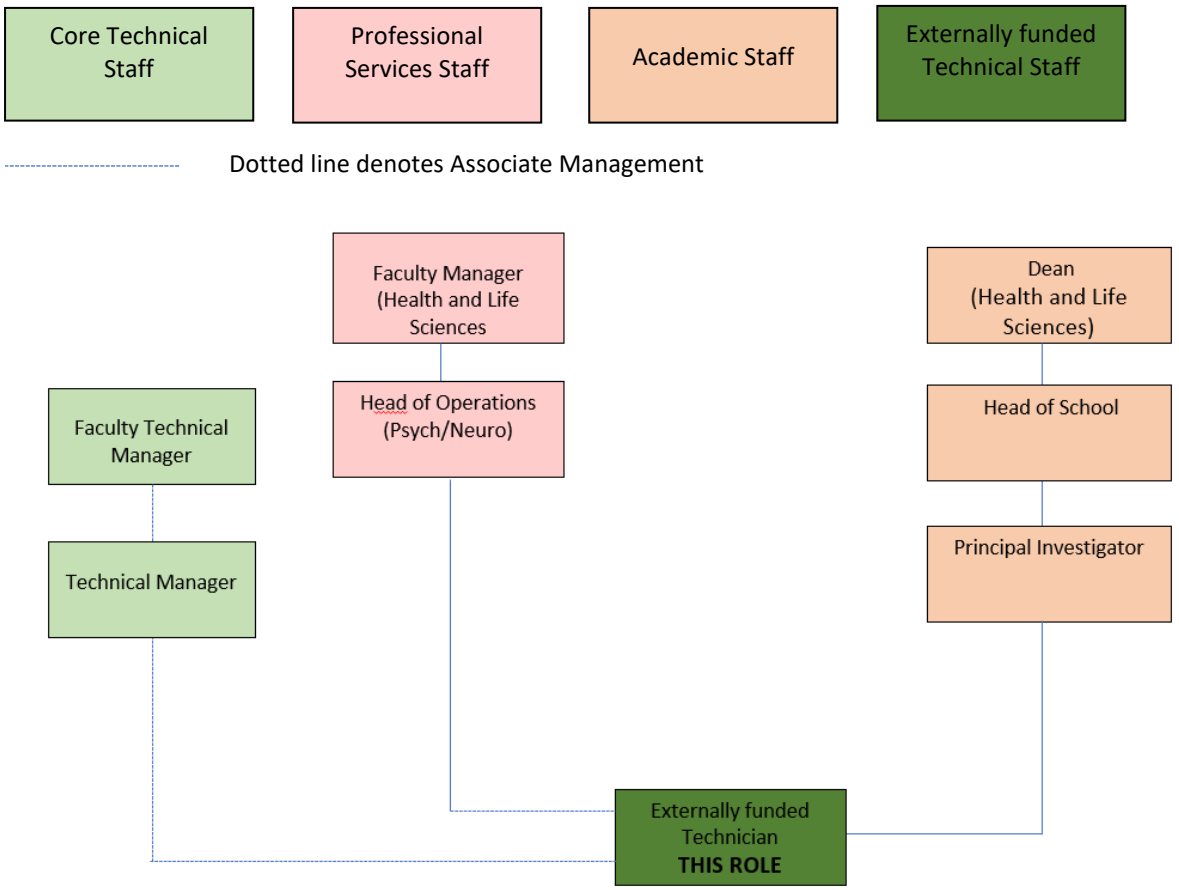
Line manager: Dr Kevin Kemp

Line manager to: no formal line management responsibility but will undertake day to day supervision of Technical Assistants or apprentices where appropriate

Associate line manager (for externally funded roles with an academic line manager): Dr Lucia Primavesi

1.4 Organisation Charts

Key for all diagrams



1.5 Job Hazards/Safety Critical Duties (Pre-employment health screening)

The following duties are an intrinsic part of the role and any offer of employment will be conditional upon satisfactory health screening by the University Occupational Health Service:

- Work involving handling of human tissue samples
- Work involving handling culture of human pathogens or material that does or may contain such pathogens
- Work with genetically modified organisms, microorganisms or cells under class 2 activities.
- Potential exposure to skin and respiratory irritants, cytotoxic substances, sensitising chemicals and hazardous substances (e.g. formaldehyde and Virkon disinfectant).
- Handling of sharps, including needles, scalpels and glassware
- Regular use of latex or nitrile gloves.
- Exposure to low temperatures when handling samples and materials stored at −80°C.
- Regular use of electrical laboratory equipment, including centrifuges, microscopes and other powered instruments.

---

2 PERSON SPECIFICATION[2]

2.1 Relevant Experience, Skills and Knowledge

Essential

- Experience of working in a biomedical laboratory to include laboratory techniques, process improvement and problem solving:
    - Extensive research experience working with iPSCs, including culture, maintenance and differentiation, or related iPSC techniques.
    - Experience of molecular biology techniques, such as nucleic acid/protein extraction, PCR, western blotting and ELISA
    - Experience of histological techniques, such as immunofluorescence staining and microscopy.
- Excellent IT skills, and an ability to effectively use new software or IT systems when required
- Excellent organisational skills, with the ability to deal with and prioritise a range of ongoing tasks at the same time, and to be able to cope under pressure
- Ability to carry out procedures in an accurate and timely manner, and contribute to process improvement
- Ability to work with minimal supervision towards pre-defined goals
- Proven experience of completing tasks to a high level of accuracy
- Innovative approach to work.

Desirable

- Experience of iPSC differentiation to HSCs and microglia.
- Experience of haematopoietic stem cell isolation and culture techniques
- Experience of flow cytometry techniques

2.2 Relevant Qualifications

Essential

- Relevant qualifications at GCSE, or NVQ level 2/3, or equivalent level, plus relevant work experience; or significant relevant work experience.

Desirable

- University degree or equivalent in a relevant life science, or equivalent research experience
- Appropriate professional registration

2.3 Communication and Interpersonal Skills

Essential

- Polite and courteous approach when dealing with others
- Ability to effectively communicate with a wide variety of internal and external contacts
- Ability to work both independently and as part of a team
- Ability to convey technical instructions to service users
- Good influencing skills

Desirable

- Able to prioritise and meet work deadlines

2.4 Additional Criteria

Essential

- Commitment to continuing professional development
- Ability to use initiative in service delivery