

Candidate Information

Position:	Technician
School/Department:	Patrick G Johnston Centre for Cancer Research
Reference:	20/108472
Closing Date:	Monday 7 December 2020
Salary:	£24,461 per annum
Anticipated Interview Date:	Thursday 17 December 2020
Duration:	This is a fixed term contract until 31 December 2021

JOB PURPOSE:

This position within the PGJCCR's Colorectal Research group is available in the Cancer Research UK funded programme "Impact of chemotherapy on anti-cancer immunity in molecularly- stratified subgroups of colorectal cancer". The grade 5 technician will work within cell death and functional genomics groups (group leaders Prof Daniel Longley and Dr Simon McDade) focussed on management and experimentation of 2D and 3D cell cultures, as well and preparation/cataloguing of a variety of samples for genetic/genomic analysis.

The successful candidate will also assist in the design, implementation and delivery of 2/3D functional genomics (small molecule/siRNA/CRISPR) phenotypic screens.

The successful candidate will be expected to also provide organisational support to the programme, in terms of monitoring and cataloguing stock levels.

The post holder will be expected to liaise strongly with the team leaders, learn and be familiar with appropriate techniques.

MAJOR DUTIES:

1. Manage cell lines and 3D model stocks and authentication of new derivatives.
2. Assist in generation of genetically modified 2D/3D models for own immediate use and use by other researchers.
3. Assist in the design, implementation, delivery and analysis of small molecule, chemotherapy siRNA/CRISPR combination studies
4. Optimise SOPs for routine extraction of nucleic acids from diverse range of samples including cell lines, organoids and in vivo samples.
5. Assist in design/optimisation for phenotypic/genomics assays (e.g. Growth/Cell number/Cell death/gene expression) from tissues and single cells from a diverse range of samples including cell lines, co-cultures, organoids and in vivo samples.
6. Comply with health and safety procedures affecting self and others and ensure the work area is clean and safe at all times.
7. Oversee and instruct under-graduate and post-graduate research students and research staff in laboratory techniques as deemed necessary and appropriate.
8. Assist in any way deemed appropriate to the overall success of the research objectives of the group and the cancer research centre.

Planning and Organising:

1. Maintain accurate records of cell line/organoid stocks, MTAs, links to genomic and genotyping data.
2. Carry out, with minimal supervision, a range of tasks largely but not exclusively according to established procedures including development and management of SOPs.
3. Assist in the optimisation of new techniques or use of new reagents and troubleshoot as required.
4. Have responsibility for cataloguing, monitoring and ensuring adequate levels of stocks.
5. Plan own work schedule but make adjustments depending on changing demands.
6. Make strategic arrangements for planned future work in association with academic supervisor or line manager as appropriate.

7. Ensure all supplies and equipment are available so that work can proceed as scheduled.
8. Maintain accurate records of cell line/organoid stocks and genotyping data.

Resource Management Responsibilities:

1. Take delegated responsibility for the maintenance of in vivo colonies.
2. Take delegated responsibility for the planning and execution of in vivo experiments, and maintenance of accurate records to complete annual returns.
3. Have responsibility for the processing, embedding and sectioning of in vivo samples.
4. Have responsibility for careful use of available resources including BSU and histological reagents.

Internal and External Relationships:

1. Daily contact with supervisors, work colleagues and other members of staff.
2. Contact with Genomics and other CTU staff as necessary.
3. Liaison with research collaborators from other departments or institutions as necessary.
4. Attendance and involvement at seminars and research meetings in the PGJCCR and CEM.

ESSENTIAL CRITERIA:

1. A minimum qualification of ONC/OND and/or NVQ level 3 in biology, medical laboratory sciences or related subject (or equivalent).
2. 3 years recent relevant experience in cancer biology, including tissue culture AND molecular biology work. To include extraction and analysis of nucleic acids, QC and preparation for genomic analysis.
3. Experience in good laboratory practice (GLP) environment.
4. Experience in following and developing SOPs.
5. Sufficient breadth or depth of specialist knowledge in the discipline and of research methods and techniques to work within colorectal cancer research.
6. Excellent record keeping skills to facilitate internal auditing and external reporting.
7. Good communication and interpersonal skills.
8. Be capable of using own initiative.
9. Ability to work in a team and as an individual.
10. Ability to plan own work schedule responding to new pressures and adjusting priorities.
11. Must be willing to work irregular hours when necessary for the progress of the research project.

DESIRABLE CRITERIA:

1. BSc degree or higher.
2. Active UK Home Office/ NI Department of Health Personal Licence.
3. Experience in genomics sample preparation e.g. microarray, NGS libraries.
4. Drug/siRNA/small molecule screening experience.
5. Experience with 3D cell/organoid culture in vitro.
6. Experience with single cell analysis.
7. Experience in Histology/tissue processing.
8. Experience in Immunohistochemistry techniques and image analysis.
9. Previous experience in RNA/DNA extraction for genomic analysis in a GLP genomics laboratory environment.
10. Knowledge of relevant Health and Safety issues and of COSHH regulations.
11. Demonstrate excellent communication skills and enthusiasm to develop and maintain productive relationships with lab members and collaborators.