

Candidate Information

Position: Research fellow (Stem Cell Epigenetics)
School/Department: School of Medicine, Dentistry and Biomedical Sciences
Reference: 25/112763
Closing Date: Monday 25 August 2025
Salary: £41,519 per annum
Anticipated Interview Date: Thursday 11 September 2025
Duration: 6 months

JOB PURPOSE:

We are inviting applications for a Postdoctoral Research Fellow position in Stem Cell Epigenetics. This exciting role provides an opportunity to contribute to a cutting-edge project exploring the interplay between WNT/GSK3 signalling and chromatin biology in embryonic stem cells (ESCs).

Under the supervision of Dr. Yaser Atlasi, the successful candidate will utilize advanced epigenomics techniques alongside computational biology approaches to map epigenetic changes driven by WNT/GSK3 signalling in ESCs.

This collaborative project offers access to world-class expertise, state-of-the-art resources, and dedicated mentorship, creating a vibrant and supportive research environment for professional growth.

MAJOR DUTIES:

1. Use CRISPR/Cas9 to introduce specific mutations or generate KO models for target genes.
2. Map the protein interactions in different KO or mutant models.
3. Perform Cut&Run and ChIPseq to map the chromatin binding of specific TFs in mESCs.
4. Culture and maintain mouse and human ESCs models.
5. Share findings and coordinate research efforts within a multidisciplinary team.
6. Prepare high-quality research manuscripts for publication in peer-reviewed journals.
7. Attend and present findings at national and international conferences.
8. Engage in seminars and workshops to disseminate research outcomes.
9. Assist in training and supervising undergraduate or graduate students within the research group.
10. Ensure compliance with laboratory safety protocols and ethical guidelines.
11. Document experimental methods, results, and analyses comprehensively and accurately.
12. Assist grant holder in the preparation of funding proposals and applications to external bodies.
13. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.
14. Carry out occasional undergraduate supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
15. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines.

ESSENTIAL CRITERIA:

1. Hold or be about to obtain* a PhD in Molecular biology, Biochemistry, genomics, or a related discipline.
(*PhD to be completed within 4 months of the closing date for the post)

2. Significant, relevant research experience to include:
 - Expertise in maintaining and manipulating embryonic stem cell models.
 - Experience in high-throughput epi-genomics assays or related technologies.
 - Proficiency in genome editing tools like CRISPR/Cas9 for functional validation.
 - Experience with tools and pipelines for analysing next-generation sequencing (NGS) data.
 - Handling genomic, epigenomic, and transcriptomic datasets.
 - Understanding of chromatin biology, and related technologies such as chromatin accessibility (e.g., ATAC-seq), histone modification assays (e.g., ChIP-seq).
3. Skilled in presenting scientific findings clearly, both in written reports and oral presentations.
4. Proven ability to develop and optimise experimental protocols for high-throughput or innovative laboratory techniques.
5. Strong foundation in cellular and molecular biology techniques, including the use and maintenance of cell culture systems.
6. Proficiency in analysing experimental data using standard statistical tools and visualising complex datasets.
7. Demonstrated capacity to troubleshoot experimental workflows and address technical challenges effectively.
8. Ability to work collaboratively in multidisciplinary teams, contributing to shared research objectives and outcomes.
9. Ability to contribute to broader management and administrative processes.
10. Team worker, highly motivated, supportive of junior colleagues within the group.
11. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
12. Ability to communicate complex information clearly.
13. Ability to build contacts and participate in internal and external networks.
14. Motivated, and driven, who takes initiative in addressing challenges, proposing solutions, and driving projects forward.
15. Persistence in the face of setbacks, with the ability to learn from failures and refine approaches.
16. Receptive to feedback, new ideas, and alternative perspectives, fostering continuous learning and improvement.
17. Willingness to work irregular hours when necessary for the progress of the research project.

DESIRABLE CRITERIA:

1. 1st Class undergraduate degree in genetics, biochemistry, molecular biology, or related discipline.
2. Direct experience with mouse or human ESCs.
3. Knowledge of stem cell biology.
4. Advanced data visualisation and statistical modelling using tools like R, Python, or MATLAB.
5. Familiarity with tools and programming languages (e.g., R, Python, or others) for advanced data analysis and modelling.
6. Evidence of mentoring students, colleagues, or team members in experimental design or data interpretation.
7. Capacity to adapt to emerging technologies or methods and contribute to their implementation within a research setting.
8. Experience working in international or cross-institutional partnerships, particularly with shared resources or diverse expertise.
9. Experience of undergraduate and postgraduate research supervision / mentorship.
10. Contribute to the School's outreach programme by links with industry, community groups etc
11. Experience of working within multi-institutional collaborative studies.
12. Experience of public communication of science to lay audiences.