

Candidate Information

Position:	Research Fellow
School/Department:	Centre for Experimental Medicine
Reference:	18/106936
Closing Date:	Wednesday 5 December 2018
Salary:	£33,199 - £37,345 per annum
Anticipated Interview Date:	Monday 17 December 2018
Duration:	Until September 2020

JOB PURPOSE:

An experienced and highly motivated Postdoctoral scientist is being sought to join Dr. Chris Watson's research group based in the Centre for Experimental Medicine. The recruited Postdoctoral scientist will undertake a senior role within a British Heart Foundation funded study focused on epigenetic analysis (DNA methylation) in the pathogenesis of ischaemic heart disease. Both in vivo and in vitro models will be utilised to examine the expression, methylation status, and functional relevance of selected genes/miRNAs/lncRNAs in the context of cardiac tissue ischaemia and fibrosis.

Applications are invited from enthusiastic, motivated and efficient individuals with a strong commitment to research. The successful candidate will have a demonstrated research background in cardiac disease and epigenetics. The candidate should be committed to developing a dynamic, academic career in science and have excellent communication skills in written and spoken English.

We offer scientific development opportunities in an international and interdisciplinary environment and support our postdoctoral fellows with a Centre-based mentoring program to support career development.

Further information:

<https://pure.qub.ac.uk/persons/chris-watson>

<https://www.qub.ac.uk/research-centres/CEM/>

MAJOR DUTIES:

1. Develop, plan, and deliver cardiovascular and epigenetics based research under supervision within a research programme aimed at identifying and validating DNA methylation signatures and their functional relevance in ischaemic heart disease and cardiac fibrosis. Techniques may include RNA sequencing, methylation-specific PCR, gene-specific bisulphite sequencing, in vivo model of experimental myocardial infarction, murine echocardiography, cell culture, tissue histology, clinical biobanking, transfection, Western blotting, RT-PCR, bioinformatics.
2. Maintain up-to-date knowledge of the field of interest at the cutting edge (e.g. cardiac fibrosis, ischaemic heart disease, epigenetics) and communicate the same to the group.
3. Design, develop and refine experimental apparatus, models or experiments in order to obtain reliable and reproducible data.
4. Carry out analyses, critical evaluations, and interpretations of experimental data and the literature using methodologies and other techniques appropriate to area of research.
5. Present regular progress reports on research to members of the research group, other groups within the Centre/University, to external audiences nationally and internationally to disseminate and publicise research findings.
6. Prepare, in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
7. Assist grant holder in the preparation of funding proposals and applications as well as project progress reports to external bodies.

8. Carry out routine administrative tasks associated with the research projects/group to ensure that projects are completed on time and within budget and that the group functions efficiently. These might include organisation of project/group meetings and documentation, financial control, stock management/procurement, risk assessment of research activities and development of SOPs. Carry out routine administrative tasks associated with the day-to-day running of the research group in a communal lab setting.
9. Carry out school/undergraduate/post-graduate student and visiting researcher training and supervision as required, demonstrating, tutoring or lecturing duties within the post holder's area of expertise and under the guidance of a member of academic staff.
10. Participate, and in some cases lead outreach activities on behalf of the group/Centre, which may include social media.
11. Participate in local research-related activities such as journal clubs, training sessions, seminar series, postdoctoral development activities etc.

Planning and Organising:

1. Plan for specific aspects of research programme. Timescales range from 1-12 months in advance and may contribute to overall research group planning.
2. Plan for access to, and use of, research resources, laboratories and workshops where appropriate.
3. Plan own day-to day activity within framework of the agreed research programme as well as communal activities (e.g. meetings) where appropriate.
4. Plan up to 1 year in advance to meet deadlines for grant applications, journal publications and to prepare presentations and papers for conferences and meetings.
5. Coordinate and liaise with other members of the research group and collaborative research groups regarding work progress and stock management.
6. Assist in training other group members on effective planning and organisation.

Resource Management Responsibilities:

1. Ensure research resources are used in an effective and efficient manner including liaising with vendors and collaborators.
2. Provide guidance as required to support staff and any post-graduate/under-graduate students and visiting researchers who may be assisting with work of the group.

Internal and External Relationships:

1. Liaise on a regular basis with supervisor, colleagues, students and collaborators.
2. Communicate appropriately and effectively with lab colleagues topics such as latest research findings/results within the group and field.
3. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
4. Travel to, and present at scientific meetings and work in collaborative laboratories when necessary.
5. Join external networks to share information and ideas and help develop and maintain external collaborations, as appropriate.
6. Contribute to the School's outreach programme by developing links with local community groups, industries etc.

ESSENTIAL CRITERIA:

1. Have or be about to receive (thesis must be submitted and viva completed) a PhD in molecular biology, cell biology, or a related area of biomedicine, relevant to the project.
2. At least 3 years relevant research experience in two or more of the disease areas: cardiovascular disease, epigenetics, or fibrosis.

AND

Recent extensive hands-on experience in the following:

1. DNA methylation analysis or manipulation
2. Worked with clinical samples/data from cardiovascular disease studies.
3. In vivo experimental models of cardiac disease

AND

Recent high quality original publications in reputable peer-reviewed journals, commensurate with career stage

3. Experience teaching/supervising/mentoring postgraduate/undergraduate/school students and visiting researchers in the laboratory
4. Methodical approach to project management and meticulous in regards to experimental procedures and record keeping.
5. Highly ambitious, self-motivated, very efficient and organised
6. Showing strong commitment to, and interest in, research topic.
7. Competent in maintaining and communicating knowledge of cutting-edge of field of expertise
8. Good oral and written communication skills.
9. Competent in giving effective and informative oral and poster presentations
10. Competent in communicating stipulated research skills is essential to the post in CV/job application
11. Strong ability to work from own initiative and to work independently.
12. Excellent team working skills in multiple internal and external team settings
13. Leadership qualities
14. Excellent problem-solving skills
15. Irregular hours including evening, weekend and other out-of-hours work will be a component of the research at times.
16. Must be willing to travel to national and international meetings and collaborative laboratories.

DESIRABLE CRITERIA:

1. UK Home Office personal licence (modules 1-4)
2. Human Tissue Act trained
3. Recent up to date knowledge of DNA methylation, hypoxia and ischaemic heart disease, pathophysiology of cardiac fibrosis
4. Recent hands-on experience in the following techniques:
 1. Cell culture
 2. qPCR
 3. small animal imaging
 4. tissue sectioning and histology
5. Experience in general lab management
6. Experience teaching lab members as well as undergraduate lectures/tutorials/practicals
7. Classroom-based teaching such as lecturing, tutorials.
8. Research project management training
9. Recent hands-on experience in creating SOP, Risk Assessments, COSHH
10. Up-to-date knowledge of fields of epigenetics and/or fibrosis pathophysiology and/or ischaemic heart disease
11. Experience in giving oral and poster presentations at scientific conferences.
12. Experience working in outreach settings

ADDITIONAL INFORMATION:

Applications are invited from enthusiastic, highly motivated, efficient and organised individuals with a strong commitment to research. The successful candidate will have a strong research background in cardiac disease and epigenetics, and will be seeking to lead an ambitious cutting-edge research project in a well-supported environment.

Candidates must be able to demonstrate strong initiative and independence in thought and work but also to work within a highly collaborative team to support/train other team members as appropriate.

The successful applicant will have good oral and written communication skills and a PhD in a relevant scientific area such as molecular biology, cell biology, pharmacology or a related area of biomedicine.

In-depth experience in DNA methylation analysis, in vivo models of heart disease, and fibrosis would be of benefit to this post.