

Candidate Information

Position:	Research Fellow in Cardiovascular and Metabolic Disease Research
School/Department:	Institute for Global Food Security
Reference:	22/109897
Closing Date:	Monday 18 July 2022
Salary:	£34,304 per annum
Anticipated Interview Date:	Friday 5 August 2022
Duration:	Fixed Term for 30 months

JOB PURPOSE:

An experienced and highly motivated Postdoctoral scientist is being sought to join Dr. Su's research group based in the Institute for Global Food Security, School of Biological Sciences at Queen's University Belfast. The recruited Postdoctoral scientist will undertake a senior role within a British Heart Foundation funded study focused on defining the nuclear receptor in cardiomyocyte and endothelial cell re-modelling in insulin resistance. This research will include the use of both vitro cell culture and in vivo mouse models of cardiac re-modelling and atherosclerosis, and the analysis of cardiac and plasma samples derived from animal models.

Applications are invited from enthusiastic, motivated and efficient individuals with a strong commitment to research. The successful candidate will have a demonstrated background in RNA relevant research, cardiovascular and/or metabolic disease research with an excellent PhD degree awarded and strong publication record. 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 an institution-based mentoring program to support career development.

MAJOR DUTIES:

1. Develop, plan, and deliver research on cardiovascular and energy metabolism under supervision of the principle investigator aimed at defining non-coding RNAs and nuclear receptor function in cardiomyocyte and endothelial cell re-modelling in insulin resistant animal models.
2. Techniques may include in vivo mouse models of cardiac disease, genotyping tissue specific knockout mouse models, murine echocardiography, VLDL assembly assay, aortic atherosclerotic lesion analysis, cell culture and transfection, tissue histology, aortic adhesion assay, mitochondrial integrity and dynamics, Seahorse Bioscience Analyse, Western blotting, RT-PCR and ELISA.
3. Maintain up-to-date knowledge of the field of interest at the cutting edge (e.g. cardiac metabolic re-modelling, atherosclerosis, non-coding RNAs) and communicate to the group.
4. Design, develop and refine experimental apparatus, models or experiments in order to obtain reliable and reproducible data.
5. Carry out analyses, critical evaluations, and interpretations of experimental data and the literature using methodologies and other techniques appropriate to area of research.
6. Present regular progress reports on research to members of the research group, to external audiences nationally and internationally to disseminate research findings.
7. Prepare, in consultation with the supervisor, material for publication in national and international journals and presentations at international conferences.
8. Assist grant holder in the preparation of funding proposals and applications as well as project progress reports to external bodies.

9. 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.
10. 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.
11. Participate in some cases lead outreach activities on behalf of the group/Centre, which may include social media.
12. Participate in local research-related activities such as journal clubs, training sessions, seminar series, postdoctoral development activities etc.

ESSENTIAL CRITERIA:

1. Have or be about to obtain a relevant PhD in molecular biology, cell biology, or a related area of biomedical sciences.
2. At least 3-years recent relevant research experience in non-coding RNA research, cardiovascular disease, and/or metabolic disease closely relevant to this project in molecular/cellular biology or biomedicine (PhD thesis must be submitted).
3. Recent extensive hands-on experience in the following:
 1. Cell culture/Western Blotting/qPCR.
 2. Non-coding RNA research / microRNA target prediction database.
 3. Cardiac and/or hepatic primary cell isolation / Echocardiography/Blood pressure measurement.
 4. Breeding and genotyping tissue specific knockout mouse models.
4. Recent strong relevant publications in reputable peer-reviewed journals.
5. Methodical approach to project management and meticulous in regards to experimental procedures and record keeping.
6. Experience teaching/supervising /mentoring postgraduate/ undergraduate/school students and visiting researchers in the laboratory.
7. Highly ambitious, self-motivated, very efficient and organized.
8. Showing strong commitment to, and interest in, research topic.
9. Competent in maintaining and communicating knowledge of cutting-edge of field of expertise.
10. Good oral and written communication skills.
11. Competent in giving effective and informative oral and poster presentations.
12. Competent in communicating stipulated research skills is essential to the post in CV/job application.
13. Strong ability to work from own initiative and to work independently.
14. Excellent team working skills in multiple internal and external team settings.
15. Leadership qualities.
16. Excellent problem-solving skills.
17. Irregular hours including evening, weekend and other out-of-hours work will be a component of the research at times.
18. Must be willing to travel to national and international meetings and collaborative laboratories.

DESIRABLE CRITERIA:

1. UK Home Office personal licence (modules 1-3).
2. Recent up to date knowledge of cardiomyocyte metabolism, atherosclerosis, lipoprotein metabolism, and insulin resistance.
3. Recent hands-on experience in the following techniques:
 1. Seahorse Bioscience Analyse.
 2. In vivo models of cardiovascular disease.
 3. Experience in general lab management.
4. Research project management training.
5. Recent hands-on experience in creating SOP, Risk Assessments, COSSH.
6. Experience teaching lab members as well as undergraduate lectures/tutorials/practicals.
7. Classroom-based teaching such as lecturing, tutorials.
8. Up-to-date knowledge of fields of cardiovascular disease, RNA and lipid and lipoprotein metabolism.
9. Experience in giving oral and poster presentations at scientific conferences.
10. Experience working in outreach settings.