

Candidate Information

Position:	Research Fellow in Cardiovascular Research
School/Department:	Institute for Global Food Security
Reference:	21/109209
Closing Date:	Tuesday 12 October 2021
Salary:	£34,304 - £40,927 per annum
Anticipated Interview Date:	Tuesday 2 November 2021
Duration:	12-month fixed term contract with possible extension up to 30 months

JOB PURPOSE:

An experienced and highly motivated Postdoctoral scientist is being sought to join Dr. Qiaozhu 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 microRNA and nuclear receptor signalling in cardiomyocyte and endothelial cell remodelling in insulin resistance. This research will include the use of both vitro and in vivo models of cardiac remodelling 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 non-coding RNAs, cardiovascular disease, or closely related fields in biomedical sciences 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 cardiovascular based research under supervision within a research programme aimed at defining non-coding RNAs (i.e., microRNA and lncRNAs) and nuclear receptor signalling in cardiomyocyte and endothelial cell remodelling in insulin resistance.
2. Techniques may include in vivo mouse models of cardiac disease including establishment of 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, ELISA.
3. Maintain up-to-date knowledge of the field of interest at the cutting edge (e.g. cardiac metabolic remodelling, 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 and other groups within the Centre/University, to external audiences nationally and internationally to disseminate and publicise research findings.
7. Prepare, in consultation with 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.

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 (eg. 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 obtain a relevant PhD in molecular biology, cell biology, pharmacology or a related area of biomedicine.
2. At least 3-years recent relevant research experience in non-coding RNA research, cardiovascular disease, atherosclerosis, or closely related area 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. microRNA/long-non-coding RNA research / microRNA target prediction database
 3. Hepatic and/or cardiac primary cell isolation / Echocardiography/Blood pressure measurement
 4. Breeding tissue specific knockout mouse models / In vivo mouse model establishment.
4. Recent strong relevant publications in reputable peer-reviewed journals and relevant to.
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 organised.
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, insulin resistance and non-coding RNAs.
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, COSHH.
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, microRNA and long-non-coding RNA and lipid and lipoprotein metabolism.
9. Experience in giving oral and poster presentations at scientific conferences.
10. Experience working in outreach settings.