

## Candidate Information

<b>Position:</b>	Research Fellow in Cardiovascular Research
<b>School/Department:</b>	Institute for Global Food Security
<b>Reference:</b>	21/109387
<b>Closing Date:</b>	Monday 3 January 2022
<b>Salary:</b>	£34,304 per annum
<b>Anticipated Interview Date:</b>	Wednesday 19 January 2022
<b>Duration:</b>	12 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 using both cell culture system and in vivo animal models with insulin resistance and atherosclerosis.

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

### MAJOR DUTIES:

1. Develop, plan, and deliver biomedical research aimed at defining non-coding RNAs (e.g., microRNAs and LncRNAs) and nuclear receptor signalling in cardiomyocyte, endothelial cell and hepatocyte remodelling in insulin resistant context.
2. Techniques may include in vivo mouse models of cardiac disease including establishment of tissue specific knockout mouse models, murine echocardiography, aortic atherosclerotic lesion analysis, cell culture and transfection, tissue histology, mitochondrial integrity and dynamics, Seahorse Bioscience Analyses, Western blotting, RT-PCR, ELISA.
3. Maintain up-to-date knowledge of the field of interest, including cardiac metabolic remodelling, insulin resistance, 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 using methodologies and other techniques appropriate to area of research.
6. Present regular progress reports on research to members of the research group, other groups within the Centre/University and external audiences nationally and internationally to disseminate research findings.
7. Prepare, in consultation with supervisor, materials for publications in national and international journals and presentations at international conferences.
8. Assist grant holder in the preparation of research proposals and grant applications as well as project progress reports to external funding agencies.
9. Carry out routine administrative tasks associated with the research projects to ensure that projects are completed on time and within budget and are managed efficiently. These might include organization of project meetings and documentation, financial control, 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 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 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. Coordinate and liaise with other members of the research group and collaborative research groups regarding work progress and management.
5. Assist in training other group members on effective planning and organization.

**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 on topics such as the latest research findings/results within the group and field.
3. Travel to, and present at scientific meetings and work in collaborative laboratories when necessary.
4. Join external networks to share information and ideas and help develop and maintain external collaborations, as appropriate.
5. 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 (microRNA and LncRNA) research, , metabolic syndrome, cardiovascular disease 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/LncRNA research / microRNA target prediction database
  3. Hepatic and/or cardiac primary cell isolation /
  4. Breeding tissue specific knockout mouse models / In vivo mouse model establishment
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 in teaching/supervising /mentoring postgraduate/ undergraduate students and visiting researchers in the laboratory.
7. Highly ambitious, self-motivated, very efficient and well-organized.
8. Showing strong commitment to, and interest in, research topic.
9. Competent in maintaining and communicating knowledge of the 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 research skills is essential to the post.
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, hepatic lipoprotein metabolism, insulin resistance and non-coding RNAs (microRNA and LncRNA).
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 in teaching lab members.
7. Up-to-date knowledge of the fields of metabolic disease, microRNAs, lncRNAs, lipid and lipoprotein metabolism.
8. Experience in giving oral and poster presentations at scientific conferences.
9. Experience working in outreach settings.