

## Candidate Information

<b>Position:</b>	Research Fellow
<b>School/Department:</b>	School of Biological Sciences
<b>Reference:</b>	23/110573
<b>Closing Date:</b>	Monday 13 February 2023
<b>Salary:</b>	£35,333 per annum
<b>Anticipated Interview Date:</b>	Friday 24 February 2023
<b>Duration:</b>	Fixed Term available until 26/02/2024

### 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 on investigating the therapeutic effect of fenugreek seed in hyperlipidaemia and cardiovascular disease and therapeutic biomarkers. Specific attention will be paid to investigating the lipid lowering effect of fenugreek seed in human subjects with hyperlipidaemia on the changes of lipid profile and circulating blood non-coding microRNAs (e.g. microRNA-122).

Applications are invited from enthusiastic, motivated and efficient individuals with a strong commitment to research. The successful candidate will have a demonstrated strong research experience on human energy metabolism, non-coding RNAs and/or closely related fields in biomedical science with an excellent PhD or MD degree awarded. 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 on career development.

Further information:

<https://pure.qub.ac.uk/en/persons/qiaozhu-su>

### MAJOR DUTIES:

1. Develop, plan, and deliver research on cardiovascular and energy metabolism under supervision of the principle investigator focusing on the therapeutic effect of fenugreek seed on hyperlipidaemia, cardiovascular disease and therapeutic biomarkers in human subjects.
2. Defining the roles of non-coding RNAs and gut microbiome in energy metabolic signalling associated with cardiomyocyte, endothelial and hepatocyte remodelling in insulin resistant animal models.
3. Experience on working with human blood samples and mouse models of metabolic disease, murine echocardiography, VLDL assembly assay, aortic atherosclerotic lesion analysis, cell culture and cell transfection, tissue histology, aortic adhesion assay, mitochondrial integrity and dynamics, Seahorse Bioscience Analyse, Western blotting, RT-PCR and ELISA.
4. Maintain up-to-date knowledge of the field of non-coding RNAs, cardiac metabolic remodelling, atherosclerosis and NAFLD and communicate to the group.
5. Design, develop and refine experimental apparatus, models or experiments in order to obtain reliable and reproducible data.
6. Carry out analyses, critical evaluations, and interpretations of experimental data and the literature using methodologies and other techniques appropriate to area of research.
7. Present regular progress reports on research to members of the research group, to external audiences nationally and internationally to disseminate research findings.
8. Prepare, in consultation with the supervisor, material for publication in national and international journals and presentations at international conferences.

9. Assist grant holder in the preparation of funding proposals and applications as well as project progress reports to external bodies.
10. 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.
11. 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.
12. Participate in some cases lead outreach activities on behalf of the group/Centre, which may include social media.

**ESSENTIAL CRITERIA:**

1. Have an MD with substantial basic research experience or have/or about to hold a PhD degree in relevant discipline.
2. At least 3 years' recent relevant research experience in human non-coding RNA research, nutrition metabolism, and/or metabolic disease closely relevant to this project in molecular/cellular biology or biomedicine.  
AND
3. Recent extensive hands-on experience in the following:
  1. Cell culture/Western Blotting/qPCR/ELISA
  2. Isolation of non-coding RNAs from human blood samples
  3. Cardiac and/or hepatic primary cell isolation / Echocardiography/Blood pressure measurement in animal models
  4. In vivo animal model experience
 AND
4. Recent strong relevant publications in reputable peer-reviewed journals.
5. Experience in teaching/supervising /mentoring postgraduate/ undergraduate/school students and visiting researchers in the laboratory.
6. Methodical approach to project management and meticulous in regards to experimental procedures and record keeping.
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. Excellent IT skills e.g. Microsoft Office suite.
11. Excellent organisational skills.
12. Excellent oral and written communication skills.
13. Evidence of ability to write reports and meet deadlines.
14. Evidence of ability to deal competently with administrative tasks and contribute to broader management tasks.
15. Competent in giving effective and informative oral and poster presentations.
16. Clear and confident communicator.
17. Strong ability to work from own initiative and to work independently.
18. Excellent team working skills in multiple internal and external team settings.
19. Leadership qualities.
20. Excellent problem-solving skills.
21. Irregular hours including evening, weekend and other out-of-hours work will be a component of the research at times.
22. Must be willing to travel to national and international meetings and collaborative laboratories as required.

**DESIRABLE CRITERIA:**

1. Recent up to date knowledge of lipid and lipoprotein metabolism, pathophysiology of cardiomyocyte, atherosclerosis, and insulin resistance.
2. Recent hands-on experience in the following techniques:
  1. Seahorse Bioscience Analyse
  2. In vivo animal models of metabolic disease
  3. Experience in general lab management
3. Classroom-based teaching such as lecturing, tutorials.
4. Research project management training.
5. Recent hands-on experience in creating SOP, Risk Assessments, COSSH.

6. Up-to-date knowledge of fields of cardiovascular disease, RNA and lipid and lipoprotein metabolism.
7. Experience in giving oral and poster presentations at scientific conferences.
8. Experience working in outreach settings.