



Candidate Information

Position:	Research Fellow
School/Department:	Institute for Global Food Security
Reference:	18/106945
Closing Date:	Monday 3 December 2018
Salary:	£33,199 - £39,610 per annum (potential to progress to £43,266 per annum through sustained exceptional contribution)
Anticipated Interview Date:	Monday 17 December 2018
Duration:	3 years

JOB PURPOSE:

To be an active member of the research project/team assisting in the development of research proposals and the planning and delivery of the research activity within a specified area so that the overall research objectives of the project/school are met.

MAJOR DUTIES:

1. Develop and plan an area of personal research and expertise, and/or undertake research under supervision within a specific research project or as a member of a research team.
2. Design, develop and refine experimental apparatus, field research or experiments in order to obtain reliable data.
3. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
4. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
5. Prepare, often in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
6. Assist grant holder in the preparation of funding proposals and applications to external bodies.
7. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.
8. Carry out occasional undergraduate supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
9. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines.

Planning and Organising:

1. Plan for specific aspects of research programmes. Timescales range from 1-6 months in advance and contribute to research group planning.
2. Plan for the use of research resources, laboratories and workshops where appropriate.
3. Plan own day-to-day activity within framework of the agreed research programme.
4. Plan up to a year in advance to meet deadlines for journal publications and to prepare presentations and papers for conferences.
5. Coordinate and liaise with other members of the research group over work progress.

Resource Management Responsibilities:

1. Ensure research resources are used in an effective and efficient manner.
2. Provide guidance as required to support staff and any students who may be assisting with research.

Internal and External Relationships:

1. Liaise on a regular basis with colleagues and students.

2. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
3. Join external networks to share information and ideas.
4. Contribute to the School's outreach programme by establishing links with local community groups, industries etc.

ESSENTIAL CRITERIA:

1. Have or be about to obtain a PhD in a relevant area.
2. At least 3 years recent relevant research experience to include:
 - Experience in the development of computational pipelines for analysis of non-coding RNAs and modelling the effects on mRNAs.
 - Experience with computational genomics and genetics, multi-omics data integration, tool development for systems and network biology.
 - Experience analysing data sets pertaining to stem cells, cancer, endocrine disruption and immunology.
 - Experience applying the adverse outcomes pathway (AOP) framework.
3. Evidence of publications commensurate with stage of career and experience.
4. Work as part of the systems biology research group within the Institute for Global Food Security and School of Biological Sciences.
5. Develop, plan, and deliver systems biology disease associated research under supervision within a research programme aimed at delineating the mechanistic between non-coding RNAs and endocrine disruption leading to adverse metabolic outcomes.
6. Techniques may include multi omics approaches, computational genomics and genetics, RNA and miRNA sequencing, reduced reduction bisulfite sequencing (RRBS), miRNA network biology cell culture, RT-PCR, immune based assays, mammalian cell culture, rodent and zebrafish models, flow cytometry and bioinformatics.
7. Maintain up-to-date knowledge of the field of interest at the cutting edge (e.g. non-alcoholic fatty liver disease, cancer, endocrine disruption) and communicate the same to the group.
8. Contribute to general culture of the laboratory, particularly passing on skills to new members.
9. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes
10. Knowledge of R, Python and Linux to analyse and integrate "Omics" data, including Transcriptomics, Epigenomics, Proteomics and Metabolomics data sets.
11. Experience with System Biology analysis tools (for example iPathwayGuide, IPA and GSEA).
12. Ability to communicate complex information clearly.
13. Ability to build contacts and participate in internal and external networks.
14. Demonstrable intellectual ability.
15. Ability to assess and organise resources.
16. Ability to work independently within the context of a research team.
17. Commitment to high quality research.

DESIRABLE CRITERIA:

1. Master's Degree in a related subject.
2. Experience analysing data from immune based assays, mammalian cell culture, rodent and aquatic animal models, qPCR analyses, flow cytometry analysis
3. Experience in Network Biology, including Reverse-engineering biological networks and Master Regulator Analysis.
4. Evidence of having presented at conferences (poster and/or oral presentations).