Candidate Information

Position:	Research Fellow
School/Department:	Institute for Global Food Security
Reference:	20/108119
Closing Date:	Wednesday 11 March 2020
Salary:	£33,797 to £40,322 per annum
Anticipated Interview Date:	Monday 23 March 2020
Duration:	Available until 28 February 2021

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 are met.

This project intends to apply novel rapid evaporative ionisation mass spectrometry-based fingerprinting and point-of control interpretation to assure the quality of a number of economically important food commodities (i.e. finfish and olive oil). The project is a collaboration between QUB, two food companies (Matis and Acesur) and a retailer (Colruyt).

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 to include:
3. Optimizing real time REIMS-based analysis methods and point-of-control data interpretation approach enabling integration in existing IT pipeline, for olive oil (using laser as ionisation source) and the finish species salmon, cod, tuna (using the iKnife or an adapted probe as ionisation source).
4. Innovative REIMS-based detection platform: build models for selected olive oil and finfish supply chain vulnerabilities with potential increased consumer purchase intention. Samples will be collected with guaranteed origin and full supply chain information and in parallel analysed using conventional analytical techniques (physicochemical parameters), sensory tests (e.g. PANEL test), etc.
5. ISO17025 accreditation guidelines: implement in the REIMS-based real-time point-of-control analysis pipeline through application on a series of samples from the entire olive oil and finfish supply chains.
6. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
7. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
8. Prepare, often in consultation with 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 to external bodies.
10. 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.
11. 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.
12. 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 3-6 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 about to obtain a PhD in Food Chemistry, Biochemistry or a closely related discipline.
2. At least 3 years recent relevant research.
3. Experience in relevant Food Analysis methods.
4. Experience in identifying and validating quality parameters in food.
5. Experience of designing, conducting, statistically analysing and writing up scientific experiments.
6. An understanding of food traceability and integrity processes.
7. Contribute to general culture of the laboratory, particularly passing on skills to new members.
8. Ability to deliver training and provide support to operatives.
9. Ability to communicate complex information clearly.
10. Ability to build contacts and participate in internal and external networks.
11. Ability to work from own initiative and effectively as a member of a group.
12. Ability to assess and organise resources.
13. Willingness to undertake international travel as required.
14. Flexibility and ability to work irregular hours on an occasional basis as required.

DESIRABLE CRITERIA:

1. Experience in the use of Mass Spectrometry.
2. Experience in the use of Mass Spectrometry for Food Analysis.
3. Experience in Rapid Evaporative Ionization Mass Spectrometry.
4. Understanding of regulatory requirements for a range of target markets.