

JOB DESCRIPTION

Vacancy reference:	SRF41810
Post Title:	Post Doctoral Research Associate
Grade:	Grade 6
School/Department:	School of Agriculture Policy and Development
Reports to:	Paola Tosi
Responsible for:	Delivering UKRI funded research project

Purpose

'Raising the Pulse (RtP)' is a £2.5M UKRI Transforming UK Food Systems project based on the concept that a higher consumption of UK grown pulses would result in considerable health and environmental benefit to the population. The pulse best suited to the UK, the faba bean, is naturally high in protein, micronutrients and fibre, and has the lowest environmental impact of all crops. However, most of the population will not significantly increase their consumption of this pulse unless it is successfully incorporated into familiar looking and tasting, affordable and convenient staple foods, such as bread. The scope of the RtP project is wide ranging, from sustainable production to nutritional enhancement, to processing and manufacturing innovation to evaluation of health benefits and consumer acceptance together with modelling of all the above. This ambitious project is therefore highly multi-disciplinary and will employ 6x FTE research staff (PDRAs and technicians). One of these posts is for a full-time Postdoctoral Research Associate with relevant training and experience in chemical and microstructural analysis of plants/foods for a period of 3 years from 1st October 2022.

The PDRA will carry out and coordinate research activities relating to faba bean grain characterisation and processing optimisation for incorporation into bread and other bakery products, which are central deliverables of the RtP project.

Main duties and responsibilities

The successful candidate will be responsible for:

- Undertaking independent research within multidisciplinary teams on Crop Science and Food Science and with the wider Raising the Pulse consortium, spanning plant microscopy, grain processing, food chemistry (including flavour chemistry), sensory science, food rheology and microstructure,
This will include:
 - Morphological investigations (including microscopy) and milling trials of faba bean grain
 - Design and implementation of chemical and physicochemical analysis of raw and processed faba beans, flour, dough and bread
 - Designing, seeking ethical approval, running and analysing data collected from trained and untrained panels
- Leading preparation of reports, drafting of manuscripts and presentation of research outcomes of faba bean grain processing and development of faba bean-based bakery products at national and international conferences
- Assisting in the supervision of MSc and BSc project students.
- Overseeing project progress, and meeting deadlines, under the supervision of the project leads.
- Organisation of and participate in project group meetings

Supervision received

The PDRA will report to Dr Tosi, Leader of WP2 in the Raising the Pulse project, who will provide support and guidance on grain microscopy and grain milling. The post holder will also receive support and guidance from Dr Afroditi Chatzifragkou on grain chemical characterisation; Dr Julia Rodriguez Garcia on bakery science and food physical properties; Dr Stella Lignou on sensory and consumer research; and Dr Jane Parker on flavour chemistry and acrylamide formation.

Supervision given

The successful candidate may have the opportunity to provide supervision to undergraduate and postgraduate projects.

Contact

The post will be based at the Crop Sciences Department, School of Agriculture, Policy and Development. There will be frequent contact with the internal co-investigators at the Department of Food and Nutritional Sciences, Department of applied economics and marketing at the University of Reading. There will be also frequent contact with external collaborators at Hovis, and Pladis Ltd.

Terms and conditions

This post is full-time (1.0 FTE) and fixed-term for 3 years. Requirement to be able to work occasionally off-site to make use of research facilities at Industrial partners.

This document outlines the duties required for the post to indicate the level of responsibility. It is not a comprehensive or exhaustive list and the line manager may vary duties from time to time which do not change the general character of the job or the level of responsibility entailed.

Date assessed: May 2022

PERSON SPECIFICATION

Job Title	School/Department
Postdoctoral Research Associate	School of Agriculture Policy & Development

Criteria	Essential	Desirable
Skills Required	<ul style="list-style-type: none"> • Chemical and microstructural analysis of plants/foods • Analysis of physical properties of food • Handling and statistical analysis of large datasets • Writing and publication of scientific papers and reports • Good verbal and written communication skills 	<ul style="list-style-type: none"> • Skills in analysing chemical and microstructural properties of grains • Skills in flavour analysis
Attainment	<ul style="list-style-type: none"> • PhD in Plant Science, Food Science or related biological science • Evidence of publication record in peer reviewed journals 	<ul style="list-style-type: none"> • Post-doctoral experience with publication in current project relevant topics • Presentation at conferences • Full UK drivers' licence
Knowledge	<ul style="list-style-type: none"> • Plant/ food biochemistry • Food science • Chemical analysis 	<ul style="list-style-type: none"> • Basic Botany • Grain processing • Food rheology • Sensory science • Bakery science • Light/CLSM/TEM microscopy
Relevant Experience	<ul style="list-style-type: none"> • Experience of multidisciplinary research • Experience of operating at least two of the following independently: grain microstructure analysis, rheology, liquid/ gas chromatography • Statistical analyses • Scientific publication writing 	<ul style="list-style-type: none"> • Confocal microscopy • Organising and leading project meetings • Working with legume flours • Working with bread • Working in collaboration with industry • Carrying out sensory evaluation and consumer acceptability trials • Bakery/Cereal science • writing reports for industry and research papers

Disposition	<ul style="list-style-type: none">• Ability to work independently and as a member of a team• Good communication skills (essential to run sensory and consumer panels).• Enthusiastic and motivated• Good project management and time management skills.	
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Completed by: Dr Paola Tosi

Date: 16/05/2022