UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Sustainable Fermentation-based Proteins, School of Food Science and Nutrition

Salary: Grade 7 (£37,099 – £44,263 p.a.) Due to funding limitations, the an appointment will be not be made above £37,099 p.a

Reference: ENVFS1097

Fixed-term for 19 months from 1st March 2024

We will consider job share / flexible working arrangements

Research Fellow in,
School of Food Science and Nutrition

Are you an ambitious researcher looking for your next challenge? Do you have an established background in food biotechnology and interests in designing novel alternative protein-based food products with optimized nutritional value, texture, healthier and simultaneously sustainable and clean label? Are you passionate about developing multidisciplinary research? Are you interested to explore the innovation potential of a scientific discovery to bring the research to marketplace by working with food industry stakeholders? Do you want to further your career in one of the UK's leading research-intensive universities?

What does the role entail?

We are looking for an Innovate UK-funded Research Fellow to join a highly dynamic, interdisciplinary team; focusing on the development of an unprecedented low-emission, indulgent, highly structured protein and vitamin enriched yeast-based "whole-cut" food product, to answer consumers' and market demands, while boosting the reduction of food loss and freshwater usage by promoting the recovery of vegetable retailers' side-streams. You will actively collaborate with experts in the School of Food Science and Nutrition from food engineering, fermentation science, biopolymer science including colloids and functional nanomaterials design, and with commercial food industrial stakeholders (large as well as small-scale industries).

You will work on the development of microbial based texturized novel proteins, using precise-fermentation technology to make it more sustainable and healthier than the traditional proteins (meat, plants) and characterize the product chemically and physically. Furthermore you will test the feasibility of upcycling vegetables loss to formulate a growth media for the microorganisms, lowering production costs and promoting circular economy. This will involve integrating microbial fermentation optimization, functional biopolymer scaffold design and characterization, nutritional evaluation knowledge, advanced imaging and other colloid science techniques to gain mechanistic and structural information on the complex of microbial biomass and biopolymer scaffold.

You will have a PhD (or have submitted your final thesis) in Food Science, Biotechnology, Biopolymer Science, Microbiology, Biophysics, Biochemistry, or a



related discipline, and extensive knowledge and experience of biophysical and biological properties of biopolymer-based soft material (namely bio-polysaccharides). You will also have a positive approach to collaborative research and the drive to make a significant contribution to make this ground breaking project a success.

As a Research Fellow, your main duties will include:

- Designing, planning and conducting a programme of investigation on optimizing sustainable yeast veggie growth media, bioscaffolds production and microbial structured protein-based formulation and upscaling, in consultation with Dr Célia Ferreira and the extended project team: Dr Alan Hernandez-Alvarez, Dr Amin S Dilmaghani and Dr Darren Greetham;
- Seeking opportunities to develop alternative-protein food products in collaboration with relevant commercial stakeholders to accelerate commercialization of the scientific discovery;
- Generating independent and original research ideas and methods on the formulation of growth medium from agro-industry side-streams.
- Developing research objectives and proposals and contributing to setting the direction of the research project and team including preparing proposals for funding in collaboration with colleagues;
- Preparing papers for publication in leading international journals and disseminating research results through recognised national and internal conferences and other industrial events;
- Working both independently and also as part of a larger team of researchers, engaging in knowledge-transfer activities where appropriate and feasible;
- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?



As Research Fellow, you will have:

- A PhD (or have submitted your final thesis before taking up the role) in Food Science, Biotechnology, Biopolymer Science, Microbiology, Biophysics, Biochemistry, or a related discipline;
- Experience in biophysical and biological properties of biopolymer-based soft material (namely bio-polysaccharides) and/or microbial fermentation;
- Theoretical knowledge of biophysical and biological properties of biopolymer-based soft material (namely bio-polysaccharides);
- Experience in combining the results of multiple approaches across different disciplines to develop new insights into a field of study;
- The ability to design, execute and write up research independently;
- A proven track record of peer-reviewed publications in high quality journals;
- Excellent written and verbal communication skills including presentation skills;
- Good time management and planning skills, with the ability to meet tight deadlines;
- A proven ability to work well both independently and as part of a team;
- The ability to work accurately and carefully;
- A strong commitment to your own continuous professional development.

You may also have:

- Experience in running food sensory trials and relevant statistical tests;
- Experience in advanced colloid science techniques;
- Understanding of patent and protecting intellectual property.

How to apply

You can apply for this role online; more guidance can be found on our How to Apply information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

Contact information

To explore the post further or for any queries you may have, please contact:

Dr, Célia Ferreira, Lecturer on Analytical Biochemistry
Email: C.M.Ferreira@leeds.ac.uk



Additional information

Find out more about the Faculty of Environment.

Find out more about the School of Food Science and Nutrition

A diverse workforce
The Faculty of Environment is proud to have been awarded the Athena SWAN Silver Award from the Equality Challenge Unit, the national body that promotes equality in the higher education sector. Our equality and inclusion webpage provides more information.

Working at Leeds
Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our Working at Leeds information page.

Candidates with disabilities
Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our Accessibility information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974
A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our Criminal Records information page.