



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Yeast Fermentation Science, School of Food Science and Nutrition, Faculty of Environment



Salary: Grade 7 (£38,205 – £45,585 p.a.) This role cannot be appointed above £42,978 p.a. due to funding restrictions.

Reference: ENVFS1127

Fixed-term for 9 months from 1st October 2024

We will consider job share / flexible working arrangements

Research Fellow in Yeast Fermentation Science

School of Food Science and Nutrition

Overview of the Role

Are you an ambitious researcher looking for your next challenge? Do you have an established background in food biotechnology and interests in designing novel yeast fermentation products and bio-fortification of the yeast? 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?

We are looking for an Innovate UK-funded Research Fellow to join a highly dynamic, interdisciplinary team; focusing on the development of a fortified yeast strain following a fermentation of a range of fruit and vegetable commercial side-streams and processing. 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 yeast strain development for use as a fortified strain in the fermentation industry with potential as a standalone product. You will also identify high value metabolites produced by the yeast during the fermentations. 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 and will build into an advanced artificial intelligence database which is currently one of the core missions within the School of Food Science and Nutrition at Leeds. A knowledge of analytical biosciences such as HPLC, ICP-OES, NMR would be an advantage but not essential as training will be provided.

You will have a PhD (or have submitted your final thesis) in Food Science, Biotechnology, Biopolymer Science, Microbiology, Analytical Biochemistry, Biochemistry, or a related discipline. A background in yeast microbiology, analytical biochemistry and biopolymers would be desired but not essential given relevant experience in research. 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.

Main duties and responsibilities

As a Research Fellow, your main duties will include:

- Designing, planning and conducting a programme of investigation on optimizing fermentation of vegetable and fruit side streams principally with yeast.
- Determining the changes in yeast during a fermentation using analytical tools such as ICP-OES, XRF, and NMR and correlating with production of desirable metabolites via HPLC and GC/MS would be desirable in consultation with Dr Darren Greetham and the extended yeast fermentation team at the School of Food Science and Nutrition.
- Seeking opportunities to develop yeast products from a fermentation of vegetable and fruit side streams in collaboration with relevant commercial stakeholders to accelerate commercialization of the scientific discovery;
- Generating independent and original research ideas and methods during the fermentations and explore biomass processing, yeast phenotyping and metabolic screening.
- 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;
- Making a significant contribution to the dissemination of research results by 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.
- Contributing to, and encouraging, a safe working environment.



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.

Qualifications and skills

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, Analytical Biochemistry, Biochemistry, or a related discipline
- Experience in microbial fermentations and optimising performance in adverse or challenging media;
- Theoretical knowledge of yeast fermentations, yeast physiology and yeast microbiology
- Experience in combining the results of multiple approaches across different disciplines to develop new insights into a field of study 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 developing 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:

- A knowledge of analytical biosciences such as HPLC, ICP-OES, NMR
- Experience of handling large and complex datasets
- 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, Darren Greetham, Teaching Fellow, University of Leeds

Email: D.greetham@leeds.ac.uk

Additional information

Please note: If you are not a British or Irish citizen, from 1 January 2021 you will require permission to work in the UK. This will normally be in the form of a visa but, if you are an EEA/Swiss citizen and resident in the UK before 31 December 2020, this may be your passport or status under the EU Settlement Scheme.

Please note that this post may be suitable for sponsorship under the Skilled Worker visa route but first-time applicants might need to qualify for salary concessions. For more information please visit: www.gov.uk/skilled-worker-visa

For research and academic posts, we will consider eligibility under the Global Talent visa. For more information please visit: <https://www.gov.uk/global-talent>

Find out more about the [Faculty of Environment](#).

Find out more about the [School of Food Science and Nutrition](#)

Find out more about our [Research and associated facilities](#)

Find out more about [Equality in the Faculty](#)



Working at Leeds

We are a campus based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.

A diverse workforce

The Faculty of Environment has received a prestigious Athena SWAN silver award from [Advance HE](#), the national body that promotes equality in the higher education sector. This award represents the combined efforts of all schools in the Faculty and shows the positive actions we have taken to ensure that our policies, processes and ethos all promote an equal and inclusive environment for work and study. Our [equality and inclusion webpage](#) provides more information.

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.

