



Job title	Research Fellow	Job family and level	R&T Level 4
School/ Department	Biosciences Food Nutrition & Dietetics	Location	Sutton Bonington Campus

Purpose of role

The microstructure of ice cream is partly determined by the inclusion of tropical and/or dairy fats; sources of these fats are considered unsustainable due to their impact on the environment. Identifying alternative sources of fats/oils for ice cream manufacture has become a pressing issue. Natural, plant-derived lipid droplets (oleosomes/oil bodies) are found in oilseeds; pioneering work at Nottingham University has revealed their potential as a sustainable, oxidatively stable and nutritious food ingredient. Oleosomes are therefore attracting much interest in the food sector globally, but little is known about their physical properties. The role holder will lead this applied research project.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	Establish the effect of oleosome composition (core oil and amphiphilic surface component) and size on targeted functional properties.	25
2	Develop techniques to measure flavour carry over from oleosomes into ice cream formulations	20
3	Select ingredients to enhance the performance of oleosomes in ice cream	10
4	Explore processing regimes that can optimise the performance of oleosomes in an ice-cream formulation.	25
5	Write quarterly reports for sponsors and organise/lead regular meetings	10
6	Help to maintain a safe laboratory environment including advice to PhD and undergraduate project students	5
7	Participate in activities that contributes towards a positive culture within the Food Structure and Biomaterials Research Group	5

Person specification

	Essential	Desirable
Skills	<ul style="list-style-type: none"> ▪ Problem Solving Skills ▪ Excellent written and verbal communication skills ▪ Ability to work independently and as part of a team ▪ Motivation and resilience ▪ Capability to be organised and methodical 	
Knowledge and experience	<ul style="list-style-type: none"> ▪ Knowledge of the chemistry of oils and fats ▪ Practical experience in the use of methods to measure the composition and physical properties of fats 	<ul style="list-style-type: none"> ▪ Analysing the composition and physical properties of oils and fats ▪ Experience in flavour analysis (SPME, APCI-MS) ▪ Creating, handling, and analysing emulsions and/or foams
Qualifications, certification and training (relevant to role)	<ul style="list-style-type: none"> ▪ PhD in Physics/Chemistry/Biochemistry/Food Science/Pharmaceutical Science/Material Science or another science-related subject 	



The University of Nottingham is focused on embedding equality, diversity and inclusion in all that we do. As part of this, we welcome a diverse population to join our work force and therefore encourage applicants from all communities, particularly those with protected characteristics under the Equality Act 2010.

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

- Valuing people** Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.
- Taking ownership** Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.
- Forward thinking** Driven to question the status quo and explore new ideas, supporting the team to "lead the way" in terms of know-how and learning.
- Professional pride** Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.
- Always inclusive** Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

Key relationships with others



