

TEAGASC MSC WALSH SCHOLARSHIP OPPORTUNITY

Consumer Acceptance and Sensory Profiling of Dairy Snack Foods using 3D Printing Technology

Teagasc Walsh Scholarship Number: 2018212

Background

External factors such as Brexit and climate change have direct impacts for the Irish dairy industry. Hence, dairy processors need to continue to develop innovative high-value products to remain competitive and meet contemporary consumer needs. Although 3D printing has been recommended as a technology of the future, its potential has not yet been fully explored in the food sector. The benefits of 3D printed foods include the flexibility to develop and manufacture food products of any shape or size, combined with more efficient and optimal use of clean and traceable ingredients.

The Department of Agriculture, Food and the Marine, through their FIRM funding instrument, is currently funding a 3D printing project, entitled '3D Dairy'. The objective of this project is to explore the potential of extending the market for dairy ingredients by developing new processing applications and new dairy snack-type products using 3D printing technology. Using an augmented 3D printer and nutrient dense dairy ink, a 3D dairy structured snack with novel flavours, colours and nutritional enhancement will be printed. It is well documented that having an understanding of consumer attitudes and needs during the NPD process can enhance the likelihood of product success.

Therefore, this Walsh Scholarship project will focus on undertaking a consumer survey in Ireland and UK to identify consumer needs as well as profile attitudes, facilitators and barriers regarding acceptance of 3D printed dairy foods. In addition, the student will also design and conduct sensory trials of novel 3D printed dairy-based snack foods, and bench mark these products against conventionally produced dairy products.

Requirements

Applicants should have a first or upper second-class honours primary degree or equivalent in an appropriate discipline (food science, nutrition, food business or similar). The successful candidate should be highly self-motivated with an interest in new product development and an understanding of the dairy industry in Ireland. Proficiency in English is essential.

Award

This Teagasc Walsh Scholarship forms part of a joint research project between Teagasc Food Research, Ashtown and Cork Institute of Technology. The student will be based at Teagasc, Ashtown and will be registered at Cork Institute of Technology. The Scholarship will start as soon as possible after 1st of September 2020 when the most suitable candidate is appointed. The Scholarship comprises a stipend of €24,000 per annum from which fees are paid. The duration of the award to pursue an MSc by research is two years.

Further Information/Applications

Dr Sinéad McCarthy, Department of Agrifood Business and Spatial Analysis, Teagasc Food Research Centre, Ashtown, Dublin 15.

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Dr Eimear Gallagher, Head of Food Quality and Sensory Science, Teagasc Food Research Centre, Ashtown, Dublin 15.

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Informal enquiries can be made via email to either Sinéad McCarthy or Eimear Gallagher. Interested candidates are requested to email an electronic copy of Curriculum Vitae and a letter of interest simultaneously to sinead.mccarthy@teagasc.ie and eimear.gallagher@teagasc.ie no later than **12 pm Monday 27th of July 2020**. Interviews will be held with potential candidates shortly thereafter.