

FUNDED MSc POSITION IN FOOD PRESERVATION

DESCRIPTION



Food for Health Ireland, University College Dublin

Food for Health Ireland (FHI; www.fhi.ie) is a recently created centre for functional food development funded by Enterprise Ireland (in conjunction with members of the Irish Food Industry). The FHI at UCD will consist of up to 30 individual scientists/postgraduate students working on the development of milk based Functional Foods targeting health areas which include early infant development, metabolic syndrome, immunity/infection and colorectal cancer. Research on the isolation, identification, characterization, formulation and validation of milk bioactives will form the basis of the Centre's multi-disciplinary research. FHI combines expertise from a number of national institutes and is located at University College Cork, **University College Dublin**, Teagasc – Moorepark Food Research Centre and University of Limerick.

Project Summary

Potential methods for the production of milk bioactives include enzyme hydrolysis or bacterial fermentation. These production processes tend to be performed in batchwise fashion as they are relatively slow in nature which in turn limits throughput in a commercial environment. In addition, the relatively long process times can allow the proliferation of native microflora from raw materials many of which can have an undesirable impact on the end product or on bacterial fermentation if used. The current project will explore the potential for the application of a range of novel technologies (e.g. high voltage pulsed electrical fields, ultrasound, high intensity light pulses, ultraviolet light and high hydrostatic pressure) to areas of the production process such as the pre-treatment of raw materials prior to processing with a view to reducing their initial microbial load. Alternatively their use as treatments during enzyme hydrolysis and/or bacterial fermentation will be assessed with the aims of assessing their impact on the reaction rates, impact on microbial flora while also assessing their effect on functionality and bioactivity of the end products. (*Note: The specific effect on bioactivity will be assessed by other team members*).

Profile

Candidates should be enthusiastic, self motivated individuals, who will interact well within a larger research team. The successful candidate will register for a Masters degree, will be paid a stipend (approx. Euro 22,700 p.a.) from which they will be required to pay a postgraduate registration fee; EU fee approx. Euro 5,800 p.a.; non-EU fee approx. Euro 11,600 p.a.

Requirements

- A minimum of a 2.1 honours degree in Food Microbiology, Food Science/Food Technology or other appropriate disciplines.
- Experience and/or interest in enzyme/microbial analysis/chemical and/or food preservation is also desirable.
- Note: Funding is available for 21 months (subject to a start date of September 2011)

No relocation expenses will be payable on this appointment

Application procedure: Please send a CV, covering letter and a copy of your transcripts to Dr. Nessa Noronha, Research Manager, Food for Health Ireland (ucdfoodsci@gmail.com) University College Dublin, Belfield, Dublin 4, Ireland.

Informal enquiries in relation to this position can be made to Dr. James Lyng (james.lyng@ucd.ie) or Dr. Nessa Noronha (e-mail above).

Closing date 16th August 2011.