Teagasc PhD Walsh Scholarship Opportunity

"Applying naturally occurring bacterial species for the healthy biotransformation of milk and milk products"
Walsh Scholarship Reference Number: 2020018

Background
The milk processing industry is a vital part of the Irish bioeconomy with an estimated turnover value of €4.8 billion in Ireland. The widespread adoption of Clean-In Place practises in the dairy industry has helped to ensure food safety in the supply chain and of the final product. However, this leads to increased levels of by-products in the food chain, such as chlorate, which can be harmful to the consumer and have been specifically targeted for reduction by the dairy industry. The aim of this project is to identify naturally occurring members of the bacterial community in the dairy environment that can convert the chlorate to compounds that are safe for human consumption and thereby further improve the sustainability of the sector.

As part of this fully funded PhD studentship, the research programme will couple shotgun metagenomics and bioinformatics with synthetic biology tools to determine which pathways are associated with the reduction of chlorate, how they function, and how they can be harnessed in a practical fashion to address this industrial challenge. The student will develop skills in a wide range of techniques including next generation sequencing and analysis, biochemical and biological assays, and bacterial culturing and propagation. The successful candidate will also be involved in wider Teagasc and APC Microbiome Education and Public Engagement activities.

Teagasc Food Research Centre (TFRC), Moorepark, part of Teagasc – the Irish Agriculture and Food Development Authority, undertakes public scientific research and provides technological services to the food industry with emphasis on functional foods, dairy, food ingredients and formulated foods and beverages. The programme consists of fundamental and applied research, technology transfer, industrial consultancy and training under the overall umbrella of an innovation management strategy.

Teagasc supervisor: Dr John Kenny TFRC, Moorepark, Fermoy Co. Cork, Ireland
Academic supervisor: Prof Douwe van Sinderen, UCC, College Road, Cork, Ireland

Requirements
Applicants should have a good primary degree (First or Second Class Honours) or M.Sc. in Microbiology, Genetics, Biochemistry or related discipline. The successful candidate should be highly self-motivated, interactive and willing to learn new techniques. A minimum level of competency in English is required. Please see the following link with regard to English Language requirements: https://www.ucc.ie/en/study/comparison/english/postgraduate/

Award
The scholarship funding is €22,000 per annum and includes University fees of up to a maximum of €6,000 per annum and is tenable for 4 years.

Further Information/Applications
Contact Dr John Kenny, Teagasc Food Research Centre, Fermoy Co. Cork. john.kenny@teagasc.ie or Prof Douwe van Sinderen, UCC, College Road, Cork, Ireland. d.vansinderen@ucc.ie

Application Procedure
Applicants should submit a CV and covering letter detailing their qualifications, experience and contact details for at least two referees simultaneously to Dr John Kenny at john.kenny@teagasc.ie and Prof Douwe van Sinderen at d.vansinderen@ucc.ie.

Closing date
5 pm on Friday May 22nd 2020