

Enhancement of Nutritional and Functional Qualities of Herbal-Infused Beverages

Walsh Scholarship Reference Number: 2024297

University: Maynooth University

Funding: Teagasc

Research Institution: Teagasc

Location: Teagasc Ashtown, Dublin 15

Proposed Start Date: May 2026

Project Summary

Consumer demand is increasingly focused on foods and beverages that deliver benefits beyond basic nutrition. This MSc project aims to develop and optimise herbal-infused dairy beverages with enhanced nutritional and functional properties. The study will focus on the selection of bioactive-rich herbs produced in Ireland and the application of novel processing technologies, including pulsed electric field and ultrasonication, to enhance the recovery of high-value ingredients.

The project will evaluate the retention of key nutrients and phytochemicals in fortified beverages, with particular emphasis on antioxidant capacity, phenolic profiles, and shelf-life stability.

Physicochemical properties relevant to product quality and potential market adoption will also be assessed. The research will generate evidence to support the development of functional dairy beverages aligned with emerging consumer health trends.

Supervision

The student will be supervised by Dr Dilip Rai (Teagasc), with academic supervision from Dr Fergal Byrne (Maynooth University). The supervisory team brings complementary expertise in food science, functional ingredients, and dairy processing, providing a strong academic and applied framework for the project.

Research Environment

You will be registered at Maynooth University and based at Teagasc Food Research Centre, Ashtown, for the duration for your studies. The centre provides access to modern food processing facilities and advanced analytical laboratories, supporting experimental research in functional food development.

Candidate Profile and Eligibility

Applicants should ideally:

- Hold, or expect to hold, an honours degree in Food Science or a related discipline
- Demonstrate an interest in functional foods, food processing, or food chemistry
- Be motivated to undertake laboratory-based experimental research
- Possess strong organisational skills and the ability to analyse and interpret data
- Have good written and verbal communication skills
- Relevant industry or internship experience is desirable

Funding Details

This is a fully funded two-year Masters funded by Teagasc, including:

- €25,000 annual stipend (tax-free)
- University fees covered up to €6,000 per annum

How to Apply



Applicants should complete the [online application form](#) by **5:00pm on Wednesday, 18 March 2026**. Applications must include a curriculum vitae and a 1 page statement of motivation submitted as part of the online application.

Interviews

Shortlisted candidates will be invited to interview in early to mid-April 2026. Online interviews can be accommodated.

Further Information

Informal enquiries are welcome and may be directed to: **Dr Dilip Rai** – Dilip.rai@teagasc.ie

Further information on the Walsh Scholars Programme is available at:

<https://www.teagasc.ie/about/research-innovation/the-walsh-scholars-programme/about-the-programme/>