



An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine



## TEAGASC PHD WALSH SCHOLARSHIP OPPORTUNITY

“RU-MINIG: RUMen microbiome MINING for bacterial cultures to reduce methane”

**Ref Number 2022218**

**Background:** The agri-food sector is one of Ireland and New Zealand’s largest indigenous industries and a key player in the national economy. However, greenhouse gas (GHG) emissions from agricultural, primarily enteric methane, accounts for 38 and 49% of Irish and New Zealand total GHG emissions. Enteric methane originates as a by-product of rumen microbial fermentation. Previous research from Ireland and New Zealand has highlighted the contribution of individual species of lactic acid producing bacteria (LAB), to inter animal divergence in methane output.

This Walsh Scholarship is part of an international collaboration between researchers in Ireland and New Zealand, called ‘RU-MINIG’, funded by the Ireland – New Zealand Joint Research Mechanism (2023-2027). The goal of the project is to evaluate the anti-methanogenic effects of individual strains of LAB and their suitability as potential silage inoculants for beef cattle. Promising LAB will also be administered to calves in early life, to investigate their potential to alter the course of microbial establishment within the rumen, and have a lasting impact on the subsequent enteric emissions of an animal in later life.

The successful candidate will join a team with a track record of success in this research topic, and have access to research infrastructure. There will be opportunities throughout the programme for professional development training, conference attendance and international travel to expand your research interest.

**Requirements:** Applicants should have a primary degree (First or upper Second Class Honours) or a M.Sc. in an appropriate discipline (Microbiology, Animal or Agricultural Science, Molecular biology, Biochemistry, Biology etc.). The successful candidate should be highly self-motivated and be prepared for both laboratory and field work. A full EU driving licence is also required. Proficiency in the English language is required. Please see the following link with regard to English Language requirements <https://www.ucc.ie/en/study/comparison/english/postgraduate/>

**Award:** This 3 year PhD Scholarship is part of a large international project called ‘RU-MINIG’, funded by the Ireland – New Zealand Joint Research Mechanism (2023-2027). The scholar will be registered at University College Cork (UCC), but primarily based at the Teagasc Animal and Bioscience Research Department, Grange Co. Meath, Ireland, with complementary laboratory and course work conducted at UCC.

The scholar will be under the joint supervision of Prof. Sinéad Waters and Dr. Paul Smith (Teagasc) and Prof. Paul Ross (UCC). The scholarship funding is €24,500 per annum and includes University fees of up to a maximum of €6,000 per annum and is tenable for 3 years.

**Further Information/Applications:** For further information please email: [sinead.waters@teagasc.ie](mailto:sinead.waters@teagasc.ie) or [paul.smith@teagasc.ie](mailto:paul.smith@teagasc.ie) .

**Application Procedure:** Submit an electronic copy of a Curriculum Vitae, which should include a short personal statement and the names and contact details of two referees, by email to: [sinead.waters@teagasc.ie](mailto:sinead.waters@teagasc.ie) .

**Closing date: 30th June, 2023.**