



Marine Biodiversity Lab
University of Galway



MSc Research Position: Metabolomic Diversity in Kelp

We invite applications for a fully funded MSc research position to join the Marine Biodiversity Lab (@marinebiodiversitylab) at the University of Galway and investigate the chemical diversity in kelp using metabolomics.

Kelp forests are among the most productive and ecologically important marine ecosystems, providing habitat, food and ecosystem services while supporting substantial biodiversity. Kelps also produce a diverse range of primary and secondary metabolites involved in growth, stress responses, chemical defence and interactions with other organisms.

This MSc project will use LC–MS-based metabolomics to investigate chemical diversity in kelp to examine metabolite profiles among species, populations, tissues and/or environmental conditions. The project will form part of the broader research programme of the Marine Biodiversity Lab investigating seaweed biodiversity, evolutionary ecology, chemical ecology and responses to environmental change.

Funding and duration

- Duration: 1 year
- Host institution: University of Galway
- Start date: January 2027
- Tuition fees: Fully covered for the duration of the MSc
- Stipend: €12,000 per annum for 12 months

Project aims

The project will investigate metabolomic diversity in kelp through three main objectives:

1. Characterise metabolomic diversity in kelp using LC–MS-based metabolomics and determine whether chemical profiles vary among species, populations, tissues and/or environmental conditions.
2. Explore the ecological significance of metabolomic variation, including potential links to stress responses, chemical defence and growth.

Supervision and research environment

The MSc will be supervised primarily by Dr Maggie Reddy (University of Galway) and co-supervised by Prof. Olivier Thomas (University of Galway).

The student will be based in the Marine Biodiversity Lab and will work within a multidisciplinary research environment combining kelp ecology, marine biodiversity, metabolomics and chemical ecology.



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Required expertise and desirable skills

Applicants must have:

- A relevant undergraduate degree in Biochemistry/Molecular Biology, Chemistry or a related discipline.
- An interest in developing laboratory, analytical and data-analysis skills.
- Experience in marine fieldwork or a willingness to learn.

Experience in one or more of the following areas would be desirable:

- Seaweed/kelp and/or molecular biology.
- Metabolomics or mass spectrometry.
- Statistical or ecological data analysis in R.

Experience with these techniques is not essential. The project provides an opportunity to develop interdisciplinary research skills in marine biology, metabolomics, chemical ecology and data analysis.

How to apply

Applicants must submit the following documents to mmreddy@universityofgalway.ie with the subject line RE: MSc_application_name_surname by 30 October 2026:

- CV (2–3 pages) and contact details for at least two academic referees
- Academic transcripts

Shortlisted candidates will be invited for an interview following the application deadline.

The successful candidate will be expected to commence the MSc in January 2027.

We are committed to building an inclusive and supportive research environment and strongly encourage applications from candidates from diverse backgrounds.