



Marine Biodiversity Lab
University of Galway



PhD Position: Ecology and Evolution of Seaweeds Using a Multi-Omic Approach

We invite applications for a fully funded PhD position to join the Marine Biodiversity Lab (@marinebiodiversitylab) at the University of Galway, Ireland. The project will investigate the relationship between seaweed biodiversity, evolution, and chemical ecology.

Seaweeds are ecologically important foundation species and a rich source of biologically active compounds with applications in biotechnology, food, agriculture and biomedicine. However, evolutionary processes underlying variation in their chemical traits remain poorly understood. This project will combine systematics, phylogenomics and LC–MS-based metabolomics to investigate how chemical traits evolve across seaweed lineages and respond to environmental and developmental variation.

Project aims

1. Characterise seaweed biodiversity and evolutionary relationships using molecular systematics, phylogenomics and species-delimitation approaches.
2. Characterise and compare chemical diversity across species, populations and lineages using LC–MS-based metabolomics and investigate relationships between genetic and chemical differentiation.
3. Investigate the ecological and environmental drivers of diversity, examining how geography, environmental conditions and development influence these patterns.

Funding and duration

- Duration: 4 years
- Host institution: University of Galway
- Start date: January–March 2027
- Tuition fees: Fully covered for the duration of the PhD
- Stipend: €25,000 per annum for 4 years

Additional opportunities for research training, conference attendance and international research visits will be available through the project and wider research programme.

Supervision and research environment

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

Candidates will be based at the University of Galway and join the Marine Biodiversity Lab, a multidisciplinary research environment combining marine biodiversity, molecular biology and chemical ecology.



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The project will provide access to existing seaweed collections, field sampling, molecular and microscopy facilities, controlled culture rooms and mass spectrometry facilities, as well as opportunities for national and international collaboration and research visits.

Required expertise and desirable skills

Applicants must have:

- An MSc degree in Marine Biology/Biological Sciences, Evolutionary Biology, Genetics and Genomics or a related discipline.
- Seaweed identification, taxonomy and microscopy.
- Experience with molecular biology, such as DNA extraction, PCR and/or short or long sequencing and genome assembly.
- Controlled seaweed culture or common-garden experiments and statistical analyses in R or Python.

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

- Scientific diving (CMAS2 or equivalent), sample collection, data curation.
- Phylogenetics/phylogenomics and molecular species delimitation.
- Metabolite extraction and LC–MS-based metabolomics.
- Integration of genomic, metabolomic and environmental datasets.

How to apply

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

- CV (2–3 pages) including at least two letters of recommendation from academic supervisors.
- Academic transcripts.
- List of publications, conference presentations and/or relevant science communication activities, where applicable.

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

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