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Ollscoil
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an Atlantaigh

Atlantic
Technological
University



Foras na Mara
Marine Institute

PhD Postgraduate Research Opportunity

PhD Project Title:	Assessment of the <i>Kudoa</i> sp. parasite in Atlantic mackerel
Project Duration:	48 months funded PhD position
Organisation:	Atlantic Technological University (ATU)
Location:	ATU Galway City, Dublin Road, Galway.
Stipend:	€19,000 per annum
Responsible to:	Project Supervisors: Dr Deirdre Brophy (ATU), Dr Katie O'Dwyer (ATU), Dr Anita Talbot (ATU), Dr Michael Gallagher (BIM)

Funding: European Maritime, Fisheries and Aquaculture Fund

Description: An exciting opportunity has arisen for a suitably qualified and strongly motivated graduate to undertake a PhD as part of a collaboration between the Marine and Freshwater Research Centre (MFRC) at ATU's Galway City Campus, BIM, the Marine Institute.

Northeast Atlantic (NEA) mackerel (*Scomber scombrus*) is Ireland's most valuable commercial fish species, with €73m worth of fish landed by Irish vessels in 2021 and exports valued at €109m in 2021. In recent years Irish pelagic processors have noted an increase in the occurrence of 'jelly flesh', most likely due to infection with the myxosporean parasite *Kudoa* sp. (Kudoidae). Increasing infection rates in more northern waters may be linked to a change in the distribution of the mackerel stock, changes in stock size or in size at age (Giulietti et al. 2022, Højgaard et al. 2022). Although not harmful to humans, heavy infection with the *Kudoa* sp. parasite can destroy the fillet and renders it commercially unusable. A PCR test has been developed that detects *Kudoa* sp. infection, even in fish without symptoms (Funk et al. 2007); this may have wider applications for the seafood processing sector in the future.

The aim of this PhD research programme is to characterise *Kudoa* sp. infection in the Irish mackerel fishery using molecular and histological techniques, to identify biological and environmental factors associated with infection and to develop tools for mitigating the impacts on commercial fishing and processing operations.

Requirements/Qualifications: The successful candidate will hold an Honours Degree (minimum 2:2, but 2:1 or higher is desirable) in Marine or Environmental Science, Zoology, Ecology, or a related discipline. The successful candidates will have excellent field and laboratory skills. Previous experience in fish

biology, parasitology or molecular biology would also be an advantage, although training will be provided. Ability to communicate scientific research findings and experience in statistical software packages in R will be viewed favourably. A full clean driving licence is highly desirable. The candidate will be expected to work on their own initiative as part of a dynamic team, liaise with project collaborators and relevant industry partners and be willing to acquire the broader skills necessary for the successful completion of a PhD project.

Project Duration: 48 months

Conditions:

- €19,000 Stipend per annum.
- Postgraduate fees for EU students will be covered by the project
- Any necessary national and international travel and material costs incurred during the project will be covered by the project.

Please Note: Candidates from outside the EU are eligible to apply but will be expected to provide evidence of sources of additional funds to cover excesses associated with Non-EU fees.

If either English or Irish is not the applicant's first language, evidence of English language proficiency is required for registration. Please refer to web link [English Language Requirements | ATU - Atlantic Technological University \(gmit.ie\)](#) to view the minimum English language proficiency standards for entry to ATU

Project Start Date: September 2023

Application Closing Date: 12 noon, Thursday 25th May 2023

Applicants should submit their:

- Curriculum Vitae (to include details of 2 referees)
- A copy of transcript of results
- A Personal Statement

The Personal Statement should not exceed 1 page and should include an outline of:

- How you meet the requirements of the position
- Why you would like to pursue this PhD research programme

Applications must be submitted to ResearchOffice.galwaymayo@atu.ie e-mail address only. Please ensure all documents are emailed as a single Word or PDF file.

For further information on the project, please contact: Dr Deirdre Brophy Deirdre.brophy@atu.ie or Dr Katie O'Dwyer katie.odwyer@atu.ie

Data Protection Statement

ATU takes very seriously its legal obligations as set out in the General Data Protection Regulation 2016/679 (GDPR) and the Irish Data Protection Act 2018 to safeguard and protect your personal information in our possession. The personal information which you disclose to us in this form will only be used to assess your suitability; administer and register you for this scholarship. We will not keep your personal information for any longer than is necessary for those stated purposes. **For more details, please refer to ATU's Student Privacy Statement: <http://www.gmit.ie/general/student-privacy-statement>**