



Ollscoil  
Teicneolaíochta  
an Atlantaigh

Atlantic  
Technological  
University



Marine Institute  
Foras na Mara

## PhD Postgraduate Research Opportunity

**Project Title:** Epidemiological examination of Salmonid Rickettsial Septicaemia (SRS) in Irish Atlantic salmon farms (P230076)

**Funding:** This **Cullen Scholarship** (Grant-Aid Agreement No. CS/23/002) will be administered by the Marine Institute and funded by the Institute under the Marine Research Programme with the support of the Irish Government.

**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 ([www.mfrc-atu.ie](http://www.mfrc-atu.ie)) located in the Atlantic Technological University (Dublin Road Campus) ([www.atu.ie](http://www.atu.ie)) and the Marine Institute ([www.marine.ie](http://www.marine.ie)).

The PhD project will investigate Salmonid Rickettsial Septicaemia (SRS) in Atlantic salmon, a bacterial infection caused by the gram negative *Piscirickettsia salmonis* (*P. salmonis*). The frequency of occurrence of this disease has increased significantly in recent years whereby *P. salmonis* is now emerging as one of the main disease challenges for the Irish marine salmon farming industry. This PhD project will investigate the epidemiology of *P. salmonis* and will include longitudinal studies to determine SRS disease prevalence and seasonality. Culture cultivation methods for *P. salmonis* will also be developed. In addition, rapid, sensitive, quantifiable, and reliable molecular tests for *P. salmonis* using real-time PCR (qPCR) and digital droplet PCR (dPCR) will be established to detect SRS more accurately. One of the main objectives of this project will be the development of an effective vaccine for the protection of salmon from SRS infection. Vaccine development will be accomplished using a reverse vaccinology (RV) approach, using computational methods to screen bacterial genomes in public databases to identify antigens for use in the SRS vaccine.

**Requirements/Qualifications:** The successful candidate will hold an Honours Degree with a minimum award classification of 2:1 or equivalent in a cognate discipline (Microbiology, Molecular Biology, Marine Biology, Veterinary Medicine, Zoology, or a related discipline). Demonstrated experience in microbiology, and molecular biology techniques would be an advantage, however training will be provided. Knowledge of bacterial genome databases would also be an advantage. A knowledge of the salmon aquaculture industry would also be helpful. A driving license is desirable. The candidate will be expected to work on their own initiative and be willing to acquire the broader skills necessary for the successful completion of a PhD project.

**Project Duration:** 48 months

**Conditions:**

The student will receive a stipend of €25,000 per annum.

Postgraduate fees for EU students 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.

In addition, any necessary travel and material costs incurred during the project will be covered. The student will be based at the Marine Institute in Rinville, Oranmore Co. Galway, Ireland and at the Marine and Freshwater Research Centre (MFRC), Atlantic Technological University (ATU) Dublin Road Campus, Galway, Ireland.

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:** May 1<sup>st</sup> 2024

**Application Closing Date:** 12 noon Monday 29<sup>th</sup> January 2024

Applicants should submit their:

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

The Personal Statement should not exceed 2 pages and include information related to:

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

***Applications must be submitted to [researchoffice.galwaymayo@atu.ie](mailto: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 Anita Talbot ([anita.talbot@atu.ie](mailto:anita.talbot@atu.ie)) or Dr Samantha White ([samantha.white@marine.ie](mailto:samantha.white@marine.ie))

#### **Data Protection Statement**

The 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.atu.ie/general/student-privacy-statement>