TUS
Technological University of the Shannon
Midlands Midwest
Ollscoil Teicneolaíochta na Sionainne:
Lár Tíre Iarthar Láir

POSTGRADUATE RESEARCH OPPORTUNITY

Project Title: Jaagsiekte Sheep Retrovirus: Characterisation and Novel Insights (J-SCAN)

This project focuses on the molecular characterisation of Jaagsiekte sheep retrovirus (JSRV), the causative agent of ovine pulmonary adenocarcinoma (OPA), a contagious lung cancer of sheep. OPA is an "iceberg disease" because it is often chronic and subclinical, meaning infected animals may show no visible signs while the disease continues to spread within flocks.

The successful PhD candidate will process lung tissue samples from suspected OPA cases and perform molecular testing for JSRV detection. She/He will use high-throughput sequencing technologies, including Oxford Nanopore Technologies and Illumina platforms, to generate a comprehensive genomic dataset of Irish JSRV isolates. The candidate will also analyse sequencing datasets using bioinformatics pipelines to investigate the genetic diversity and evolution of JSRV in Ireland. In addition, they will evaluate existing diagnostic assays and develop a rapid isothermal amplification test to improve the early detection of OPA.

This research is important for Ireland as a major sheep meat exporter, where OPA poses a threat to animal health, flock productivity, and trade. Although OPA is a notifiable disease, early diagnosis remains challenging due to the limited availability of sensitive field-deployable diagnostic tests, and the genetic diversity of JSRV circulating in Ireland remains poorly characterised.

Type of Degree Offered: PhD (Doctor of Philosophy)

Duration of Project: 4 years (48 months)

Expected Start date: December 2026

Funding Agency: TUS Strategic Research Fund

Salary and Funding:

- PhD stipend of €17,000 per annum
- Tuition fee will be covered by the project
- Opportunities for paid involvement in practical demonstrations, laboratory teaching, and other departmental activities are available
- Funding to support attendance at national and international conferences is available

Minimum Qualifications, Experience, and Other Requirements

Essential

- Applicants must hold a Bachelor's degree (minimum 2:1 or equivalent) in Biological Sciences, Biomedical Sciences, Microbiology, Biotechnology, Veterinary Sciences, or a related discipline

TUS
Technological University of the Shannon
Midlands Midwest
Ollscoil Teicneolaíochta na Sionainne:
Lár Tíre Iarthar Láir

- Practical laboratory experience in molecular biology techniques, such as DNA/RNA extraction, PCR, and gel electrophoresis
- Interest in molecular virology, infectious diseases, animal health, or veterinary research
- Interest in developing skills in bioinformatics, genomics, and sequencing data analysis
- Experience in scientific data analysis and interpretation
- Good written and verbal communication skills
- Ability to work independently and as part of a research team

Desirable

- A Master's degree in a relevant discipline
- Experience with next-generation sequencing technologies or computational biology
- Familiarity with bioinformatics tools, scripting, or statistical analysis would be advantageous

English Language Requirement

IELTS [International English Language Testing System] Applicants must have a minimum of 6.5 with no component score less than 6.5. Please contact pro@tus.ie for any specific questions on this requirement.

Project Supervisory Team:
Lead supervisor: Dr. Paulina Flannery (Rajko-Nenow)
Co-supervisor: Dr. John Flannery
Advisor: Dr. Andy Fogarty

The closing date for receipt of completed application forms is **20 November 2026**. Interviews will take place on **30 November 2026**.

To apply

1. Download TUS Scholarship application form https://tus.ie/rdi/research/office/funded-research/
2. Email the completed application form to pro@tus.ie. Please add the project title in the subject line 'Jaagsiekte Sheep Retrovirus: Characterisation and Novel Insights' (J-SCAN).

For further information, please contact: paulina.flannery@tus.ie