

Funded, 4 year PhD studentship in forest pathology and microbiology:

Closes: 25th February 2022

Expected start date: May 2022



This doctoral research programme will be a 4-year structured PhD (<https://www.ucd.ie/graduatestudies/>) based at University College Dublin (Dublin, Ireland) funded by the Department of Agriculture, Food and the Marine (DAFM) and Department of Agriculture, Environment and Rural Affairs (DAERA) on the project entitled “Adaptation, mitigation and protection strategies to increase resilience of Irish forests to address the impacts of climate change (ADAPTForRes)”.

The ADAPTForRes project is a multidisciplinary collaboration between seven institutions (UCD, Teagasc, AFBI, University of Limerick, Trinity College Dublin, DAFM, and the National Botanic Gardens) across the Ireland of Ireland. The project aims to protect the ecosystem services delivered by Irish forests in the face of environmental perturbations by developing the resilience of forest ecosystems in three strategic areas: (1) forest genetic options, (2) forest management practices and (3) forest protection measures. This PhD opportunity is part of strategic area 3. The successful candidate will join a team of one other PhD student, one postdoctoral researcher and several collaborating researchers.

This PhD project will develop optimised surveillance tools for the early detection of fungal forest pests in Ireland, with a focus on molecular methods. The research has four broad topics: (i) Establish and survey a surveillance network consisting of around 30 high-risk forest plots and sentinel sites across the island of Ireland, (ii) isolate, identify (by microscopic and molecular methods) and catalogue the fungal diversity of foliage from important tree species (*Quercus*, *Picea*, *Pinus*) across the 30 sites, (iii) build and curate a culture collection of fungal organisms from the project, (iv) conduct population genetic analysis on some of the fungal organisms isolated in order to generate data for use in related project modelling work.

The experience gained in this PhD project in the areas of microbiology and plant pathology will provide the successful candidate with highly important skills, which would be suited to either a career in academia, research or in government/state agencies working on diagnostics in the animal/plant health or food safety area.

The successful candidate should be self-motivated and be prepared to acquire the necessary skills for laboratory and forest experimental work, and be fit to work on forest surveys. Experience in microbiological laboratory experience and forest fieldwork experience are highly desirable, although training will be provided.

The following selection criteria will be applied to applications.

Essential:

- Hold an undergraduate or taught Master’s degree in a life science discipline (e.g. microbiology, ecology, botany, conservation, environmental sciences) with at least a 2:1 grade (or equivalent)
- Demonstrated ability to be self-motivated
- Full driving license
- Fluent in English, at a level that meets UCD minimum requirements

Desirable:

- Previous experience of designing and conducting environmental surveys
- Previous laboratory microbiology experience
- Proven ability to work independently on project work with strict deadlines

The successful applicant will be invited to register for a structured PhD programme at University College Dublin and will be supervised by Dr Jon Yearsley (UCD's School of Biology and Environmental Science, <https://www.ucd.ie/ecomodel/people.html>) and Dr Richard O'Hanlon at DAFM's Plant Science Division (<https://www.linkedin.com/in/richard-o-hanlon-16187037>).

The studentship cover an annual PhD stipend €18,000 per annum and full tuition fees.

Applicants should submit a cover letter and cv to Dr Jon Yearsley (Jon.Yearsley@ucd.ie) by **Friday 18th February 2022**.



**An Roinn Talmhaíochta,
Bia agus Mara**
Department of Agriculture,
Food and the Marine

