



## PhD Scholarship Advertisement

Fully Funded PhD Scholarship in Sustainability, Public Engagement, and Advocacy within Cell and Tissue Engineering [College of Science & Engineering, within the disciplines of Physics and Biomedical Engineering]

Application(s) are invited from suitably qualified candidates for full-time funded PhD scholarship(s) starting in October, 2023 and affiliated to the College of Science & Engineering, within the disciplines of Physics and Biomedical Engineering at the University of Galway.

### University of Galway

Located in the vibrant cultural city of Galway in the west of Ireland, the University of Galway has a distinguished reputation for teaching and [research excellence](#)

For information on moving to Ireland please see [www.euraxess.ie](http://www.euraxess.ie)

### Detailed Project Description

PROJECT TITLE: Sustainability, PE, Advocacy & Cell and Tissue Engineering

Sustainability is a key challenge for advances in cell and tissue engineering. This includes both sustainability of laboratory methods, which are energy-intensive and can produce huge volumes of chemical and plastic waste, as well as sustainability of research careers and attitudes toward this research from various publics. For technological advances in these fields to have maximum impact, the tension between the imagined objectivity of laboratory experiments, and their real effects on our society and our planet, must be resolved. The focus of the liFETIME CDT on alternatives to animal models already attempts to address this, but methods from behavioural psychology, environmental science, and even the arts have the potential to go further.

This PhD project will be ideal for a science or engineering student looking to move beyond the bench and improve the field, using methods from the global *Green Labs* initiative as well as social science and public engagement with science. The project could also be suited to graduates from the arts, business, communications, psychology, or social science disciplines who wish to apply their skills to technical sectors that are supporting and revolutionising human health.

Laboratories, as large and constant users of energy, plastic, water, and chemicals can represent up to 25% of the total carbon footprint of a higher education institution. Thus, labs have a key role to play in delivering actions to meet the mandatory carbon zero targets set by Irish and UK governments. Green Labs programmes seek to quantify the climate impact of labs, and identify the means to co-design education, procedures and policies to mitigate these impacts. The PhD candidate would identify climate impact performance indicators from evidence-informed research before examining Green Labs approaches across the liFETIME CDT cohort and their impact, in terms of waste prevention, reuse policy, chemical management, and energy and water conservation.



Public engagement with research is also key to sustainability in these fields, and arts-based approaches using theatre, comedy, and even dance have been shown to communicate and drive engagement with technical topics. This area is sometimes known as STEAM (Science, Technology, Engineering, Arts & Maths), and the many STEAM initiatives of CURAM's Education and Public Engagement team, such as Science On Screen, Afterimage, Curious Young Minds, as well as the centre's support of Bright Club Ireland, provide possible platforms to investigate the question, can performing arts approaches change public attitudes about cell and tissue engineering? Dr Fairfield is the director of Bright Club Ireland, a research comedy variety night running since 2015 (see <https://youtu.be/UYSrH7qv0OU>), and is a regular contributor to Newstalk's 'Futureproof' science education programme (see <https://www.newstalk.com/podcasts/futureproof-with-jonathan-mccrea/short-term-memory-illusions>).

This PhD project would also include a placement, with either a learned society, a non-profit, or other advocacy organization to help translate the data collected during the PhD into policy and societal outcomes. This project is expected to yield deep insights about how the culture of a field can change, both internally and externally, to be more sustainable and open. Applications are encouraged from students who have STEM backgrounds, as well as experience in arts, social science, or advocacy work, for this highly interdisciplinary and impactful PhD project.

ORGANISATION: The SFI Research Centre for Medical Devices (CÚRAM) is a national, SFI funded, research centre that brings together researchers from University of Galway, University College Dublin, Dublin City University, University of Limerick, University College Cork, Trinity College Dublin, Royal College of Surgeons Ireland, National Institute for Bioprocessing Research and Training, Clinical Research Development Ireland and Athlone Institute of Technology. CÚRAM has 40 industry partners, strong clinical collaborations, and hospital groups. In November 2019, the CÚRAM lab in Galway was the first in Europe to be certified as 'green' by My Green Lab. For more, see <https://www.youtube.com/watch?v=9QuQ6XoEMKs> ). Dr FitzGerald is the first Chair of the Irish Green Labs network (see <https://irishgreenlabs.org/>).

Organisation website: <https://curamdevices.ie/curam/>

PROGRAMME INTRODUCTION: The EPSRC-SFI Joint Centre for Doctoral Training in Engineered Tissues for Discovery, Industry, and Medicine (lifETIME CDT) is a partnership between the University of Glasgow, University of Birmingham, Aston University, and the University of Galway. Within the University of Galway, the dynamic programme is hosted by CÚRAM, the SFI Research Centre for Medical Devices.

The lifETIME CDT will train future engineering and physical science (EPS) innovation leaders in interdisciplinary (engineering, chemistry, physics, maths and biology) research to develop humanised in vitro systems to accelerate therapeutic discovery in tissue engineering, sensing, and diagnostics.



Students will follow a four-year PhD model. Over the four years with the lifETIME CDT, students will undertake a range on skills training modules designed to help them network with stakeholders (industry, HSE, charity, funders and regulators) in the sector and will develop their skills in becoming a future leader. The cohort-based training will forge an Irish community of talented researchers with high-value skills sought by the market and who can deliver change. The students will spend time conducting research or training in partner institutions in the UK. The skills training programme will also include a summer school per year to develop professional skills and to strengthen the cohort.

The position is funded under the EPSRC – SFI CDT program.

**QUALIFICATIONS:**

The ideal candidate should have a 1st class or a 2:1 honours first degree and a Master's in any of the following areas: biomaterials, developmental biology, biomedical engineering, chemistry, molecular biology, biotechnology, tissue engineering, medicine, cell biology, biology, drug discovery or in a related area. *For this project, candidates from other disciplinary backgrounds will be considered if they state how their skills are transferable to advocacy and behavioural change in a cell and tissue engineering context.* Candidates should have excellent communication and organisational skills; be highly motivated and passionate about developing new approaches to lab sustainability and advocacy within the life sciences; and have strong written, oral, and interpersonal skills. The candidate should be able to work independently and as a part of a team. Leadership skills are desirable for this fellowship.

**Living allowance (Stipend):** €18,500 per annum, [tax-exempt scholarship award]

**University fees:** 5,00

**Start date:** 01/10/2023

**Academic Entry Requirements:** 2H1 or higher

**To Apply for the Scholarship:**

**Contact Name:** Dr / Jessamyn / Fairfield

**Contact Email:** jessamyn.fairfield@universityofgalway.ie

**Application Deadline:** date 09/\_06 / 2023 and time 23:59 (Irish time 24hr format)

**Primary Supervisor name (if applicable):** Dr Jessamyn Fairfield