



## JOB DESCRIPTION

<b>Research Centre</b>	School of Physical Sciences
<b>Post title</b>	Postdoctoral Researcher in Sustainable Biomaterials
<b>Level on Framework</b>	Level 1
<b>Post duration</b>	Up to 12 Months Fixed-Term Contact

### **Dublin City University**

Dublin City University (DCU) is a leading innovative European University. It is proud to be one of the world's leading Young Universities and is among the world's top 2% globally. DCU is known as Ireland's University of Impact, with a mission to 'transform lives and societies' and focuses on addressing global challenges in collaboration with key national and international partners and stakeholders.

DCU has over 20,000 students in five faculties spread across three academic campuses in the Glasnevin-Drumcondra area of North Dublin. Thanks to its innovative approach to teaching and learning, the University offers a 'transformative student experience' that helps to develop highly sought-after graduates. DCU is currently No. 1 in Ireland for Graduate Employment Rate, and for graduate income (CSO).

DCU is a research-intensive University and is home to a number of SFI-funded Research Centres. The University participates in a range of European and international research partnerships. DCU is also the leading Irish university in the area of technology transfer as reflected by licensing of intellectual property.

As a 'People First' institution, DCU is committed to Equality, Diversity and Inclusion - a University that helps staff and students to thrive. The University is a leader in terms of its work to increase access to education, and is placed in the world's Top 10 for reducing inequalities in the Times Higher Education Impact Rankings.

### **Research Career Framework**

As part of this role the researcher will be required to participate in the DCU Research Career Framework. This framework is designed to provide significant professional development opportunities to Researchers and offer the best opportunities in terms of a wider career path.

## **Background & Role**

*Grain-4-Lab* is a €2.4 million funded sustainability project, part of the SFI Future Innovator Prize Programme (<https://grain4lab.ie/>). The aim of the project is to reduce the reliance on fossil-fuel based single-use plastics in research laboratories, by providing a more sustainable and functionally equivalent alternative. At *Grain-4-Lab* we take waste products from the brewing and distilling industry and aim to produce a high quality bioplastic alternative. We are a highly multi-disciplinary team which includes researchers from the fields of bioprocessing, materials science, polymer synthesis, societal change and scientific outreach. *Grain-4-Lab* operates in close collaboration with an international network of companies and collaborators to develop, test and trial their bioplastic solution. The project was recently featured on Irish national news channel RTE (<https://www.rte.ie/news/ireland/2022/1005/1327355-dcu-scientists/>).

The School of Physical Sciences at Dublin City University invites applications for a postdoctoral researcher in material science and biology to work on the Grain-4-Lab project on the design and testing of compostable, single-use, polymer laboratory components. The position is available from mid-November 2023.

The goal of this specific project is to design, build and test compostable polymer laboratory components to determine if the material can meet chemical, biological, mechanical, and regulatory applicability as laboratory consumables products and to work with colleagues across the project to modify the properties of the polymer to increase its capabilities. The project will involve collaboration with the Schools of Chemical Sciences, Biotechnology, and Nursing, Psychotherapy and Community Health in Dublin City University.

## **Principal Duties and Responsibilities**

Reporting to the Principal Investigator the Postdoctoral Researcher will:

- Conduct a specified programme of research under the supervision and direction of the Principal Investigator, with a specific focus on the design and testing, including biological compatibility testing of compostable polymers.
- Engage in the dissemination of the results of the research in which he/she is engaged with the assistance of and under the supervision of the Principal Investigators with a specific focus on the writing of high-impact papers, completing funding reports and preparing presentations and material for funding reviews.
- Supervise and assist undergraduate and postgraduate students working in this area with their research and management of RA staff working on the project.
- Liaise with both internal and external stakeholders including industry and academic partners/co-workers
- Engaging with other members of the project team and delivery of update presentations to larger project team.
- Carry out administrative work associated with the programme of research as necessary, including assisting the Principal Investigators in tendering for equipment and instruments required for the project

## **Minimum Criteria**

Applicants should have a PhD in molecular or microbiology. In addition, it is desirable that the individual has:

- A minimum of two years' relevant post-PhD research and teaching experience at undergraduate level

- Practical laboratory experience in animal/mammalian cell and/or microbial culture
- Experience with testing novel biomaterials and benchmarking against ISO standards
- Evidence of publication of research articles in relevant fields
- Experience with writing technical reports for a range of project stakeholders, including industry partners and funding organizations.
- High motivation and passion about sustainability and climate change research
- Excellent interpersonal and communication skills
- The ability to work on multidisciplinary and high collaborative projects.

**Individuals will be assessed on the following competencies:**

**Discipline knowledge and Research skills** – Demonstrates knowledge of a relevant research discipline and the ability to conduct a specific programme of research within that discipline

**Understanding the Research Environment** – Demonstrates an awareness of the research environment (for example national funding bodies) and the ability to contribute to grant applications and project funding reviews

**Communicating Research** – Demonstrates the ability to communicate their research with their peers, the wider research community, and review panels

**Managing & Leadership skills** - Demonstrates the potential to manage and deliver on a research project including the supervision of undergraduate and postgraduate students