



## JOB DESCRIPTION

<b>Research Centre</b>	School of Biotechnology / Water Institute
<b>Post title</b>	Postdoctoral Researcher
<b>Level on Framework</b>	Environmental DNA – TechOcean S Project
<b>Post duration</b>	Level 1 Fixed term contract up to 13 months

### **Dublin City University**

Dublin City University [www.dcu.ie](http://www.dcu.ie) is a young, ambitious and vibrant University, with a mission 'to transform lives and societies through education, research, innovation and engagement'. Known as Ireland's 'University of Enterprise and Transformation', it is committed to the development of talent, and the discovery and translation of knowledge that advances society and the economy. DCU is the Sunday Times Irish University of the Year 2021.

The University is based on three academic campuses in the Glasnevin-Drumcondra region of north Dublin. It currently has more than 18,000 students enrolled across five faculties – Science and Health, DCU Business School, Computing and Engineering, Humanities and Social Sciences and DCU Institute of Education. DCU is committed to excellence across all its activities. This is demonstrated by its world-class research initiatives, its cutting-edge approach to teaching and learning, its focus on creating a transformative student experience, and its positive social and economic impact. This exceptional commitment on the part of its staff and students has led to DCU's ranking among the top 2% of universities globally. It also consistently features in the world's Top 100 Young Universities (currently in QS Top 70 Under 50, Times Higher Top 150 Under 100).

DCU is placed 84th in the world, in the Times Higher Education University Impact Rankings – measuring higher education institutions' contributions towards the UN Sustainable Development Goals. Over the past decade, DCU has also been the leading Irish university in the area of technology transfer, as reflected by licensing of intellectual property.

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.

### **Research Career Framework**

As part of this role the researcher will be required to participate in the DCU Research Career Framework (<http://dcu.ie/hr/ResearchersFramework/index.shtml>). 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**

**Project background:** The Technologies for Ocean Sensing project is an EU Horizon 2020 funded project to develop new technologies to enable a step change in ocean biology, chemistry and plastic observation. The project is led by the National Oceanography Centre (UK) with partners across Europe, including Dublin City University. The technologies include 5 sensors, two imaging systems, a sampler and a new image processing method using Artificial Intelligence that enables data compression and transmission of information about key variables from the remote ocean. The environmental DNA project will focus on an in situ analyser for Nucleic Acids (DNA and RNA) including using eDNA for species detection.

**Role:** The successful candidate will join the Molecular Genetics Laboratory in the School of Biotechnology at DCU and will further develop molecular detection and extraction assays, including applying CRISPR-Cas to marine environmental DNA, for sensor adaptation (<https://onlinelibrary.wiley.com/doi/abs/10.1111/1755-0998.13045>).

## **Principal Duties and Responsibilities**

Reporting to his/her Principal Investigator the Postdoctoral Researcher will:

- Carry out all experimental objectives and ensure timelines are met as specified in the project award.
- Document all experimental data, analyses and protocols.
- Report/present regularly at group meetings.
- Attend relevant meetings, seminars and conferences including local, national and international.
- Contribute to manuscript preparation relevant to the project.
- Complete detailed reports during and upon completion of the project.
- Ensure laboratory consumable spending is within budget.
- Assist the PI in the supervision of research students relevant to the award.
- Liaise with both internal and external stakeholders including industry and academic partners/collaborators.
- Assist in identifying and developing future research and funding initiatives.
- Engage in the dissemination of the results of the research in which they are engaged with the support of and under the supervision of the Principal Investigator.
- Supervise and assist undergraduate/postgraduate students working in this area with their research.
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University
- Engage in teaching and teaching support as assigned by the Head of School under the direction of the Principal Investigator
- Carry out administrative work associated with the programme of research as necessary
- Undertake other tasks as defined by the PI, Prof. Anne Parle-McDermott.

## **Minimum Criteria**

The successful candidate must hold a Ph.D in a biology-related discipline and have experience in molecular biology techniques, particularly, experience working with environmental DNA.

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

**Discipline knowledge and Research skills** – Demonstrates knowledge of a 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 funding bodies) and the ability to contribute to grant applications.

**Communicating Research** – Demonstrates the ability to communicate their research with their peers and the wider research community (for example presenting at conferences and publishing research in relevant journals) and the potential to teach and tutor students.

**Managing & Leadership skills** - Demonstrates the potential to manage a research project including the supervision of undergraduate students.

**Essential Training**

The post holder will be required to undertake the following essential compliance training: Orientation, Health and Safety and Intellectual Property and Data Protection training. Other training may need to be undertaken when required.