



Applications are invited from suitably qualified candidates for the following position:

Research Centre	School of Biotechnology
Post title	Postdoctoral Researcher in Immuno-oncology and the Microbiome
Level on Framework	Level 1
Post duration	Fixed Term Contract - 24 months

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.

Background & Role

The School of Biotechnology at Dublin City University invites applications for a postdoctoral researcher role in Immuno-oncology and the Microbiome to work on the impact of bacteria on immune-mediated targeted therapy efficacy. The position is available from no later than the 1st September 2023.

This postdoctoral position is funded by the All Island Cancer Research Institute's HEA North South

Research Programme, AICRISart. The position is based in Dublin City University and is a part of the “Immune responses to intratumoural bacteria; Consequences and opportunities for immunology” project, which is a collaboration between Dublin City University, Royal College of Surgeons in Ireland, University College Cork and Queen’s University Belfast. The overall aim of the four-institution project is to develop focussed understanding of immune responses to intratumoural bacteria to enable therapeutic development of i) new Prognostic Biosignatures and Rational Therapeutic Interventions, and ii) bacteria themselves as immune-oncology therapeutics.

The specific aim of the DCU postdoctoral position will be to assess the impact of bacteria on targeted therapy efficacy and immune contexture in models of gastro-intestinal (GI) cancers and colorectal cancer (CRC). The presence of bacteria such as *Fusobacterium nucleatum* (FN) in the tumour microenvironment (TME) is associated with aggressive progression of gastric and oesophageal cancers potentially through suppression of anti-tumour immunity. However, some studies have reported that FN can enhance the therapeutic effect of PD-L1 blockade in CRC cancers. The immune system also plays a role in response to IgG monoclonal antibody (mAb) therapies used to treat gastric/oesophageal (GE) cancers (eg anti-HER2 mAb trastuzumab) and CRC (e.g. anti-EGFR mAb cetuximab) cancers. Therefore, the mechanisms by which these bacteria may contribute to the clinical efficacy of treatments such as immune checkpoint inhibitors and mAbs is not fully understood. In this study, CRC, gastric and oesophageal cancer cellular models will be used to investigate the impact of FN and other bacteria on the immune response to mAbs, and utilise GE cancer organoid models to faithfully recapitulate the interactions between tumour, host immunity and bacteria.

The project will utilize peripheral blood mononuclear cell (PBMC)-mediated antibody dependent cell mediated cytotoxicity (ADCC) assays induced by therapeutic mAbs and bacteria-conditioned media. The impact of bacteria products on immune/drug targets and cytokine profiles will be examined by flow cytometry and Luminex Multiplex assays. A TME immune-competent GE tumour organoid and bacteria platform will be developed using organoids that have been previously established in the lab. The platform will be used to investigate transcriptomic and metabolomic signatures of bacterial-mediated immune response. Secondments at AICRISart partner institutions will be supported to access essential expertise and training to allow completion of the project.

Principal Duties and Responsibilities

Please refer to the job description for a list of duties and responsibilities associated with this role.

Minimum Criteria:

- Individuals should have a PhD in one of the following fields: cancer biology, immunology, microbiology or related disciplines.
- Experience in cell culture.
- Individuals should be able to demonstrate their ability to work in multidisciplinary and highly collaborative projects.
- Evidence of publication of research articles in the field of cancer biology, immunology, microbiology or related disciplines.

Individuals 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 individual will be required to undertake the following mandatory compliance training: Orientation, Health & Safety and Data Protection (GDPR) and all Cyber Security Awareness Training. Other training may need to be undertaken when required.

Salary: IUA Postdoctoral Researcher - €42,033 (Point 1)

Appointment will be commensurate with qualifications and experience and in line with IUA guidelines.

Closing date: Thursday, 13th July 2023

For more information on DCU and benefits, please visit [Why work at DCU?](#)

Informal Enquiries in relation to this role should be directed to:

Dr Denis Collins, Assistant Professor, School of Biotechnology, Dublin City University.
Phone + 353 1 700 5647
Email: denis.collins@dcu.ie

Application procedure:

Application forms are available from the DCU Current Vacancies website at <https://www.dcu.ie/hr/vacancies-current-vacancies-external-applicants>

Applications should be submitted by e-mail with your completed application form and CV to: hr.applications@dcu.ie

Please clearly state the role that you are applying for in your application and email subject line: #RF1876 Postdoctoral Researcher in Immuno-oncology and the Microbiome

Dublin City University is an equal opportunities employer. In line with the Employment Equality Acts 1998 – 2015, the University is committed to equality of treatment for all those who engage with its recruitment, selection and appointment processes. The University's Athena SWAN Bronze Award signifies the University's commitment to promoting gender equality and addressing any gender pay gaps. Information on a range of university policies aimed at creating a supportive and flexible work environment are available [in the DCU Policy Starter Packs](#)