



## JOB DESCRIPTION

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| <b>Research Centre</b>    | National Institute for Cellular Biotechnology   |
| <b>Post title</b>         | Postdoctoral Researcher<br>In Cancer Immunology |
| <b>Level on Framework</b> | Level 1   |
| <b>Post duration</b>      | 24 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.

## **Background & Role**

A postdoctoral position is available with the Cancer Biotherapeutics/Molecular Therapies for Cancer Ireland group within the National Institute for Cellular Biotechnology at Dublin City University (DCU) to undertake research on the following project: "Pre-clinical assessment of biomarkers of response to chemotherapy and targeted therapies".

Specifically, the project will utilise translational material (blood) from patients to validate an identified biomarker test and identify further biomarkers of response to chemotherapy and targeted therapies (including immune checkpoint inhibitors) across multiple cancer types, including HER2+ breast cancer.

Blood will be analysed to provide an immune profile (immune cell function, plasma cytokine profile, immune cell phenotype) for each patient and this data will be interrogated in the context of response to therapy (pathological complete response (neo-adjuvant setting) or relapse free survival, overall survival). Experience of multi-colour flow cytometry immune cell phenotyping would be advantageous.

Further pre-clinical work is planned to examine tumour micro-environmental conditions that could indicate those tumours that are less likely to respond to chemotherapy/immune checkpoint inhibition due to a suppressed immune response e.g. hypoxia.

The project will be funded by The Caroline Foundation. It will be co-supervised by Dr. Denis Collins, Cancer Biotherapeutics, DCU and Prof. John Crown, St Vincent's University Hospital/DCU.

## **Principal Duties and Responsibilities**

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

- Conduct a specified programme of research under the supervision and direction of the Principal Investigator
- Document all experimental data, analyses and protocols.
- Undertake in standard lab management tasks.
- Assist in identifying and developing future research and funding initiatives
- Engage in the dissemination of the results of the research in which he/she is engaged with the support of and under the supervision of the Principal Investigator
- Supervise and assist undergraduate 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
- Liaise with both internal and external stakeholders including industry and academic partners/collaborators
- Carry out administrative work associated with the programme of research as necessary

### **Minimum Criteria**

Applicants should have a PhD in cancer biology, cancer immunology or a related discipline. Applicants should possess the self-assurance to take responsibility and be a strong team player who can contribute to the overall success of the team.

In addition, it is desirable that the candidate has experience in:

#### *Mandatory experience:*

- *Cell culture: maintenance and quality control*
- *Clinical sample handling/processing/storage*
- *Flow cytometry (cell phenotyping)*
- *Immune cell functional assessment*

#### *Desirable experience:*

- *Western blotting/ELISA*
- *Apoptosis assays*
- *Intracellular signalling pathway interrogation*
- *Hypoxia/adenosine signalling pathway*

### **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.