



## JOB DESCRIPTION

<b>Research Centre</b>	School of Chemical Sciences
<b>Post title</b>	Research Fellow Bioinorganic and Medicinal Chemistry
<b>Level on Framework</b>	Level 2
<b>Post duration</b>	Fixed Term Contract 12 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**

The School of Chemical Sciences at Dublin City University invites applications for a senior postdoctoral research fellow in synthetic bioinorganic chemistry to work on a collaborative project on the development of new cancer theranostics using Auger electron and photon-emitting antimony and cobalt isotope pairs funded by the NovoNordisk Foundation and the NATURE-ETN

Marie. The position is available from January 2021, initially for one year, with the possibility of extension for two years (pending the award of external extension funding).

The goal of this specific project is to develop biocompatible chelating ligands that coordinate metal ions and to link these to nucleic acid vectors via click chemistry. The hybrids will then be used to target specific oncogenes in cancer cells. The project will involve collaboration with the University of Southern Denmark and the department of Nuclear Medicine at Odense University Hospital.

### **Principal Duties and Responsibilities**

The goal of this work is to develop new chelating ligands that coordinate Sb, Cu, and Co and to link these to nucleic acid vectors using click chemistry. The hybrids will then be used to target specific genetic targets in human cancer cells. The project involves collaboration with the University of Southern Denmark, the department of Nuclear Medicine at Odense University Hospital, and the University of Oxford.

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.
- 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.
- Engage in teaching and teaching support as assigned by the Head of School under the direction of the Principal Investigator
- 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**

The applicant must hold a PhD in synthetic bio-inorganic chemistry, have a minimum of 4 years of postdoctoral research experience, and have a strong publication track record in the field of nucleic acid chemistry or in designing new metallodrug-DNA (or RNA) binding agents. A knowledge of nucleic acid click chemistry is necessary. An excellent track record in laboratory skills (including cell culture experience, biophysical assay design, and molecular biology) directly related to this project is essential. Excellent communication skills in English, both written and spoken, are a necessity. The candidate must be at the senior postdoctoral level and have experience in supervising postgraduate researchers, group administration, and European and national (e.g. SFI / IRC) grant writing.

**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.