JOB DESCRIPTION

Research Assistant (Biology / Biotechnology / Biomedical Engineering or related)
School of Mechanical and Manufacturing Engineering
with Fraunhofer Project Center at Dublin City University (FPC@DCU)
Fixed Term Contract - 11 Months Full-time

Introduction

The DCU School of Mechanical & Manufacturing Engineering has been at the forefront of Teaching and Learning, and Research and Innovation since its establishment in 1987. The Schools strive for excellence and development which is evident through their taught and research programme options offered both at undergraduate and postgraduate levels.

The Fraunhofer Project Centre for Embedded Bioanalytical Systems "FPC@DCU" - an initiative jointly supported by Science Foundation Ireland and Fraunhofer-Gesellschaft - is a one-stop shop for the development of microfluidics-based solutions for decentralised bioanalytical testing.

Role Overview

DCU has acquired funding for an exciting research project (MxNChip) to develop a proof-of-concept laboratory instrument. On successful completion of the project it is intended to secure follow-on funding with the eventual aim of establishing a university spin-out company†. The project will therefore appeal to a researcher with a strong interest in commercial technology development.

The research assistant will join a team focussed on developing a novel PCR thermocycler and associate microfluidic chip which can greatly improve workflows in molecular biology laboratories.

The project will be based in a School of Mechanical Engineering and will be conducted in conjunction with the Fraunhofer Project Center @ Dublin City University (FPC@DCU). It is of 11 months’ duration.

This position involved multi-disciplinary work across biology / biomedical engineering and will therefore suit a biologist with a passion or interest in engineering or conversely an engineer with a strong interest in biology.

Duties and Responsibilities

Reporting to the MxNChip Project PI the technical duties will include but will not be limited to:

- Conduct a specified programme of research within the MxNChip Enterprise Ireland Commercialisation Fund Project under the supervision and direction of the project PI.
- Implementing common molecular biology methods, particularly PCR assays, to assist the development and testing of a novel PCR thermocycler
- Contributing to the optimization of the performance of the system including material bio-compatibility testing and PCR optimization
- Following training, fabrication of microfluidic cartridges.
• Assist as required activities relating to the mechanical design, system design, implementation and integration of during the development of a PCR thermocycler that can function both with micro-titre plates and DCU’s patented MxNChip format.
• Testing the developed instrument prototype under various conditions and working in coordination to validate the performance of the system.
• Developing and maintaining relevant documentation and SOPs
• Promote engagement with industry and other external parties in areas relevant to the project.
• Assist with reporting of project out-comes to Enterprise Ireland
• Engage in appropriate training and professional development opportunities as recommended/required by Dublin City University

Qualifications and Experience:

Minimum criteria:
• An MSc or Bachelor’s Degree in Biology or Biotechnology or cognate discipline. A qualification in Mechanical / Biomedical / Mechatronic Engineering or related Engineer/Science degree is also acceptable.
• Good communication and reporting skills.

Desirable criteria:
• Ideally 3+ years post-degree experience
• Experience in molecular biology protocols and particularly PCR
• A passion for on-the-job learning and a willingness to contribute to multi-disciplinary aspects of the project such as microfabrication of MxNChip cartridges and contributing to instrument assembly and testing.
• Proven aptitude for hands-on work and comfortable in the laboratory environment.

Mandatory Training:
Post holders will be required to undertake the following mandatory compliance training: GDPR, IP, and Health and Safety training. Other training may need to be undertaken when required.

Dublin City University is an equal opportunities employer and is committed to promoting gender equality reflected in its attainment of the Athena SWAN Bronze Award. Information on a range of university policies aimed at creating a supportive and flexible work environment are available at www4.dcu.ie/policies/policy-starter-packs.shtml.