



Research Centre Fraunhofer Project Centre for Embedded Bioanalytical Systems at Dublin City University (FPC@DCU) – a joint initiative of Science Foundation Ireland and Fraunhofer-Gesellschaft

Post title Research Assistant in sample prep for Next generation sequencing and microfluidics.

Post duration Fixed term 9 months.

Background & Role

An opportunity has arisen to join an exciting research project where the stated ambition is to spin-out the technology into a start-up company on the successful conclusion of the project. The position is located in the innovative, Fraunhofer Project Centre for Embedded Bioanalytical Systems at Dublin City University – Ireland’s University of Enterprise (FPC@DCU). This technology-led centre develops next-generation life-science technologies for the benefit of people and society.

The role involves involvement in development of systems to high technology readiness levels (TRLs) within the FPC@DCU which operates at the challenging crossroads of microsystems engineering and life sciences. Common fields of application are Point-of-Care in-vitro diagnostics, pharma, life-science research, agrifood and environmental monitoring. Furthermore, you will support the business development and project management teams of the FPC@DCU in their interactions with industry, academia and funding agencies.

Project Summary: Nucleic acid handling towards Next Generation Sequencing (NGS).

Nucleic acid library preparation/clean-up is a critical part of sample preparation for next-generation sequencing (NGS), as well as for many other applications and FPC@DCU is developing a Lab-on-a-Disc (LoaD) solution in this area. Based on its extensive expertise and background IP in microfluidics, the FPC@DCU will develop an affordable, automated, microfluidic system, which delivers reproducible, high-quality outputs while minimising reagent use. FPC@DCU’s patented, event-triggered dissolvable-film (DF) valve technology provides an unparalleled level of robust, multiplexed flow control which enables development of highly integrated, single-use LoaD cartridges for handling samples and reagents. Pursuing a design-for-manufacture and scale-up strategy compatible with industry standard mass manufacturing practices, FPC@DCU will deliver early prototypes that can be rapidly replicated for evaluation by early adopter customers.

Principal Duties and Responsibilities

Reporting to the NGS PREP project Principal Investigator.

Technical duties will include but will not be limited to:

- Conduct a specified programme of research within the NGS PREP Enterprise Ireland Commercialisation Fund Project under the supervision of the project PI.
- Assist development and testing of the appropriate sample preparation protocols required to facilitate lab-on-a-disc technology application.
- Experimental characterisation and optimisation of the methods for next generation sequencing sample prep assays implemented on the microfluidic platforms.
- Support, quality control and testing of developed microfluidic products
- Engage in the dissemination of the results of the research in which they are engaged, as directed by, with the support of and under the supervision of the Principal Investigator
- Authoring of scientific publications, technical reports and marketing activities
- Support collaboration with industry in areas relevant to the FPC@DCU.

Profile

The successful candidate can convincingly demonstrate the willingness and capability to transfer bioanalytical methods to microfluidics-based technologies, e.g. for enabling handling and decentralised sample-to-answer testing of biological samples to the benefit of people and societies. You already have experimental work experience with bioanalytical methods & working in a biochemistry lab and show a keen interest to contribute to its “fit-for-industry” focus.

Minimum Criteria

You must hold a primary degree (NFQ Level 8) in a relevant discipline and should have at least have 1 year of relevant job experience. Under overall guidance of a researcher, you should have a proven track record of working in a team as well as well-defined experience handling select aspects independently. Familiarity with the operations of a scientific laboratory environment especially in the next generation sequencing and microfluidic area would be highly desirable. A self-starting attitude, good interpersonal skills and high technical expertise are a prerequisite.

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.

DCU has a strong track record in attracting both Irish and European Union research funding under Horizon 2020 (and all previous Framework Programmes), Marie Curie Actions and Erasmus. We offer a dynamic and internationally-focused environment in which to advance your academic career.

An exciting research position in a very innovative, applied research initiative embedded in Dublin City University – Ireland’s University of Enterprise. The technology-led FPC@DCU engineers next-generation life-science technologies for the benefit of people and societies in collaboration with the Fraunhofer Institute for Production Technology (IPT) in Germany. Common fields of application are in-

vitro (“Point-of-Care”) diagnostics, pharma, life-science research, agrifood and environmental monitoring. FPC@DCU therefore operates at the challenging crossroads of microsystems engineering and the life sciences.

Salary range: *€21,891 – 34,612

*Appointment will be commensurate with qualifications and experience will be made on the appropriate point of the salary scale, in line with current Government pay policy.

Closing date: 28th February 2019

Candidates will be assessed on the following competencies:

Discipline specific knowledge and Research Skills (demonstrates knowledge of a research discipline and the ability to conduct a specific programme of research within that discipline)

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)

Understanding the Research Environment (demonstrates an awareness of the research environment (e.g. funding bodies) and takes responsibility for how their research is conducted)

Informal enquiries to: Dr. Rohit Mishra (rohit.mishra@dcu.ie)

Application Procedure:

Application forms are available from the DCU Current Vacancies (Open Competitions) website at <http://www4.dcu.ie/hr/vacancies/current.shtml> and also from the Human Resources Department, Dublin City University, Dublin 9. Tel: +353 (0)1 700 5149; Fax: +353 (0)1 700 5500 Email: hr.applications@dcu.ie

Applications should be submitted by e-mail to hr.applications@dcu.ie or by Fax: +353 (0)1 700 5500 or by post to the Human Resources Department, Dublin City University, Dublin 9.

Please clearly state the role that you are applying for in your application and email subject

line: Job Ref 1133 Research Assistant, Level according to experience

Dublin City University is an equal opportunities employer