



BIOMEDICAL DIAGNOSTICS INSTITUTE

The Biomedical Diagnostics Institute (BDI) was established in October 2005 at Dublin City University, through an award of €16.5M from Science Foundation Ireland (SFI) under its Centres for Science, Engineering and Technology (CSET) programme, in addition to a €6M contribution from industry partners. The BDI will carry out cutting-edge research programmes focused on the development of next-generation biomedical diagnostic devices measuring indicators of chronic disease (e.g. cancer, cardiovascular disease).

We are currently assembling a team of world-class research scientists to partner with cutting-edge research teams from our industry partners (Analog Devices, Ámic, Enfer, Hospira, Becton Dickinson & Inverness Medical Innovations) and collaborating institutions (The Royal College of Surgeons in Ireland (RCSI), the National Centre for Biomedical Engineering Science (NCBES) at NUI, Galway, and the Tyndall National Institute (TNI) in Cork). The BDI team will be based primarily in DCU, with some researchers located in our collaborating institutions. Some applicants for the Postdoctoral positions may be offered employment by our industrial partners.

Applications are invited for the following contract positions:



RESEARCH PROGRAMMES

RESEARCH FELLOWS, POSTDOCTORAL RESEARCHERS & POSTGRADUATE STUDENTS

Biomolecular Recognition (REF: BDI-RP1)

Prof Richard O'Kennedy (richard.okennedy@dcu.ie)

Goal: To develop novel antibody and nucleic acid-based assays and to incorporate them into biochip platforms.

Expertise: Antibody production/engineering and immunoassay development / Nucleic acid-based analysis / Immobilisation and surface chemistry of biomolecules.

Functional Diagnostics in Platelet Biology (REF: BDI-RP2)

Prof Dermot Kenny (dkenny@rcsi.ie)

Goal: To develop novel physiologically relevant assays of platelet function.

Expertise: Cell biology of platelet function & thrombosis / Molecular Protein chemistry / Rheology.

Transduction Science (REF: BDI-RP3)

Prof Robert Forster (robert.forster@dcu.ie)

Goal: To develop sensitive and selective detection strategies for proteins and DNA through combinations of current and light detection.

Expertise: Electrochemiluminescent materials especially luminescent polymers / Interfacial characterisation techniques – Raman and scanning probe microscopy / Electrochemical / Luminescent bioassay development.

Signal Amplification Science (REF: BDI-RP4)

Prof Brian MacCraith (brian.maccraith@dcu.ie)

Goal: To develop substantial sensitivity enhancements in a range of optical biochip systems, with the emphasis on fluorescence-based platforms.

Expertise: Metal-enhanced fluorescence – Plasmonics / Optoelectronic readout instrumentation for biochips / High-brightness nanoparticle labels.

Microfluidic Platforms (REF: BDI-RP5)

Prof Luke Lee (luke.lee@dcu.ie) & Prof Tony Ricco (antonio.ricco@dcu.ie)

Goal: To develop advanced microfluidic platforms for diagnostic applications.

Expertise: Microfluidics and microfabrication / Integrated detection techniques / Cell biology.

Coagulation Monitoring (REF: BDI-IP1)

Dr Tony Killard (tony.killard@dcu.ie)

Goal: To develop advanced coagulation monitoring devices for chronic and critical care applications (including wearable closed-loop anticoagulant therapy systems).

Expertise: Rheological, viscoelastic and haemostatic properties of blood / Polymer MEMS & microfluidics / Biodevice interfacial modification / Integration of sensors and wireless technology.

Biochip for Cardiac Wellness (REF: BDI-IP2)

Prof Brian MacCraith (brian.maccraith@dcu.ie)

Goal: To develop a multi-analyte, capillary-fill biochip for monitoring markers of cardiac wellness.

Expertise: Microfluidics / Optical biosensors based on fluorescence / Immobilisation of biomolecules.

Bovine Mastitis Diagnostics Chip (REF: BDI-IP3)

Prof Richard O'Kennedy (richard.okennedy@dcu.ie)

Goal: To develop a multi-analyte miniaturised assay platform for the detection of mastitis.

Expertise: Immuno / Nucleic Acid-based assay development and validation / Analyte extraction & sample preparation / Microbiological and Biochemical analysis.

TECHNICIANS (REF: BDI-TN)

Technicians are also required to support the above research programmes. Applicants must hold a minimum qualification in a relevant discipline at National Certificate and preferably at National Diploma level, or equivalent.

Salary: €30,626 – €50,137 (LSI)

MANAGEMENT & ADMINISTRATION

INSTITUTE MANAGER (REF: BDI-MN-MNG)

The Manager will support the Director in the establishment and ongoing development of the Institute and will facilitate the achievement of the Institute's objectives by the effective management of its resources and operations, including financial and administrative issues. In addition, the Institute Manager will be responsible for all aspects of the Institute's business relations and commercialisation. Applicants must have an honours degree with at least three years postgraduate experience of team management.

Salary: €72,864 – €96,039

Queries To: Prof Brian MacCraith (brian.maccraith@dcu.ie)

EDUCATION & OUTREACH (E&O) PROGRAMME

The BDI has designed an ambitious E&O programme with initiatives targeting the general public and all levels of education from primary through to post-graduate level. Applications are invited for the following positions:

EDUCATION & OUTREACH MANAGER (REF: BDI-EO-MNG)

Reporting directly to the E&O Leader, the E&O Manager will have responsibility for the development and implementation of the Institute's E&O programme. He/she will also manage the overall science communication function of the BDI. Applicants must have a minimum of an honours science / engineering degree with three years relevant postgraduate experience.

Salary: €46,334 – €67,607

POSTDOCTORAL RESEARCHERS, RESEARCH ASSISTANTS & POSTGRADUATE STUDENTS (REF: BDI-EO-RES)

Postdoctoral Researchers, Research Assistants and Postgraduate Students are required for the development and delivery of the E&O programme.

We are seeking candidates with expertise in one or more of the following areas:

- Science Education or Science Communication
- Lecturing experience in Biomedical Diagnostics
- Development & co-ordination of Masters Degree programmes

Queries To: Prof Richard O'Kennedy (richard.okennedy@dcu.ie)

APPLICATION PROCEDURES:

Applicants are encouraged to contact the appropriate Principal Investigator for informal discussions.

Applications (completed Application Form & Curriculum Vitae) should be marked with the appropriate reference code and submitted to: **Human Resources Department, Dublin City University, Dublin 9, Ireland.**

Application forms are available from: **Human Resources Department, Dublin City University, Dublin 9, Ireland.**

Tel: +353 (0) 1 700 5149 Fax: +353 (0) 1 700 5500 Email: hr.applications@dcu.ie

Full job descriptions are available at: <http://www.dcu.ie/vacancies/current.shtml> Closing date for receipt of applications: **Friday 25th November, 2005**

