Research Centre: School of Chemical Sciences / National Centre for Sensor Research (NCSR)

Post title: Postdoctoral Researcher in Volatilomics

Level on Framework: Level 1

Post duration: Fixed Term Contract 10 months.

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](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.

Overview
The National Centre for Sensor Research (NCSR) is a large, multidisciplinary research unit based in state-of-the-art facilities situated on the campus of Dublin City University. Arising from success in recent proposals we are now seeking application for the following research position.

Background and Role
We are seeking an enthusiastic scientist with experience in chromatography-mass spectrometric (MS) methods to undertake a study towards the greater understanding of the diagnostic value of volatiles emitted from the skin organ as they relate to human skin cancer diagnostics. Science Foundation Ireland has recently awarded TIDA funding for the programme VolScreen to develop chromatographic methods for the analysis of skin volatiles using methods amenable to portable GC-MS instrumentation. The VolScreen study is being carried out in conjunction with St Vincent’s University Hospital whereby, as part of the programme, a participant study will be carried out. Chemometric-type analysis of the data will be used to understand and interpret the data as it relates to melanoma diagnosis.

Under ethical approval, the Post-Doctoral Fellow will collect relevant samples from participants using a non-invasive head space-solid phase microextraction (HS-SPME) technique. Samples will be analysed by gas chromatography-mass spectrometry. Method development will be required for adaptation of current methods to meet requirements of a portable GC system. Advanced data
analytics will be used for the pre-processing of the data, identification of relevant metabolites, and variable selection and modelling of the data.

The duration of this role will be for 10 months in the first instance.

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

- Conduct a specified programme of research on skin volatile analysis principally by GC-MS.
- Lead participant-based studies under University Ethical Approval.
- Deliver research outputs and provide input into reports as required according to project management schedules.
- Attend and present results at project technical progress meetings.
- Liaise with both internal and external stakeholders including industrial and clinical partners.
- Disseminate the outcomes of the research in which he/she is engaged including publishing in high quality peer reviewed journals of international standing where appropriate.
- Support the PI and research group in the design and development and implementation of the broader research programme.
- Support if required, the development of proposals for research funding.
- Take responsibility as requested for day-to-day advice and support of graduate research students associated with your research group.
- Mentor, assist and train as appropriate and as directed, the research graduate students and more junior postdoctoral fellows within the group.
- Contribute to reporting, funder/partner visits and other administrative management work associated with your programme of research and the research group.
- Contribute to teaching and outreach activities of the group.
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University.
- Carry out administrative work associated with the programme of research as necessary.

Minimum Criteria
Candidates must have a primary degree and PhD in Analytical Chemistry of which Mass Spectrometry-based research was a significant component. A good knowledge in one or more of the following areas is sought: chromatography, solid phase microextraction, metabolomics and advanced chemometrics. A strong focus on biological analysis would be important. Demonstrated experience in hyphenated MS techniques is preferable but not a pre-requisite. Applicants should be capable of working independently with a high degree of technical competence whilst also being a team player, he/she must demonstrate initiative, be hard working, versatile and productive. S/he should have good communication and organisational skills.
Salary: *€36,489 – €42,181

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

Closing date: 1 February 2018

Candidates will be assessed on the following competencies:

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Discipline knowledge and Research skills – Demonstrates knowledge of a research discipline and the ability to conduct a specific programme of research within that discipline and in collaboration with industry partners.

Understanding the Research Environment – Demonstrates an awareness of the research environment (for example funding bodies and key industry players) and the ability to contribute to grant applications

Communicating Research – Demonstrates the ability to communicate their research with their peers, with industry partners, and with 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 and to meet industry partner expectations regarding project turn-around times.

Informal enquiries to:
Dr. Aoife Morrin Aoife.Morrin@dcu.ie
Dr. Emer Duffy Emer.duffy@dcu.ie

Please do not send applications to this email address, instead apply as described below.
Application Procedure

To apply for this role, applications should include a CV and covering letter and be submitted with the application form to the Human Resources Department as outlined below. Application forms are available from the DCU Current Vacancies (open Competitions) website at http://dcu.ie/hr/vacancies/current.shtml and also from the Human Resources Department, Dublin City University, Dublin 9. Tel: +353 (0) 1 7005149.

Please clearly state the role that you are applying for in your application and email subject line: Job Ref 762 Postdoctoral researcher in Volatilomics

Applications should be submitted by email to hr.applications@dcu.ie or by Fax: +353 (0)1 7005500 or by post to the Human Resources Department, Dublin City University, Dublin 9. Human Resources Department, Dublin City University, Dublin 9. Tel: +353 1 700 5149; Fax: +353 1 700 5500 Email: hr.applications@dcu.ie Dublin City University is an equal opportunities employer.

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