

PhD Research Vacancy



PhD Studentship: Identification and functional characterization of gut microbes for the development of next-generation pro- and synbiotics

Closing Date for Applications: 6th August 2021

School: School of Microbiology and APC Microbiome Ireland

College: College of Medicine and Health

Job Type: Research

Unique ID: APC funded PhD Studentship

PhD Studentship

Research into the human microbiome using metagenomics and multi-omics approaches has enabled the characterisation of microbiome composition, variation and, importantly, role in human health and disease. These studies are increasing our understanding of the interaction between the microbiome and the immune system and subsequent effects on human health and wellbeing. There is now mounting evidence that perturbation of human microbiome composition is linked to a plethora of diseases. Despite this, there remains significant work in understanding host-microbe interactions. This project aims to exploit the potential of the gut microbiota in the prevention of chronic inflammatory diseases. The project will involve the isolation and functional and genomic characterisation of bacterial strains from faecal samples collected during human intervention trials and evaluation of their role as therapeutic agents in the prevention of chronic inflammatory disorders using both multi-omics data and downstream functional characterisation. The project is part of a broader program of work using nutritional- and microbiome-based approaches to prevent chronic disease.

Key duties and responsibilities

- The PhD candidate will conduct a specified programme of research under the supervision of Professor Jens Walter
- A BSc, or preferably, an MSc (or equivalent degrees) in Microbiology or a related topic is required.
- The successful candidate must be able to apply microbiology expertise in a lab-based setting and integrate traditional microbiology with bioinformatic and genomics analyses
- Significant interdisciplinary interactions with collaborators in APC Microbiome Ireland and externally will be required.
- Good communication, organisation, interpersonal skills and the ability to work within a project team are essential.

Additional tasks will include:

- The dissemination of results at conferences and through scientific articles.
- Attendance at postgraduate training courses.
- Regular reporting of research data.
- Involvement in Educational and Public Engagement (EPE) activities.
- Occasional laboratory supervision of Bachelor or Master students.

Qualifications

- Minimum 2:1 undergraduate degree (or equivalent) in Microbiology, Molecular Biology or a similar discipline.
- Enthusiasm and an awareness of Microbiology issues in society.
- Applicants whose first language is not English must show evidence of English proficiency, please check the minimum requirements at: <https://www.ucc.ie/en/study/comparison/english/>.

Funding Details

This full-time PhD position is funded for 4 years including a stipend of €18,500 per annum. The studentship will cover UCC fees at the rate for EU students.

The scholarship for the PhD degree is subjected to academic approval, and the candidate will be enrolled in one of the general degree programmes at UCC.

Further information -applicable to your post

The PhD candidate will work with a team of scientists in the APC Microbiome Ireland, School of Microbiology and the Department of Medicine (College of Medicine and Health) and School of Food and Nutritional Sciences (College of Science, Engineering and Food Science).

APC Microbiome Ireland is a trans-disciplinary research centre, with clinicians, clinician-scientists and basic scientists from diverse backgrounds working in teams, sharing ideas and resources. Although focused upon the gastrointestinal bacterial community (the microbiota), the scale and scope of the work has become one of the fastest moving areas of biology. The microbiota is not only a target for treatment and prevention of disease, it is a repository for functional food ingredients and even new drugs and is a source of novel biomarkers of disease risk. The scientific organisation of the APC consists of a matrix of 'spokes' or themes of intellectual pursuit which are supported by multiple horizontal or shared technology platforms.

Informal enquiries about the post should be made by email to Professor Jens Walter (jenswalter@ucc.ie)

To Apply:

Please email the following information to Victoria McMahon (vmcmahon@ucc.ie) as a **single PDF file**:

- A one-page cover letter outlining any relevant experience and your reasons for wanting to participate in the project.
- A Curriculum Vitae including your education history, courses, awards and skills. Also, if appropriate, please include details of any publications and conference presentations.

The deadline for applications is Friday 6th August 2021. Applications received after the deadline will not be considered. Please **quote "Microbiology PhD Studentship"** on the subject line of your email.

About University College Cork (UCC)

UCC is an award-winning institution with a history of independent thinking stretching back over 170 years. UCC has a student population of over 21,000. The University was named Irish University of the Year by the Sunday Times in 2017. In 2015, UCC was also named as top performing university by the European Commission funded U-Multirank system, based on obtaining the highest number of "A" scores (21 out of 28 metrics) among a field of 1200 universities. UCC has been ranked as one of the leading universities in the world for sustainable social and economic impact, in the inaugural 2019 Times Higher Education (THE) University Impact rankings.

University College Cork is an Equal Opportunities Employer

All interested candidates irrespective of age, gender, disability, race, religion or ethnic background are encouraged to apply.