UCD School of Medicine
Scoil an Leighis UCD

PhD Studentship in Virology

Characterisation of respiratory virus infection of human airway cells (ViroSPEC)

Description

Applications are invited from suitably qualified candidates for a fully funded (fees and stipend), 4-year full-time PhD positions at the Centre for Experimental Host Pathogen Research (CEPHR) University College Dublin, Dublin, Ireland. This position is part of the Virospec project, funded by a Science Foundation Ireland Frontiers for Partnership award. This partnership is between Technological University Dublin (TU Dublin) and UCD CEPHR.

The ViroSPEC project seeks to develop label free spectroscopic techniques for Virology, using a combination of novel spectroscopic based techniques, combined with established virological techniques to improve our understanding of respiratory viral infection. This project combines the unique expertise in biophysics of TU Dublin with that in Virology in UCD CEPHR/National Virus Reference laboratory to study the interactions between clinically important respiratory viruses and cells of the human airway.

The aim of this PhD project is to investigate mechanisms involved in the attachment and entry of respiratory viruses into human airway cells. The PhD candidate will be involved in the generation of lentiviruses pseudotyped with envelope proteins derived from SARS-CoV-2, SARS-CoV-2 and seasonal coronaviruses. The relative binding and entry capacities of pseudoviruses to human airway will be determined using a variety of established methods including FACS, luminescence, immunofluorescence. The contribution of accessory molecules/pathways in binding and entry of these viruses will be assessed using various established inhibitors and drugs using various cellular models for respiratory virus infection.
Even though the successful candidate will be primarily based in UCD CEPHR, they may also be required to perform some of their work in the TU Dublin city campus.

Qualifications / Expertise

Applicants should have a 1st or 2:1 Bachelor's degree in Biomedical Sciences, Microbiology, Biochemistry or a related discipline. Ideally, the applicant should have a Master's degree in one of these areas. The ideal candidate should have experience in as many of the following techniques as possible: mammalian cell culture; molecular biology; lentiviral generation and transduction; protein and gene analysis; immunohistochemistry. The candidate should have excellent communication and organisational skills; be highly motivated and have strong written, oral and interpersonal skills. The candidate should be able to work independently and as a part of a team.

Funding

The PhD studentship covers tuition fees and a tax-free stipend of €18,500 per year. An annual allowance is provided for conference attendance.

Start date: May 1st, 2024

How to apply

Please send a cover letter (1-page max), CV, and academic transcript to Dr Noreen Sheehy (noreen.sheehy@ucd.ie) **by March 1st, 2024**