



School of Pharmacy PhD Projects 2013

Project Title Delineating mechanisms behind the regulation of the disease microenvironment

Supervisors Dr Brendan Gilmore, Prof Sean Gorman and Prof Bill Graham

Description Plasma medicine is an emerging field of research, which has been gaining an ever increasing interest by researchers from a wide range of disciplines in the last decade. Plasma medicine involves the utilisation of gas plasma, especially atmospheric non-thermal plasma, in a variety of medical applications.

This research project aims to develop and evaluate of a portable, in-house designed atmospheric pressure non-thermal plasma (APNTP) jet as a tool for surface decontamination of viable tissues, i.e. treatment of skin infections particularly infected chronic wounds, control of biofilms in medical device infections/inanimate surfaces and evaluation of antiviral/sporicidal activity. The ultimate goal is to develop a device for use in the clinical environment, supported through current clinical collaborations.

This exciting collaborative project will allow the student to develop skills in microbiology, molecular biology, cell culture and low temperature plasma physics. In addition to development of laboratory-based skills, the student will have the opportunity to develop skills in research methodology, statistical analysis, as well as written and verbal presentation skills.

Start Date October 2013

Keywords Bacteria, Biofilm, non thermal plasma, infection control

Contact Details

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How to Apply

Postgraduate applications should be made using Queen's Online:

<http://go.qub.ac.uk/pgapply>

Please note that there are two application processes: one for admission to the university and another for postgraduate awards.

Further Information

Additional information for prospective postgraduate students can be found on the School of Pharmacy website:

<http://www.qub.ac.uk/pha>

and the Queen's Postgraduate website:

<http://www.qub.ac.uk/home/ProspectiveStudents/PostgraduateStudents/>