



School of Pharmacy PhD Projects 2015/16

Project Title

Use of non-thermal plasma as a novel method to reduce airborne contamination in the respiratory clinic

Supervisors

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Description

Patients attending respiratory clinics may be chronically colonised by a range of pathogens. Colonisation with *Pseudomonas aeruginosa* is of particular concern and is associated with declining lung function and poor patient outcome. Although many respiratory pathogens may be environmentally acquired, concern has focused on transmissible strains, which have the potential to be acquired from the hospital. Although routes of transmission of *P. aeruginosa*, or other potentially pathogenic organisms, are not well understood, recent studies have highlighted airborne contamination as a plausible and potential route for transmission of organisms between patients. However, there is currently limited robust evidence to support these findings. This study aims to investigate the potential for airborne transmission of organisms between patients attending respiratory clinics, using a variety of culture based and molecular methods of detection and characterisation. In addition, the use of non-thermal plasma as a novel method to reduce airborne contamination will be developed and evaluated. This 3-year project will provide extensive training in culture and non-culture based microbiological techniques, molecular biology, and production of non-thermal plasma, with an important clinical focus, as part of an internationally renowned research team.

Start Date

September 2015

Keywords

Pseudomonas aeruginosa, microbiology, infection control, non-thermal plasma

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/>

