# PGR Studentship Information Template 2021 entry

* Please complete the template with as much information as possible.
* \*fields are essential.
* If you have information that does not have a label, please create a new row in the table for it.

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| **\*Title of studentship** | Use of Loop Mediated Isothermal amplification technology (LAMP) to rapidly detect pathogens in respiratory samples. |
| **Value / what is covered?**  |  |
| **Awarding body** | DfE |
| **Number of studentships** | 1 |
| **\*Summary descriptive text / Example of research project**  | Chronic respiratory disease is responsible for considerable morbidity and mortality both at national and international level. Much of this morbidity results from infection, and accurately diagnosing and treating infection can improve quality of life and long term outcomes for patients. Routine pathogen detection involves sampling either spontaneously expectorated or induced sputum, or cough swabs, followed by culture in the diagnostic laboratory.Loop Mediated Isothermal amplification (LAMP) has been widely used to detect bacterial and viral pathogens directly from a range of clinical samples. We are currently using this technology for detection of SARS-CoV-2 in saliva samples. The technique is simple, may not require DNA extraction and lends itself to development of rapid, point-of-care testing. This could facilitate the prompt and appropriate use of antibiotics. Further, due to its high sensitivity, it may be appropriate for use in respiratory specimens other than sputum. This is of particular importance, as in many respiratory conditions, production of a specimen is not always possible during planned clinic visits. |
| **\*Supervisor(s)** | Dr Deirdre Gilpin, Prof Michael Tunney  |
| **\*Eligibility / residence Status** |  |
| **Country** |  |
| **\*Start date and duration**  | September 2021, 3 years |
| **\*Faculty** | FMHLS |
| **\*Research centre / School** | School of Pharmacy |
| **Subject area** | Respiratory Medicine, Microbiology, Infection, Clinical Pharmacy |
| **Candidate requirements / Key skills required for the post**  | Applicants should have a 1st or 2.1 honours degree (or equivalent) in a relevant subject. Relevant subjects include Pharmacy, Molecular Biology, Pharmaceutical Sciences, Biochemistry, Biological/Biomedical Sciences, Chemistry, Engineering, or a closely related discipline. Students who have a 2.2 honours degree and a Master’s degree may also be considered, but the School reserves the right to shortlist for interview only those applicants who have demonstrated high academic attainment to date |
| **\*Deadline for applications** |  |
| **\*How to apply / contacts** | Postgraduate Research applicants for Pharmacy who are interested in applying for a fully funded DFE studentship must have applied to Queen’s, via the Direct Applications Portal, and submitted all required supporting documents by the closing date, which will be announced later in the Academic year.<https://dap.qub.ac.uk/portal/user/u_login.php>  |
| **Relevant links / more information**  | <http://www.qub.ac.uk/schools/SchoolofPharmacy/Research/PostgraduatePositions/><http://www.qub.ac.uk/schools/SchoolofPharmacy/Research/>https://www.qub.ac.uk/schools/SchoolofPharmacy/Research/find-a-phd-supervisor/dr-deirdre-gilpin.htmlhttps://www.qub.ac.uk/schools/SchoolofPharmacy/Research/find-a-phd-supervisor/professor-michael-tunney.html |
| **Keywords for search filters** | SARS-Co-V2, infection, diagnostic |
| **Training provided through the research project** | The study will provide extensive training in molecular techniques (RT-PCR, LAMP and Illumina sequencing), clinical studies, data validation, viral and bacterial diagnostics, LAMP within the setting of a world leading research lab, with a demonstrated track record in investigation of respiratory infection. |
| **Expected impact activities** | This project could lead to identification of bacterial and viral infections in a more clinically meaningful time frame. In addition, accurate and appropriate administration of antibiotics, linked to bacterial detection, may contribute to reducing rates of antimicrobial resistance.  |