



## *School of Pharmacy PhD Projects 2014*

- Project Title** Development of a rapid point-of-care diagnostic test for detection of urinary tract infection
- Supervisors** Academic: Dr Michael Tunney, Prof Carmel Hughes, Dr Deirdre Gilpin  
Industrial: Dr Martin Crockard
- Description** Diagnosis of urinary tract infections (UTIs), particularly in older patients, is difficult as clinical signs and symptoms are often vague and non-specific. Urine dipsticks which are currently used for 'detection' of UTIs are not sufficiently sensitive or specific and do not identify if strains are potentially resistant to antibiotics used for treatment. Randox laboratories Ltd, a Northern Ireland based clinical diagnostics company are developing molecular diagnostic biochip arrays that have a common detection platform. The aim of this co-funded industrial PhD project will be to develop a point-of-care molecular diagnostic test that would rapidly detect pathogens causing UTIs.
- Applicants should have or expect to obtain a 1<sup>st</sup> or 2.1 honours degree (or equivalent) in Pharmacy, Microbiology, Biochemistry, Biological Sciences or related discipline. The successful candidate will join a vibrant, world-class multidisciplinary team engaged in studies to improve the detection, treatment and understanding of how bacteria contribute to the pathophysiology of infection. This 3-year project will provide a challenging research training experience, allowing a top quality graduate to undertake research, leading to a PhD, within the context of a mutually beneficial research collaboration between Queen's University Belfast and Randox. Extensive training will be provided by both partners in a range of laboratory techniques including conventional and molecular microbiology and molecular diagnostics (primer design, multiplex PCR, array probe design).
- For further details and informal enquiries regarding this project, please contact Dr Michael Tunney ([m.tunney@qub.ac.uk](mailto:m.tunney@qub.ac.uk)).
- Start Date** September 2014
- Keywords** Urinary tract infection, molecular diagnostics, microbiology

### **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/>