



## School of Pharmacy CAST PhD Project 2017 / 2018

### Development of a modular multipurpose prevention technology (MPT) device for vaginal administration of multiple therapeutic agents

Each year, there are 85 million unintended pregnancies and 2 million new HIV cases globally. Following the recent clinical success of the dapivirine-releasing vaginal ring for HIV prevention, there is now considerable interest in second-generation products aimed at better addressing women's sexual and reproductive health needs by combining HIV prevention with other therapeutic strategies within a single intervention device. Led by an international and interdisciplinary team of researchers from QUB and the Population Council with extensive expertise in advancing global health products for impact in low-resource settings, this three-year project aims to develop a new multi-purpose vaginal drug delivery platform to help address the global health burdens associated with sexually transmitted infections (e.g. HIV-1, HSV-2, bacterial vaginosis) and unmet need for contraception, which disproportionately affect young women in low and middle income countries. The concept is based around an innovative modular vaginal ring design offering ease of fabrication of complex devices containing multiple drugs and materials. The student will be based at the Queen's University Belfast, but will also complete a fully-financed three-month internship at the Population Council offices in New York during the project, working closely within the Council's key biomedical research programs directed at sexual and reproductive health, fertility, and family planning. The project must be started before 1st October 2017. Funding for 3 years has been secured for the project, and covers full tuition fees and an enhanced annual maintenance stipend (starting at £16,582) for UK residents or EU nationals who have been resident in the UK for at least 3 years immediately preceding the start of studentship. Applicants should have a 1st or 2.1 honours degree (or equivalent) in a relevant subject from a university in the UK or Ireland. Relevant subjects include Pharmacy, Pharmaceutical Sciences, Chemistry, Materials Science, Polymer Processing, Mechanical Engineering or a closely related discipline. Students who have a 2.2 honours degree and a Master's degree may also be considered. Closing date for applications: 30th March 2017.

#### General Email Enquiries

[pharmacypostgrad@qub.ac.uk](mailto:pharmacypostgrad@qub.ac.uk)

#### Project Email Enquiries

[k.malcolm@qub.ac.uk](mailto:k.malcolm@qub.ac.uk)  
[p.boyd@qub.ac.uk](mailto:p.boyd@qub.ac.uk)

#### How to Apply

Postgraduate applications should be made using Queen's University [Direct Applications Portal](#). 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](#) and the [Queen's Postgraduate website](#).