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| **\*Title of studentship** | To investigate novel interacting drug combinations in the treatment of Ovarian Cancer |
| **Value / what is covered?**  | Fully funded  100% of UK/EU tuition fees paid and an annual stipend for UK residents only (living expenses), currently at **£15,285** |
| **Awarding body** |  |
| **Number of studentships** | 1 |
| **\*Summary descriptive text / Example of research project**  | Ovarian cancer (OC), the most lethal gynaecological cancer, will result in ~13,000 deaths in the UK this year. At time of diagnosis most patients (58%) present with an advanced stage (III or IV) and 5-year survival is 27% for stage III and 13% for stage IV ovarian cancer in which chemotherapy is still the principal treatment for OC patients. Repurposing drug screens with compounds that have already gained FDA approval can accelerate the identification of new therapies to treat an illness and in the cancer setting extend life or provide compassionate care. This research project will focus on investigating drug combinations of novel interacting compounds to identify new therapeutic strategies to treat OC from existing FDA approved drug libraries. Research will focus on evaluating the pharmacology of drug combinations and elucidation of the underlying tumour characteristics associated with a good/poor response to these drugs. In this PhD, we will employ routine cell and molecular biology techniques to study the drug responses in cancer cell models. You will gain experience in RNAi and protein over-expression techniques, the study of intracellular signalling and a variety of *in vitro* assays to measure key hallmarks of tumorigenesis and drug responses in cancer cell lines and primary cultures. Novel results will be tested in *in vivo* models and/or clinically relevant samples. |
| **\*Supervisor(s)** |  Dr Fiona Furlong, School of Pharmacy QUB |
| **\*Eligibility / residence Status** | UK/EU/International |
| **Country** | Northern Ireland |
| **\*Start date and duration**  | Open |
| **\*Faculty** | MHLS |
| **\*Research centre / School** | Pharmacy |
| **Subject area** | Cancer pharmacology |
| **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, 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 must have applied to Queen’s, via the Direct Applications Portal.<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/> |
| **Keywords for search filters** | Ovarian Cancer; cell biology; cell signalling; pharmacology; drug action; |
| **Training provided through the research project** | The project will provide hands-on training for the student in the following:* Cancer cell culture
* Drug toxicity analysis
* Real time monitoring of cell proliferation and migration
* Assays to measure cell viability and apoptosis
* Protein, RNA and DNA isolation methods
* Gene expression and Protein detection methods
* A thorough understanding of cancer biology

Working as a PhD will also provide the following training:* Oral and poster presentation skills
* Working as part of a team
* Project management: Planning and organising experiments, time management
* Teamwork
* Data analysis
* statistical analysis
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| **Expected impact activities** | This research aims to provide evidence to support novel drug combinations/drug repositioning in the treatment of OC. |