



QUEEN'S UNIVERSITY BELFAST

*Title of studentship	Dissecting the mode of action of HDAC6 inhibition in cancer
Value / what is covered?	
Awarding body	
Number of studentships	1
*Summary descriptive text / Example of research project	<p>The HDAC6 protein is upregulated in cancer and associated with increased proliferation and metastasis. Several HDAC6 inhibitors have been developed and are in clinical trials. However, recent published data including data generated in our lab indicates that the enzymatic inhibition of HDAC6 in solid tumours is ineffective. The HDAC6 protein is a large protein with important protein scaffold properties and our current research is focused on determining the functions of each of the modular units of this protein in cancer cells.</p> <p>In this PhD, we will employ routine cell and molecular biology techniques to study the enzymatic independent functions of HDAC6 in cell proliferation and migration. You will gain experience in protein over-expression techniques, the study of protein-protein interactions, intracellular signalling and a variety of in vitro assays to measure key hallmarks of tumorigenesis and drug responses in cancer cells. This is an exciting collaboration between Drs Fiona Furlong and Irina Tikhonova who's expertise in receptor pharmacology and molecular modelling aim to design a new class of HDAC inhibitor drugs.</p>
*Supervisor(s)	Drs Fiona Furlong & Irina Tikhonova, School of Pharmacy
*Eligibility / residence Status	UK/EU/International
Country	Northern Ireland
*Start date and duration	open
*Faculty	MHLS
*Research centre / School	Pharmacy
Subject area	Cancer pharmacology, drug discovery, personalised medicine, cancer

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, Pharmacology, Molecular Biology, Pharmaceutical Sciences, Biochemistry, Biological/Biomedical Sciences, 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	open
*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/
Keywords for search filters	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: <ul style="list-style-type: none"> • Protein over-expression techniques • Protein detection methods • Protein-protein interaction • Cancer cell culture • Real time monitoring of cell proliferation • Real time monitoring of cell migration • Assays to measure cell viability and apoptosis • Protein, RNA and DNA isolation methods • a thorough understanding of cancer biology Working as a PhD will also provide the following training: <ul style="list-style-type: none"> • Oral and poster presentation skills • Working as part of a team • Project management: Planning and organising experiments, time management • Team work • statistical analysis
Expected impact activities	Discovery of the mechanism of action of HDAC6 is likely to lead to the development of methods to specifically target the oncogenic function of this protein or direct the decision for the use of combinations of therapy for HDAC6 overexpressing tumours.