



School of Pharmacy PhD Projects 2014

- Project Title** Ultrashort Self-assembling Peptides/Peptidomimetics as Antimicrobial Biomaterials
- Supervisors** Dr. Garry Laverty, Dr. Brendan Gilmore, Prof. David Jones
- Description** Ultrashort self-assembled peptide/peptidomimetics represent a highly novel and cost-effective strategy to form self-assembled nanomaterials. These will possess numerous advantages over current synthetic materials including: tunable biodegradability, tailored antimicrobial activity/gelation in response to infection, increased chemical versatility, minimal immunogenicity and enhanced biocompatibility. This project will produce a library of peptide/peptidomimetic molecules capable of producing antimicrobial nanomaterial structures in response to infection, with low gelation concentrations and well-defined properties for biomaterial applications.
- Non-native chemistries and functional groups are easily incorporated into the peptide backbone allowing peptide hydrogels to be tailored to specific functional requirements. The project will provide the successful applicant with the opportunity to advance their skills in peptide synthesis, purification and characterisation, spectroscopy, rheology, tissue culture, microbiology and pharmaceutical formulation. The student will benefit from: having access to state of the art laboratory facilities within the McClay Research Centre; enrollment into the Queen's University PhD programme and associated training; working closely with supervisors together with internal and external collaborators.
- Start Date** 1 October 2014
- Keywords** Peptide, Microbiology, Antimicrobial, Biomaterial, Self-assembly, nanomaterial

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/>