

**UCC**Coláiste na hOllscoile Corcaigh, Éire
University College Cork, Ireland**SCHOOL OF PHARMACY****Staff Research Expertise and Interests**

Staff Name	Research Interests
Dr Teresa Barbosa <i>Clinical Practice</i> t.barbosa@ucc.ie	<ul style="list-style-type: none"> • Infectious disease. • Antimicrobials, antimicrobial resistance and stewardship. • Long term impact of antimicrobial use. • Education and training on antimicrobials and AMR.
Dr Lorraine Bateman <i>Pharmaceutical Chemistry</i> l.bateman@ucc.ie	<ul style="list-style-type: none"> • Nuclear Magnetic Resonance (NMR) Spectroscopy as a key technique for Pharmaceutical synthesis and analysis. • Pharmaceutical Chemistry Process; <i>in situ</i> reaction monitoring. • Advanced structure and mechanism elucidation . • Dynamic systems, systems in equilibrium. • Food & Metabolomics studies, Biological NMR.
Dr Margaret Bermingham <i>Clinical Practice</i> margaret.bermingham@ucc.ie	<ul style="list-style-type: none"> • Prevention and treatment of chronic disease with a focus on cardiovascular disease and diabetes. • Chronic disease and medicines management in primary and secondary care. • Pharmacovigilance. • Biosimilar medicines.
Dr Stephen Byrne <i>Clinical Practice</i> stephen.byrne@ucc.ie	<ul style="list-style-type: none"> • The use of screening tools to aid in the identification of inappropriately prescribed medicines in a primary and secondary care setting. • Enhancing the role of the community and hospital pharmacists in monitoring and optimising prescribing. • The Use of the Behavioural Change Wheel to enhance pharmacists interventions. • Pharmacoeconomics and Pharmacoepidemiology.
Dr Abina Crean <i>Pharmaceutics</i> a.crean@ucc.ie	<ul style="list-style-type: none"> • Development of formulation approaches to enhance the oral bioavailability of drug molecules challenged by poor-water solubility. • Formulation and characterisation of microneedle drug delivery systems. • Investigating critical attributes of drugs and excipients that impact on the processing and performance of drug products. • Biophysical characterisation, processing and formulation of peptide, protein and vaccine therapeutics and medical devices.
Dr Maria Donovan <i>Clinical Practice</i> mariadonovan@ucc.ie	<ul style="list-style-type: none"> • Pharmacokinetic-pharmacodynamic modelling for optimising dosage regimens. • Clinical pharmacogenetics. • The Role of the Pharmacist in Deprescribing. • Technology-enhanced learning in healthcare.
Dr Aoife Fleming <i>Clinical Practice</i> a.fleming@ucc.ie	<ul style="list-style-type: none"> • Antimicrobial Stewardship. • Infection biomarkers (C reactive protein, procalcitonin). • Vaccinations: role of the healthcare professional & hesitancy • Prescribing and medication management in long term care facilities. • Medication safety and reconciliation. • Behaviour Change interventions.

For more details contact the School of Pharmacy, UCC. Tel: Intl. + 353 21 4901662/4901663
Email: pharmacy@ucc.ie Website: <http://www.ucc.ie/pharmacy>

<p>Dr Eoin Fleming Biochemistry <u>j.Fleming@ucc.ie</u></p>	<ul style="list-style-type: none"> • Diseases of protein misfolding. • Inflammation. • Cancer.
<p>Dr Cormac Gahan Microbiology <u>c.gahan@ucc.ie</u></p>	<ul style="list-style-type: none"> • Functional Metagenomics of the GI tract. • Host-Pathogen interactions in the GI tract. • Development of Novel Vaccines. • Bactofection & DNA Delivery.
<p>Dr Brendan Griffin Pharmaceutics <u>brendan.griffin@ucc.ie</u></p>	<ul style="list-style-type: none"> • Targeted drug delivery. • Oral drug delivery systems. • Nano drug delivery.
<p>Dr JJ Keating Pharmaceutical Chemistry <u>jj.keating@ucc.ie</u></p>	<ul style="list-style-type: none"> • Impurity profiling on amphetamine-type drugs of abuse. • Independent synthesis of impurities arising from synthetic routes to amphetamine analogues. • Synthetic and biological activity of compounds which increase brain serotonin levels.
<p>Prof Anita Maguire Pharmaceutical Chemistry <u>a.maguire@ucc.ie</u></p>	<ul style="list-style-type: none"> • Novel synthetic methodology including the use of α diazocarbonyl compounds and organosulfur compounds in synthesis. • Asymmetric synthesis including asymmetric catalysis and application of biotransformations in organic synthesis. • Continuous flow as a powerful technique to enhance process chemistry. • Synthesis of biologically active compounds. Current projects are targeted towards compounds with anti-viral activity. • Crystal engineering – the pharmaceutical solid state.
<p>Dr Kevin Murphy Clinical Practice <u>kevin.murphy@ucc.ie</u></p>	<ul style="list-style-type: none"> • Reducing deleterious effects of polypharmacy in older patients. • Interprofessional communication and patient communication. • Expanding pharmacy services in hospital environment.
<p>Dr Suzanne McCarthy Clinical Practice <u>s.mccarthy@ucc.ie</u></p>	<ul style="list-style-type: none"> • Healthcare Education Research. • Medication Safety. • Women's and Children's health. • Mental Health. • Pharmacoepidemiology/Drug Utilisation.
<p>Prof Caitriona O'Driscoll Pharmaceutics <u>caitriona.odriscoll@ucc.ie</u></p>	<ul style="list-style-type: none"> • Physicochemical and physiological barriers to drug delivery. • Design and assessment of targeted drug delivery constructs. • Delivery of macromolecules including peptide/protein based drugs. • Non-viral methods for delivery of plasmid DNA and siRNA. • Oral drug absorption using lipid-based formulations. • Bioavailability and pharmacokinetics.

<p>Dr Tim O'Sullivan Pharmaceutical Chemistry tim.osullivan@ucc.ie</p>	<ul style="list-style-type: none"> • Synthesis of bioactive compounds, including antiparasitic, antibacterial and antiviral compounds. • Development of new methodologies for the synthesis of medically important compounds. • Stereoselective synthesis of natural 1,2-dioxanes for the treatment of Chagas disease. • Investigation of new chiral tethers for the control of intramolecular, aryl-aryl coupling and application to anti-HIV biaryls. • Synthesis of Diffusible Signal Factor analogues to disrupt bacterial resistance in Cystic Fibrosis lung.
<p>Dr Katie Ryan Pharmaceutics katie.ryan@ucc.ie</p>	<ul style="list-style-type: none"> • Formulation approaches for poorly soluble drugs. • Nanotechnology for targeted drug delivery. • Biomaterials. • Medical devices including hard and soft tissue implants. • Regenerative medicine and tissue engineering.
<p>Dr Laura Sahn Clinical Practice l.sahn@ucc.ie</p>	<ul style="list-style-type: none"> • The role of the pharmacist in Public Health including; vaccinations and modification of solid oral dosage forms. • Patient adherence to therapy and Health Literacy. • Pharmacovigilance and the importance of medication reconciliation at the interface of primary and secondary care.
<p>Dr Sonja Vucen Pharmaceutics svucen@ucc.ie</p>	<ul style="list-style-type: none"> • Transdermal drug delivery and enhancement of percutaneous absorption. • Prediction and assessment of skin penetration and topical bioavailability and pharmacokinetics. • Skin barrier function characterization. • Design and assessment of microneedle drug delivery systems. • Formulation and characterisation of peptide and protein therapeutics.
<p>Dr Christian Waeber Pharmacology c.waeber@ucc.ie</p>	<ul style="list-style-type: none"> • Vascular biology: Investigating the role of S1P receptors, S1P synthesizing enzyme and Store-Operated Calcium Entry in vascular disorders associated smooth muscle cell proliferation. • Stroke and Neuroprotection: Studying the mechanisms by which S1P receptor stimulation is effective in rodent models of cerebral ischemia. Assessing the translational significance of these protective effects by using stroke models that are more relevant to humans (thromboembolic stroke; effect of comorbidities, age, etc.). • Bone biology: Polymer-based delivery of S1P agents for bone repair.

C:Postgraduate: Postgraduate Open Day