School of Biochemistry and Immunology Summary

The School of Biochemistry and Immunology is research intensive and has a strong international reputation for the quality of its scholarly activities. The areas of research in Biochemistry include membrane proteins, enzymology, folic acid biochemistry, structural biology, tRNA biology, neurochemistry, systems biology, cancer biology, molecular parasitology, apoptosis, energy transduction and drug discovery. In the area of Immunology our School is active in immunoregulation, immunomodulation, cell signalling in immunity and inflammation, immunoparasitology, vaccine adjuvant research, innate immunity and inflammation and viral subversion of immunity.

Our success in these areas is complemented by our substantial investment in cutting-edge facilities for nuclear magnetic resonance, protein crystallization, X-ray crystallography, transgenics, histochemistry, electron microscopy, confocal microscopy, and flow cytometry.

The staff of the School have a passion for discovery, an ability to generate new knowledge, expertise in cutting-edge technologies, a flair for entrepreneurship and innovation, as well as a commitment to communicating their passion and knowledge to students, colleagues and the public.

Our research mission is to discover the fundamental mechanisms that underlie human disease and we engage multi-disciplinary approaches for this endeavour. This intersectoral approach aims to push the boundaries of discovery by promoting the translation of basic research discoveries into therapies and treatment. Five new campus companies have emerged from our research discoveries that focus on biotherapeutic development.

There are 5 research themes in the School of Biochemistry and Immunology, all consistent with supporting the biomedical research that takes place in the Trinity Biomedical Sciences Institute where the School is physically located. The research themes are: Immunology, Cancer, Metabolism, Neurodegeneration and Structural Biology

The School has undergone considerable growth in recent years and currently comprises 25 research groups with 73 Ph.D. students, 19 M.Sc. students and 43 postdoctoral researchers.

During the period 2010-2013, researchers in the School raised over €19m in research funding and authored over 351 research papers. 23 of these research papers were published in journals with impact factor greater than 20.

Research funding has been obtained from Science Foundation Ireland, N.I.H., the Human Frontiers Research Programme, Enterprise Ireland, the Health Research Board, EU FP7, the Wellcome Trust, the European Research Council and from pharmaceutical and biotechnology industries.