Professor Robert J Capon
Division of Chemistry & Structural Biology
Institute for Molecular Bioscience
The University of Queensland
306 Carmody Road, Building 80
St Lucia, QLD 4072, AUSTRALIA

r.capon@uq.edu.au
Skype: robcapon

Biography for Professor Rob Capon

Since accepting a position as a Professorial Research Fellow and Group Leader at The University of Queensland, Institute for Molecular Bioscience, Prof Capon has established a highly regarded multidisciplinary biodiscovery laboratory with state-of-the-art capability and expertise spanning chemistry, microbiology, biology and ecology. Prof Capon has published and lectured extensively on natural products chemistry, advocating and illustrating the use of both basic and applied science to advance the discovery of new human and animal health therapeutics, crop protection agents, molecular probes and scientific knowledge. A leading Australian natural products and biodiscovery expert Prof Capon has attracted significant government and industry investment, and has assembled a talented team of research associates, students and collaborators.

Over the last 3 decades Prof Capon and his team have isolated, identified and studied >2000 novel metabolites from Australian terrestrial and marine plants, invertebrates and microbes, spanning tropical, temperate and Antarctic ecosystems. Many of these natural products possess unprecedented carbon skeletons, heterocycles and/or functional groups, and exhibit potent and selective biological properties that have seen them evaluated for biomedical and agrochemical applications. For example, in collaboration with Novartis, Prof Capon successfully pioneered the exploration of Australian marine biodiversity as a source of anthelmintics for the treatment of gastrointestinal parasites in livestock. Other industry collaborations explored the application of Australian natural products against cancer (PharmaMar, Spain), neurodegenerative diseases (Noscira, Spain), parasites (Ovita, NZ) and bacterial infection (MST, Sydney), while academic collaborations have extended to include chronic inflammatory pain, obesity, diabetes and infectious (bacterial, fungal, parasitic and viral) diseases. In 2006 Prof Capon initiated a multi-disciplinary research program aimed at using chemical ecology as means to control cane toads in Australia. This study has targeted alarm and attractant pheromones, has revealed the unexpected *in situ* role of commensurate bacteria in biotransforming toxins, and has evaluated toad toxins for biomedical application.

Prof Capon has advised the Dutch, Norwegian, Irish, South African, New Zealand, Australian and Queensland Governments on research funding, including a review of the Australian Institute for Marine Science, and is a member of the Australian Federal Government Biodiscovery Industry Panel. In recent years Prof Capon has delivered presentations at international meetings in New Zealand, USA, Korea, Malaysia, France, Italy, Chile, Greece, Portugal, China and Spain, and referees for numerous peer reviewed scientific journals, including leading journals in the fields of organic and natural products chemistry. Journals include Angew. Chem., Org. Lett., J. Org. Chem., J. Am. Chem. Soc., J. Med. Chem., Org. Biomol. Chem. and Tetrahedron, and many others. Prof Capon has deliver invited lectures across a diversity of disciplines and organizations including the Australian Clinical Researcher Society, Australian Chapter of Controlled Release Society, Invasive Animals CRC, University of Sydney Brain and Mind Institute, University of Melbourne Bio21 Institute, International Symposium on Genetics of Industrial Microbes, Mater Medical Research Institute and the Garvan Institute.

A Fellow of the Royal Australian Chemical Institute, Prof Capon is also Director of Postgraduate Studies for the Institute of Molecular Bioscience, an Affiliate Professor in the UQ School of Chemistry and Molecular Bioscience, a long standing member of the UQ Research Higher Degrees Committee, an elected member of UQ Academic Board, and UQ Academic Board Standing Committee, and a member of the Scientific Advisory Board for BioDeakin (Deakin University).

Prof Capon has advised and successfully mentored >50 Honours and >20 PhD research students, and regularly delivers invited presentations at Leadership Forums for the Go8 universities, mentoring early career academics on research planning, management and funding. Prof Capon is a regular expert commentator for print (newspapers) and electronic (TV, radio) media on matters relating to biodiscovery, and founded and is principal scientist in a consultancy company (ChemoType Pty Ltd) providing expert advice to the Australian legal community (civil, criminal and patent).

A member of the NHMRC Development Grant Panel, and ARC OZ Reader for the Biological Sciences & Biotechnology Panel, Prof Capon reviews basic and applied science funding applications across Australian biomedical and chemical science.