

Bio-sketch of Nichollas Scott



Dr Scott completed his PhD at the University of Sydney (2007 to 2012) on mass spectrometry (MS) approaches for the study of bacterial protein modification under the guidance of Prof. Stuart Cordwell. The key focus of his doctorate was the establishment of a protocol for enriching bacterial glycopeptides irrespective of glycan composition. This approach has become the gold standard for the analysis of glycopeptides (Mol Cell Proteomics, 2011) with this work being cited 160 times since 2011. Due to the significance of this work and the insights gained by its application, CI Scott was the recipient of multiple student prizes at both local and international conferences. CI Scott's PhD resulted in a total of 11 publications including 4 first author publications.

In 2011, during the examination of Dr Scott's PhD, he travelled to the University of Alberta (UofA) to take up a dual appointment between the Cordwell and Szymanski labs. This opportunity allowed him to apply the technologies developed during his PhD to multiple bacterial glycosylation systems, leading to the publication of the first large-scale analysis of glycan diversity within the *Campylobacter* genus (Mol Cell Proteomics, 2012) and the discovery of the general *O*-linked glycosylation system of *A. baumannii* (PloS Pathogen, 2012). In late 2011 Dr Scott was awarded a NHMRC Early Career Fellowship and in 2012 he moved to the Foster lab at the University of British Columbia. Within the Foster lab Dr Scott began developing quantitative proteomics approaches for the study of protein interactions and bacterial glycosylation systems. These projects resulted in the identification of multiple novel bacterial glycosylation systems within Gram-negative pathogens including *Burkholderia cenocepacia* (Mol. Micro, 2014) and *Ralstonia solanacearum* (Glycobiology, 2016).

In 2015, Dr Scott was recruited to the University of Melbourne for the conclusion of his NHMRC fellowship (2016–2017) In 2016 Dr Scott was the recipient of the International Early Career Award from the Australasian Proteomics Society (provided to a young scientist based overseas and looking to establish an independent laboratory in Australia) and in 2017 the Ken Mitchelhill Award (provided to the most outstanding ECR based on track record and research potential). In September 2017 Dr Scott established his own lab in Department of Microbiology and Immunology at the University of Melbourne. This transition to independence has been facilitated by his success in gaining competitive funding through a sole CI NHMRC project grant (2016–2018) and a University of Melbourne Early Career Researcher (2016) award as well as co-CI NHMRC/ARC project grants (2018-2020).

Dr Scott's research continues to focus on the application of MS approaches to understand complex biological systems and the characterisation of glycosylation in microbial pathogens. Since arriving at the University of Melbourne Dr Scott has continued exploring novel microbial glycosylation systems, characterising *O*-fucosylation systems within Apicomplexa parasites (Nature Communication 2017 and J Biol. Chem 2019) and developing tools to explore Arginine glycosylation (J Biol. Chem 2017). A key goal of his lab is to use the insights into microbial glycosylation gained using MS to develop new systems which use or target microbial glycosylation to improve human health.