O’Connell is a clinician scientist, and Executive Director of The Westmead Institute for Medical Research, with continuous NHMRC funding since 1996. He has a position of leadership within a large multidisciplinary collaborative research team, bringing together expertise in basic science, genomics, drug discovery, pre-clinical models and clinical research. In the last 5 years O’Connell has made a significant impact in the development of predictive biomarkers for kidney transplantation. As a PI, the NIH funded GoCAR study led to the development of a 13 gene set predicting progressive fibrosis and graft loss (O’Connell et al. Lancet 2016). Other genomic-based assays followed, leading to 6 additional publications, 2 patents. He is a past-president of the Transplantation Society.