

ANZSMS Michael Guilhaus Research Award. – awarded July 2015.

W. Alex Donald, The University of New South Wales

Project Title: Rapid, ultra-sensitive protein structure elucidation: Supercharging hydrogen deuterium exchange mass spectrometry.

The 2015 Michael Guilhaus Research Award was presented to Alex Donald on the 22nd of July 2015 in Brisbane at the 25th Australian and New Zealand Society for Mass Spectrometry and 6th Asia Oceania Mass Spectrometry Conference dinner.

The \$10,000 prize, sponsored by Waters, funded the Donald lab to develop mass spectrometry instrumentation and methods for studying proteins.

The Donald lab used these funds in discovering that protein charging in electrospray ionization is limited by proton transfer reactions with $N_2(g)$ and $O_2(g)$. The formation of protein ions in high charge states can be beneficial to enhancing the sequence information obtained using many different types of tandem mass spectrometry measurements.

The Guilhaus Award was the first external seed funding to Donald's lab for research involving intact protein mass spectrometry, and led to subsequent major grants that were used to expand research and train researchers in mass spectrometry in Australia