

Report NZMEC 2020

*New Zealand Microbial Ecology Consortium (NZMEC) Symposium v6.0
20-21 February, 2020
University of Auckland*

On 20-21 February, the 6th meeting of the New Zealand Microbial Ecology Consortium (NZMEC) took place at the University of Auckland, Aotearoa New Zealand. NZMEC is a special interest group of the New Zealand Microbiological Society (NZMS) and has a goal to promote and encourage microbial ecology research collaborations within the New Zealand science sector. The focal point of NZMEC is the biennial meetings which we hold at the University of Auckland to facilitate these interactions and invite a range of international, national and early career researchers to present their work.



At these symposia, we aim to attract a broad mix of microbial ecology topics for presentation. We do not charge registration or membership fees to attend, instead relying on generous sponsorship from organisations and societies such as ISME to assist in sponsoring plenary speakers to attend. The format of NZMEC symposia varies from year-to-year and in addition to oral and poster presentations has in the past included workshops on the use of statistics in microbial ecology research, as well as application of next-generation sequencing technologies. International plenary speakers in the past have included Catherine Lozupone, Jennifer Martiny, Gene Tyson, Ed DeLong, Phil Hugenholtz, Jim Prosser, Jill Banfield, Noah Fierer, Maureen O'Malley, Tanja Woyke, Mike Manefield and Nicole Webster.

NZMEC v6.0 was held over two days and saw a record 135 attendees from around the country, including representatives from all NZ universities and the majority of governmental research agencies (known as Crown Research Institutes, or CRIs) and also a small contingent of Australian researchers from a variety of institutions. This year we heard from world-leading microbial ecology researchers including Plenary speakers Kim Handley (U. Auckland), Eddie Holmes (U. Sydney), Jessica Metcalf (Colorado State University), Valerie McKenzie (U. Colorado at Boulder), Nancy Moran (U. Texas at Austin), Howard Ochman (U. Texas at Austin), and Matthew Stott (U. Canterbury). The New Zealand-based Invited speakers were Kristi Biswas (U. Auckland), Heather Hendrickson (Massey University), Emily Parke (U. Auckland), Louise Weaver (ESR), and Bevan Weir (Manaaki Whenua - Landcare Research). We were also delighted to showcase the amazing research done by early-career researchers, with >20 ECR presentations. Our presenter gender balance was 24 female and 18 male presenters.

ISME sponsored the third session (Day 1) of the symposium and facilitated the attendance of one of our three New Zealand invited speakers, Dr Bevan Weir (Manaaki Whenua - Landcare Research), and one of our five plenary speakers, Professor Eddie Holmes (University of Sydney, Australia). Bevan is a Senior Scientist at Manaaki Whenua and the chief curator of ICMP – New Zealand's microorganism culture collection - and his talk covered the benefits of cultivation to informing microbial ecology. Ed's talk was a wide-ranging presentation about new viruses and was particularly topical by the inclusion of his work conducted on COVID-19. Both talks were well received and prompted broad discussions. The ISME session also included talks by early career researchers Rudolf Schlechter and Syrie Hermans. Rudolf discussed the use of fluorescent bacteria to understand cell-cell interactions on plant leaf surfaces, while Syrie spoke about how soil bacterial communities can be used to predict physicochemical variables and soil quality. However, arguably the highlight of the session was 17x 3-minute ECR flash talks given by PhD, MSc and postdoctoral researchers. These talks ranged from understanding how microorganisms influence volatiles in wine through to the evolution of endosymbiosis, and the bacterial and fungal diversity in human sinuses. Finally, Mike Taylor and Gavin Lear (Chair and Co-Chair of ISME-19) facilitated a brainstorming session from the attendees about potential session themes and plenary speakers for the upcoming ISME-19 meeting in Auckland.

A copy of the Symposium programme is appended to this report.

The Symposium was a great success and we once again appreciate the ongoing support from ISME. The ongoing success of the NZMEC symposia demonstrates the vibrant and broad microbial ecology community in New Zealand.