Vertical Transmission



Dena Lyras President of ASM

Climate change is one of the most important issues faced by our planet. As scientists, we seek to understand and find ways to prevent, and perhaps reverse, its effects. Although the impacts of climate change on the environment and extinction of animal and plant life are well studied, the consequences of climate change on microbes are largely unknown. We now understand that microbes underpin a healthy global ecosystem and that disruptions to microbial diversity often have devastating repercussions on the affected ecological niche. Indeed, changes in microbial diversity induced by climate change may therefore have important downstream consequences on the resilience of such ecosystems and their ability to withstand climate change.

The issue of microorganisms and climate change is the subject of an excellent and timely paper published in *Nature Reviews Microbiology* by one of our ASM members, Professor Rick Cavicchioli, and colleagues (Scientists' warning to humanity: microorganisms and climate change. Cavicchioli *et al.*, *Nat Rev Microbiol.* 2019 Sep; 17(9): 569–586. doi:10.1038/s41579-019-0222-5). Many of you will already have read this paper; for those of you who have not, I urge you to do so. It describes what we know about the effects of microorganisms on climate change, from microbial climate-active processes and their drivers to the role of microbes in climate change mitigation. The effects of climate change on microorganisms are also described, as are the influences of climate change on microbial community compositions, physiological responses and adaptation.

This article is described as a 'Consensus Statement' and has been authored by 33 scientists from nine countries. It also serves as a microbiologists' call-to-action because of the importance of microbes to climate change biology. It encourages microbiologists to become more engaged in climate change studies, and alerts microbiologists and non-microbiologists to address the roles of microorganisms in accelerating or mitigating the impacts of climate change. The ASM has strongly endorsed this statement, which is described in more detail in a letter by Professor Cavicchioli, which follows this Vertical Transmission. We encourage our members to do the same by following the links in the article or by using the following link, and by signing the petition to show your support for this important aspect of climate change: https://www.babs.unsw.edu.au/research/microbiologists-warning-humanity.

I would like to extend our grateful thanks to the organisers of the national meeting for 2019 that was held in Adelaide. This was an excellent meeting, with over 500 delegates, and it was a tremendous success scientifically and socially. Of particular note, the public lecture speaker Wendy Jackson from PRIDA (Pacific Region Infectious Diseases Association) described the contribution scientists can make to improving health care in the Pacific region, which drew the interest of many of our members who are now planning on contributing to this effort. Our 2019 Rubbo Orator, Professor Tilman Ruff, was inspirational in describing the global imperative to eradicate nuclear weapons and showed us the power of individuals to tackle change and to promote peaceful outcomes. Congratulations and thanks to all members of the local organising committee especially the Conference Chair, Dr Stephen Kidd, and Co-Chair, Chris Ossowicz. Another excellent Annual Scientific Meeting is planned for Melbourne next year on 5-8 July 2020 - please add the dates to your diary.

As always, please visit our website www.theasm.org.au to access information regarding upcoming meetings and awards. Note our fresh new website, which is easier to navigate and currently showcases content created by our wonderful ASM Communication Ambassadors You may also like to follow, and contribute to ASM on Twitter, @AUSSOCMIC, or on Facebook to make sure you keep up with the latest news, trends and developments in Microbiology in Australia and around the world.

Member of Australian Society for Microbiology (MASM)

Want to upgrade from an associate to a full member? No points or cash required and only one supporting referee needed. Go to the ASM website, download and complete the form, and forward it with a CV to the National Office. We will do the rest.