

Symposium 10

Microbial friends and enemies of algae

Conveners

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Key-note speakers

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Symposium description

Single-cell and omics technologies are profoundly revolutionizing the breadth and depth in which the physiological, ecological and evolutionary functions of the algal associated microbes and viruses, i.e. the algal microbiome, can now be apprehended: Microbial cells and viruses can control the morphogenesis of algae, while others are indispensable to algal survival. Some control their degradation, thus directly contributing to biogeochemical cycling. Others can be pathogenic, causing devastating diseases in wild and cultivated algae, the impact of which worsens with the intensification of aquaculture practices and arguably with climate change. Controlling the microbial flora associated with algae is emerging as the biggest biological challenge for their increased usage. Yet we are only starting to understand the fundamental principles underpinning the association of microbial communities in the phycosphere. This session will explore how interdisciplinary tools are being used to address all these questions on viruses, bacteria and protists associated to algae, and will illustrate the rapid progress that is being made in this fast-moving field.

