Special Issue

Understanding Phage Particles 2.0

Message from the Guest Editor

Bacteriophages, or phages, are viruses that only infect and kill bacteria. They are the most abundant biological entities on earth, occupying all ecological niches where they have a decisive role in the balance and evolution of bacterial ecosystems. Phages shape bacterial population dynamics and can significantly alter both intra- and interspecific competition among their bacterial hosts. Phage particles are vehicles for horizontal gene transfer, and many bacterial virulence and fitness factors are encoded by phages or phage-like elements. Advances in phage biology research have led to the study of these phage–host interactions and their exploitation to obtain phages and phage-based products for their application in different settings. We want to provide an update on those phage–host interactions, especially, but not limited to, interactions involving horizontal gene transfer, modification of the bacterial fitness, the role of phage particles as reservoirs of bacterial genes, their role as drivers of evolution for bacterial communities, as well as an update on the potential of phages and phage-based products for phage therapy and other applications.

Guest Editor

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"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

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