Special Issue

Bacteriophages in Unusual and Extreme Environments—Physiology, Genetics, and Potential Biotechnological Applications

Message from the Guest Editors

The diversity and dynamics of phage development can be helpful in understanding the changes in many environments due to climate change. Additionally, metagenomic studies of extreme environments reveal the enormous genetic diversity of bacteriophages. Detailed analyses of these genomes can provide a basis for analyzing their evolution. The available literature data show that the vast majority of phage gene products in extreme environments are unique. This means that bacteriophages are present in these environments due to the presence of genes that encode proteins with unusual and rarely encountered properties. These enzymes can include DNA polymerases, depolymerases, or lysines, which are able to function at high or low temperatures, in high salt concentrations, in the presence of various ions, and in acidic or alkaline environments. These enzymes have great biotechnological potential.

This Special Issue will be devoted to the biology and biotechnology of bacteriophages in unusual and extreme environments. Original papers and review articles are equally welcome, provided that they are focused on bacteriophages that occur in these habitats.

Guest Editors

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Message from the Editor-in-Chief

"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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