



Bacteriophages and Biofilms

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Deadline for manuscript
submissions:

closed (15 December 2019)

Message from the Guest Editors

Dear Colleagues,

Biofilms are a community of surface-associated microorganisms embedded within a matrix of extracellular polymeric substances (EPS—extracellular polymeric substances) composed essentially of polysaccharides, eDNA, and proteins. These multicellular communities are characterised by the presence of different cell types in terms of physiology and phenotype.

Persister cells are much more abundant in biofilms compared to planktonic culture; therefore, it is important to understand persister cells interactions with domesticated phages (prophages) as well as with lytic ones. Phages are actively involved in biofilm formation, in two different ways: as promoting or degrading agents. Phages can be equipped with matrix-degrading enzymes and effectively infect biofilm-embedded cells. In this meaning, phages are a natural and helpful weapon against microbial biofilms. On the other hand, prophages regulate phage-mediated cell lysis and eDNA release, an important component of stabilizing the biofilm matrix.

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Message from the Editor-in-Chief

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