



Bacteriophages and Biofilms

Guest Editors:

Prof. Dr. Zuzanna Drulis-Kawa

Department of Pathogen Biology
and Immunology, Institute of
Genetics and Microbiology,
University of Wrocław, 51-148
Wrocław, Poland

Dr. Barbara Maciejewska

Department of Pathogen Biology
and Immunology, Institute of
Genetics and Microbiology,
University of Wrocław, Wrocław,
Poland

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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.

Dr. Zuzanna Drulis-Kawa

Dr. Barbara Maciejewska

Guest Editors





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Editor-in-Chief

Dr. Eric O. Freed

Director, HIV Dynamics and
Replication Program, Center for
Cancer Research, National
Cancer Institute, Frederick, MD
21702-1201, USA

Message from the Editor-in-Chief

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Viruses Editorial Office
MDPI, St. Alban-Anlage 66
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