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Developing Bacterial Virus Deterrents to Challenges of Impending Postantibiotic Era: Phage Product Engineering, Therapy, Vaccines

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Deadline for manuscript submissions:
closed (31 December 2020)

Message from the Guest Editors

Dear Colleagues,

In the two decades prior to the birth of antibiotics, Felix d'Herelle recognized the existence of natural substances, he termed phages, that could infect, multiply within, and burst from bacterial cells. Phage therapy was advanced as a means by which predator bacterial viruses could be exploited to contain infectious bacteria. We have come to realize that while phages represent the predominant microorganisms within the biosphere, the process and outcome of a phage infection is highly unique to the phage and target cell. The thesis advanced is that with the wealth of modern molecular technology, bacterial viruses can finally be rationally exploited as antibiotic substitutes or as co-therapies to treat infectious disease. This can include strategies to identify and characterize receptors involved in phage-host interactions, the engineering of phages or their encoded proteins to target and kill selected bacterial cells, and the use of phages to display or express peptides that serve as vaccines or therapeutic agents.

Keywords: phage product engineering, phage therapy, phage vaccines

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Editor-in-Chief

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Message from the Editor-in-Chief

There are very few fields that attract as much attention as scientific endeavor related to antibiotic discovery, use and preservation. The public, patients, scientists, clinicians, policy-makers, NGOs, governments, and supra-governmental organizations are all focusing intensively on it: all are concerned that we use our existing agents more effectively, and develop and evaluate new interventions in time to face emerging challenges for the benefit of present and future generations. We need every discipline to contribute and collaborate: molecular, microbiological, clinical, epidemiological, geographic, economic, social scientific and policy disciples are all key. *Antibiotics* is a nimble, inclusive and rigorous indexed journal as an enabling platform for all who can contribute to solving the greatest broad concerns of the modern world.

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