

Preface

The potential of bacterial viruses (bacteriophages or phages) as antibacterial agents was recognised over a century ago. However, the success of antibiotic therapy from the 1940s onwards caused a general decline in the applications of phages as therapeutics. Nonetheless, recent decades have seen a disquieting proliferation of pathogenic bacteria resistant to multiple antibiotics commonly used in human and veterinary medicine, in turn leading towards a crisis in public health. The renewed exploration of phages and their molecular components for biocontrol and therapeutics offers a complementary approach for eliminating problematic bacteria across a range of sectors where bacterial infections and contaminations are a persistent problem.

Written by internationally-recognised scientists involved in the exploitation of bacterial viruses in diverse areas from around the world, this book provides comprehensive coverage of the current research in several phage applications for biocontrol of undesirable bacteria in human and veterinary medicine, horticulture, aquaculture and food. Chapters from the famous centres of phage therapy in Wrocław and Tbilisi detail some of the pioneering historical contributions to the topic. The book also examines the impact of phages on the human microbiome as well as the progress of research in phage engineering, phage enzymes, phage delivery systems, biodetection as well as intellectual property aspects.

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