Bacteriology-2013

OMICS Group Conferences
Accelerating Scientific Discovery

International Congress on
Bacteriology & Infectious Diseases

November 20-22, 2013 DoubleTree by Hilton Baltimore-BWI Airport, USA

Bacteriophage therapy against antibiotic resistant bacterial infections

Mzia Kutateladze
G. Eliava Institute, Georgia

Abstract

The rapid propagation of multi-drug resistant bacterial strains is leading to renewed interest in phage therapy. In contrast to its decline in the West, phage therapy remained a standard part of the healthcare systems in Eastern Europe and the USSR during the second half of the 20th century. Phages have a number of advantages over to antibiotics, andhave been successfully used for diagnostic, therapeutic and prophylactic purposes to combat various bacterial infections. The Eliava Institute of Bacteriophages, Microbiology and Virology (Tbilisi, Georgia) is perhaps the most famous institution in the world focused on the isolation, study,and selection of phages active against various bacterial pathogens. A huge collection of phages and pathogenic bacterial strains has been constructed at the Institute. Thousands of people were treated with individual phages and phage mixtures during the Soviet era. The preparations developed in Tbilisi have been studied through extensive preclinical and clinical trials. However, little of this information has ever been published and even when details are available, the trial reports do not meet internationally approved standardsand regulations. Today, many people from various parts of the world express their willingness to take phage treatment against different infections, including those that are caused by antibiotic-resistant bacterial pathogens. The Eliava Institute has developed new, phage-based products and technological schemes for their production. Strong collaboration with the medical community in the design of clinical trials according to international standards is absolutely critical to supporting the broader implementation of phage therapy.

Biography

Mzia Kutateladze is a chief of the scientific council of the Eliava Institute and a head of the laboratory of Molecular Biology of the Institute. Dr. Kutateladze is a manager and co-investigator of several scientific projects funded by various international sources; these projects are aimed at the study of different bacteriophages and the formulations of new bacteriophage cocktails active against infectious diseases. She is involved in projects funded by the Defense Threat Reduction Agency (DTRA, USA) on research of phages against some of the world's most dangerous pathogens.