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INFLUENCE OF BACTERIOPHAGES ON THE IMMUNE SYSTEM: A COMPARATIVE STUDY

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Bacteriophages are ubiquitous, specific viruses. They attack sensitive bacteria. Elements of their capsids bind to specific molecules on the target host surface. Bacteria that do not have such a receptor can't be attacked. Their use as therapeutics of infectious diseases of animals and people refers to the times before antibiotic therapy. The ability of phages to kill bacterial cells is the basis of the idea of using them as therapeutic agents. Innate immunity is rarely discussed in terms of phage therapy. New research has demonstrated that the host immune response is an important factor in the effectiveness of phage therapy. In recent years, there have been reports about the interaction of bacteriophages with the immune system. It mainly concern people. Our studies have demonstrated the immunomodulatory effect of bacteriophages on lower vertebrates.

Biography

Andrzej K Siwicki is Head of Department, Microbiology and Clinical Immunology, Faculty of Veterinary Medicine, University of Warmia and Mazury; Department of Pathology and Immunology, IFI in Olsztyn, Poland. He is the author of over 500 original papers in reputed journals and about 200 scientific communications (index-h 32, index of citation: 4502). His fields of interest are modulation of defence mechanisms and protection against diseases by natural and synthetic products in animals, influence of pollutants on the cell-mediated immunity and restoration of immunity after suppression induced by xenobiotics. He developed a new possibility in the comparative immunotoxicology for control of effect of xenobiotics and pharmaceutical products on the defence mechanisms and protection against diseases. He attended scientific missions in USA, Japan, France and Israel, was a Co-ordinator of USDA and FAO projects and he is Professor conferring of 14 PhDs and 4 DScs.

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