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The perspectives of the use of bacteriophages in the treatment of antibiotic-resistant infections

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Global antibiotic resistance is increasing worldwide and on the other hand only few new antibiotics were placed on the market. However, the number of infectious diseases -both local and general is rising sharply. Some authors suggest that we have reached postantibiotic era and focus must be shifted towards alternative therapeutic modalities. As an alternative to the treatment of bacterial infections with antibiotics, natural predators-phages or bacteriophages appear. Bacteriophages are organisms capable of naturally attacking and killing bacteria. The advantage of their use in clinical practice is the fact that antibiotics can not create resistance to these organisms; bacteriophages are highly specific and only infect a particular bacterial strain, which protects the natural microflora of the organism and last but not least, the preparation of bacteriophage-containing preparations is cheaper and because of their self-amplification ability much faster than the development of a new antibiotics. We present pre-clinical research project dealing with the analysis of effectivity of use of local gel forms bacteriophages which may be used in treatment of local chronic wounds.

Recent Publications

1. Dedinska I, Mackova N, Kantarova D, Kovacikova K, Granak K, Laca L, Miklušica J, Skalova P, Galajda P and Mokaň M (2018) Leptin-A new marker for development of posttransplant diabetes mellitus? *Journal of Diabetes and Its Complications* 32 (9): 863-869.
2. Michalik J, Cierny D, Kantorova E, Kantarova D, Javor J, Parnicka Z, Kurca E, Dobrota D and Lehotský J (2015) The association of HLA-DRB1 and HLA-DQB1 alleles with genetic susceptibility to multiple sclerosis in the Slovak population. *Neurological Research* 37(12):1060-1067.
3. Suchanková M, Bucova M, Tibenska E, Tedlova E, Demian J, Majer I, Novosadova H, Tedla M, Paulovičova E and Kantarova D (2013) Triggering receptor expressed on myeloid cells-1 and 2 in bronchoalveolar lavage fluid in pulmonary sarcoidosis. *Respirology* 18(3):455-462
4. Kantarova D and Buc M (2007) Genetic susceptibility to type 1 diabetes mellitus in humans. *Physiological Research* 56(3):255-266.

Biography

Daniela Kantarova has completed her PhD in the Jessenius Medical Faculty at Comenius University, Slovakia. She is the Head of the Department of Research and Development in Martin's Centre of Immunology. She has published more than 50 papers in reputed journals, is an author and co-author of 3 monographs, her publications have 63 citations in publications registered in citation indexes.

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