

PERSPECTIVE OF USING BACTERIOPHAGES

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In connection with the growing resistance of microorganisms to antibiotics and the problems of selecting antibacterial drugs that arise against this background, bacteriophages have prospects as antimicrobial therapy. The use of antibiotics is accompanied by a violation of the composition of normal microflora, allergization and adaptation of microorganisms to the environment. A distinctive feature of bacteriophages as therapeutic agents is the almost complete absence of side effects, which allows them to be prescribed to patients of different age groups, pregnant without any restrictions. Depending on the bacteriophage species, various processes with contractile proteins, spines, Basal plates. The shape of the bacteriophage-icosahedral, spherical, lemon-shaped, pleomorphic depends on the capsid. The phages are exclusively intracellular parasites, since they do not have mechanisms for producing energy and ribosomes for protein biosynthesis. Phages have strict specificity, i.e. Are capable of parasitizing only in a certain form of microorganisms: streptococci, staphylococci and others. Phages with more stringent specificity, which are parasitized only by certain representatives of this species, are called typical phages. The phages that lyse organisms closely related species, such as species belonging to the genus agents of dysentery (*Shigella*), called polyvalent. Underlying their actions are natural physiological mechanisms of interaction between phages and bacteria can be predictive of both the infinite variety of bacteriophages and their possible applications. Due to their merits, bacteriophages have found wide application in medicine and agriculture. Preparation containing bacteriophages effectively struggling with lung and urogenital infections with pyogenic diabetic foot ulcers, pathogenic bacteria of the gastrointestinal tract, without violating the person's own microflora. Also phages successfully cope with drug-resistant microbial films, which are formed in chronic otitis and using prostheses. Bacteriophages may make a worthy substitute antibiotics as able to fight even with antibiotic-resistant microorganisms. At the moment, the development and production of phage-containing products are carried out by Biopharm (Georgia), Pharmaceuticals AmpliPhi Biosciences (USA and UK), GangaGen Biotechnologies (USA and India), Intalytix (USA), MircEOS (Netherlands), Phage Biotech (Israel), FSUE "NGO Microgen" (Russia), Prio Biopharma (Ukraine). At the Department of Biotechnology, work began with checking the antimicrobial properties of the drug with a bacteriophage.