# METHODS FOR ISOLATION OF COLIPHAGES FROM NATURAL SOURCES

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In recent years, the problem of acquiring bacterial resistance to antibiotics is becoming increasingly important. Familiar common antibiotics that cured billions of people today are becoming less effective. This is due to the fact that many bacteria have developed resistance to the antibiotic drug. A promising alternative to antibiotics are bacteriophages - viruses that selectively infect bacterial cells. And antibiotics and bacteriophages act directly on microorganisms, antibiotics only affect not only pathogenic, but also the normal microflora, disrupting the natural balance, whereas bacteriophages act only on pathogenic microorganisms. This selective effect due to their nature. Encountering sensitive microbial cell, the phage penetrates her, switches the mechanism of its action on the reproduction of their kind, which, bursting the cell membrane attack other microorganisms. This process becomes spontaneous, and relief from unwanted microorganisms occurs in a matter of hours. An important property of phages is their specificity. Consider coliphages, coliphages - bacteriophage is capable of infecting E. coli and related bacteria it. Because viruses are more resistant to adverse environmental conditions, coliphages continue to manifest themselves even when the bacteria themselves - hosts anymore. Given the higher resistance of coliphages to unfavorable external environment, they are used as an additional indicator of the effectiveness of water, wastewater and groundwater protection . In addition, coliphages proposed as a screening measure possible presence of pathogenic enteroviruses. Definition coliphages may both direct and titration method. Treatment bacteriophages selectively acting is much better than the use of traditional broad-spectrum antibiotics that kill all bacteria that appear on their way and, thus, violate the natural microflora necessary for normal body functioning. But today, only in Ukraine a private limited company " Biopharma " (Kiev) has been producing bacteriophage preparations, namely produces staphylococcal bacteriophage. Today bacteriophages can be purchased in various dosage forms as phages administered to gels, they retain their viability, including gels, sprays. Besides, when phages severe diseases may be combined with various groups of drugs including antibiotics. Thus we see that with the widespread formation of antibiotic resistance in pathogenic bacteria need for new antibiotics and alternative technologies for the control of microbial infections is gaining in importance. Therefore, work on the development of dosage forms of bacteriophages which are conducted at the Department of Biotechnology of the National University of Pharmacy, are relevant.