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REASONING FOR PHAGOPROPHYLAXIS OF FOOD TOXICOSIS OF BACTERIAL ETIOLOGY

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Introduction. A direct threat to human health and well-being — bacteria and products of their activity. They are the cause of the huge economic losses caused by the decline in human efficiency and spoilage of food products. In an era of widespread and practically uncontrolled use of the various (not always safe for humans) ways to fight bacterial contamination, the question of phages using to control bacterial contamination of food becomes especially important. Bacteria have many adaptive mechanisms, able to adapt relatively quickly to the effects of bacteriocides and bacteriostats of various origins, but it is still not possible to overcome natural rivals. Bacteriophages (phages) or 'bacteria eater' – natural bacteria killers. Despite different (lytic and lysogenic) cycles of development, encounter of the bacterium with the phage inevitably ends with the death of the bacterial cell.

The aim: To prove the use of bacteriophage cultures for food processing.

Materials and methods: Analysis of research materials outlined in the public domain, on the possibility of using phages to control bacterial contamination of food stuffs by pathogens of food toxicosis.

Review: Several methods are used to improve food safety. First of all – thermal processing of products (pasteurization, sterilization) – destroys a large number of micro-organisms, but does not keep food fresh. Chemical agents have a detrimental effect on microorganisms, but are not environmentally safe, affect the quality of food and promote rapid wear and corrosion of equipment. Irradiation is also effective but negatively perceived by consumers and requires proper labeling. The main disadvantage of these methods is the elimination of not only potential pathogens of food toxicosis, but also humans "beneficial" microflora. In addition, there are cases of transmission of pathogens through pre-processed products.

Currently, bacteriophage biocontrol is increasingly perceived as a natural and "green" technology. It is effective for the specific destruction of bacterial pathogens in various foods without reducing their quality and nutritional value. Recently, a significant amount of research has focused on promoting the use of phages for processing fresh meat, vegetables and fruits. The number of available products containing bacteriophages allowed for use in food is steadily increasing.

Conclusions: There are, undoubtedly, some problems with the development and use of phage preparations aimed at improving food safety. But it is obvious that bacteriophage

biocontrol remains an economically, environmentally and biologically very attractive method of eliminating pathogenic bacteria from food.
KEY WORDS: Bacteriophage, food toxicosis, prevention