

## **SOCIAL LIFE OF BACTERIA: A FORM OF COLLECTIVE BEHAVIOR AND COMMUNICATION**

Sevoyan A.A., Silaeva L.F.

National University of Pharmacy, Kharkiv, Ukraine

Arturbaileys@mail.ru

Manifestation of social behavior is characteristic not only for animals but also for many organisms - both prokaryotes (bacteria) and eukaryotes (protozoa). The goal was to compile and analyze the results of scientific research, the object of which is the collective behavior of bacteria.

Bacteria can exhibit different forms of social behavior: from affiliation (“mutual attraction”) - a desire to be together, and cooperation (association of individuals to share a specific task), to collective aggression. However, many bacteria are able to actively share information with each other using a variety of communication channels: cytoplasmic bridges (contact and communication), the exchange with the help of signal chemicals (Distant chemical communication, involving furanones, pheromones, etc.), by means of electromagnetic and acoustic waves (Distant physical communication).

Like other biosocial systems bacterial groups can both homo- (consisting of the same species) and heterotypic (consisting of individuals of different species).

At present, despite the results of scientific research, supporting the possibility of exchanging information between bacteria by means of electromagnetic and sound waves, it is the physical factors of distant communication of bacteria and their role in the exchange of information are still in the stage of “primitive accumulation” of empirical data.

Noteworthy phenomenon discovered a group of scientists, led by Nobel Peace Prize L. Montagnier. The experiment proved the ability of the DNA fragments, especially bacteria and creates weak electromagnetic fields to “restore” themselves in previously uninfected cells.

Undoubtedly, the results of studies require further study and scientific evidence, but if it turns so that the bacteria do share information and are able to “teleport” DNA, these findings may lead to the development of entirely new ways to combat viral and bacterial infections, and other insights into biology.