

## THE IMPORTANCE OF ALGOVIRUSES THE BLACK SEA ECOLOGY

**Iaremenko K., Samoilenko T., Gorshkova E., Kaminskaya L., Kucherenko E., Kaminskaya A.**

*Odessa National I.I. Mechnykov University, Dvoryanskaya Str., 2, Odessa, 65082, Ukraine*

E-mail: katttarinka@yandex.ru

Algae, and, in particular, microalgae are the most ancient inhabitants of the Earth. They play a huge role in photosynthesis — transformation of the sun energy into energy of chemical bonds of organic substances, being in the basis of an alimentary pyramid and making photosynthetic production in the World ocean. Consuming CO<sub>2</sub> from sea water, algae transform it into an organic material which comes in sea alimentary chains. It is difficult to overestimate the value of algae as food of land inhabitants, including the humans.

Among water viruses the most studied are algoviruses - viruses of algae. Research has shown that in natural ecosystems viruses can be a significant factor of the phytoplankton mortality influencing the dynamics of augmentation of phytoplankton and a microbic alimentary loop.

In total, it was revealed that about 20% of heterotrophic bacteria, and about 3-5% of phytoplankton cells die every day due to viral lysis.

It was found that the presence of viruses and viral infection clearly stimulates the growth and reproduction of the host, increasing the part of the microcommunity, and improve their access to food resources. As a result of bacterial lysis which releases organic carbon and mineral substances, it has a positive effect on nutrition of benthic microalgae.

Algoviruses are the most widely used in genetically engineered selective technology. In addition, the use of viral lysis for fast, high quality and careful dissolution of algae in the industrial sector will make it possible to receive organic