foreign key players of this market - company BioGaia, CHR Hansen, Bifodan, Renew Life, DuPont and other Most popularity is used by the probiotics oriented to the increase of immunity. They are produced as different medical forms (capsules, suspensions) and in different concentrations for adults and children.

In Ukraine, unfortunately, production of medical forms of probiotics volumes do not give an opportunity fully to provide a population. Only a few units of enterprises can be considered modern.

Conclusion. Preparations of probiotic are very important for the health of gastrointestinal tract and health of organism of man. The production of probiotics for satisfaction of necessities of population requires not only expansion of assortment of facilities but also modernisation of present powers. Only in this way, domestic probiotics can take the important place at the pharmaceutical market of Ukraine.

PROSPECTS FOR USING OF SPIRULINA IN SPORTS NUTRITION

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Introduction: Engaging in any kind of physical activity requires special careful attention to the body. Indeed, in addition to physical activity, we are all susceptible to fatigue at work, household chores - and all this takes away strength and energy. To get the maximum effect from physical activity, but at the same time not harm their health, athletes use special nutritional supplements. They not only maintain the required level of energy, but also have a beneficial effect on muscles, joints and tendons, making them flexible, resilient, nourishing them with useful substances.

Aim: To study the possibility of using spirulina in sports nutrition.

Materials and Methods: We used a descriptive research method: we analyzed scientific literature data.

Results and discussion: Spirulina is a blue-green alga of the genus of cyanobacteria (*Arthrospira*, lat.). Dried spirulina contains about 60% (51–71%) protein. It is a complete protein containing all the essential amino acids, albeit with a reduced content of methionine, cysteine and lysine compared to protein in meat, eggs and milk. However, spirulina outperforms other plant-based sources of protein, such as legumes, in these indicators. Spirulina contains vitamins B1 (thiamine), B2 (riboflavin), B3 (nicotinamide), B6 (pyridoxine), B9 (folic acid), C, D, A and E. It is also a source of potassium, calcium, chromium, copper, iron, magnesium, manganese, phosphorus, selenium, sodium and zinc. Spirulina contains many pigments that may be beneficial and bioavailable, including beta-carotene, zeaxanthin, chlorophyll a, xanthophyll a, echinenone, myxoxanthophyll, canthaxanthin, diatoxanthin, 3'-hydroxyequinenoxan, beta-cryptoxanthin as well as phycobil-proteins - C-phycocyanin and allophycocyanin.

Functional properties of spirulina:

- Mobilizes the vitality of the body, giving additional energy;
- Increases physical endurance;
- Restores strength after training and enhances protein synthesis in muscles;
- Relieves fatigue;
- Normalizes hemoglobin;
- Strengthens ligaments and tendons

Unlike vitamins and artificial supplements, spirulina is a natural component, so absorption and assimilation of useful elements is easier, in greater quantities. Compared to soybeans, algae are 3.5 times more energy efficient and provide 20 times more protein. During sports activities, free radicals are formed in the body that destroy protein. Consuming spirulina will help replenish the reserves of this component and further prevent its destruction. Another remarkable property is the elimination of toxins, salts and other harmful components formed in the process of life from the body. The ecology of modern cities is far from ideal, the air contains many impurities that enter the lungs. Spirulina reduces the negative impact of these adverse factors and restores health and activity.

Conclusions: The analysis of scientific literature data made it possible to conclude that spirulina, as a valuable source of protein and a complex of biologically active substances, is a promising raw material for the development of formulations for sports nutrition.

BACTERIOPHAGES - AS AN ESSENTIAL ALTERNATIVE TO ANTIBIOTICS

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Introduction. Bacteriophages are viruses. They do not affect humans or animals. Bacteriophages destroy only bacteria, or rather - devour them (from the Greek *phagos* - "eater"). They are widespread on our planet, they can be found almost everywhere: in water, deep underground, in the soil and even in a macroorganism. Bacteriophages are used in scientific research, but, of course, their main practical application is the fight against bacteria.

Aim. The aim is to study the state of production and use of bacteriophages as a means of anti-infective therapy, an alternative to the use of antibiotics.

Materials and methods. Use of information from printed and electronic sources, reports and research of scientists.

Results and discussion. Before the advent of antibiotics as a treatment for infectious diseases, life expectancy was quite short. Since the discovery of antibiotics, infectious agents have also started to evolve - they have simply become resistant to them, prompting scientists to modify existing antibiotics. The variety of existing antibiotics is due to many existing bacteria. At the same time there is a problem of emergence of "super-bacteria" which will be multidrug-resistant to antibiotics. This problem is created by people themselves through the thoughtless use of antibiotics, not really knowing what they are suffering from: an infection caused by a bacterium or a virus. Moreover, some bacteria are not sensitive to some antibiotics, so it is important to treat the disease properly, given the type of bacterium that causes the disease. Unfortunately, there are situations when antibiotics can not save a person at all, and have to resort to experimental drugs. It happened to 52-year-old German Tanya Didern. In 2019, she took antibiotics to live with her ailment - hydradenitis. It is an infectious disease in which the apocrine sweat glands become inflamed and are accompanied by pain. For more than 30 years, she has been taking antibiotics, which have worked worse and worse over time. In desperation, in August 2019, she went to Tbilisi, Georgia, to try an experimental method of treatment - with the help of bacteriophages, which led to success.

Bacteriophage therapy, or phage therapy, allows people to save their lives, or the lives of loved ones when antibiotics do not help, through the lysis of pathogenic bacteria. This can be an effective alternative to antibiotics. Treatment with bacteriophages is based on two main properties: