aeruginosa and Escherichia coli). One of the advantages of this drug for the treatment of ENT diseases is that the ecocide is an oily liquid, which, when coated with a thin layer of mucous membranes, prevents them from drying out. In previous studies, the specific effect of the staphylococcus bacteriophage by the Appelman method and the antimicrobial properties of the extericide were studied by the method of two-fold serial dilutions.

To study the antimicrobial effect of a combination of a bacteriophage of staphylococcus and an extericide, test samples with different API ratios were prepared. The composition of the samples is shown in Table 1.

Table 1. - Compositions of test samples

Sample	Bacteriophage staphylococcal, ml	Ekteritcid, ml
I	50	50
II	75	25
III	87,5	12,5
IV	25	75
V	12,5	87,5

The study of the antimicrobial effect of the obtained solutions of the samples was carried out by the method of two-fold serial dilutions in vitro in a liquid nutrient medium. As test microorganisms used pure cultures of the American collection of cultures (ATCC): gram-positive cultures *Staphylococcus aureus* ATCC 25293, *Bacillus subtilis* ATCC 6633, gram-negative *Escherichia coli* ATCC 25922 and *Pseudomonas aureginosa* ATCC 27853. The presence of antifungal activity was tested on a yeast-like fungus *Candida albicans* ATCC 885-653.

Results and discussion. The results were recorded visually according to the presence or absence of turbidity in the test tubes (minimal inhibitory dilution - MIR), as well as inoculating Petri dishes with nutrient media to determine bactericidal action (DB). As nutrient media used to work with bacterial cultures - meat-peptone broth and meat-peptone agar, when working with a yeast-like fungus culture - Saburo broth and Saburo agar

The results obtained experimentally showed that the test solutions of the samples (IV and V) possess a wide spectrum of antimicrobial activity with respect to gram-positive (*Staphylococcus aureus* ATCC 25293, *Bacillus subtilis* ATCC 6633), gram-negative (*Escherichia coli* ATCC 25922 и *Pseudomonas aureginosa* ATCC 27853) bacterial cultures and show both bacteriostatic and bactericidal activity. With respect to the yeast-like fungus of the genus Candida, the antifungal activity in dilution 1/2 showed sample V. It should be noted that all test samples I-V possess antimicrobial activity against gram-positive cultures *Staphylococcus aureus* ATCC 25293, *Bacillus subtilis* ATCC 6633 in dilutions 1/2 and 1/4, and also show bactericidal action (sample II, IV and V – culture *Staphylococcus aureus* ATCC 25293, sample IV and V – *Bacillus subtilis* ATCC 6633).

Conclusions. Thus, the studies carried out to study the antimicrobial activity of the studied combined samples based on the bacteriophage of staphylococcal and ekteridid have shown promise of work, and further experiments will be aimed at developing the composition and optimal technology of a combined dosage form with antimicrobial properties for the prevention and treatment of ENT diseases.

PROSPECTIVITY USING OF LACTIC ACID IN A COMPLEX PROBIOTIC PREPARATION FOR THE TREATMENT OF ACNE

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Introduction. The modern market is full of various forms of medicinal, therapeutic and prophylactic and cosmetic products designed for a problem skin care of the face, prone to acne and post-acne onset. In the arsenal of dermatologists, a significant percentage is taken by symptomatic means, for example, antibiotics for the treatment of inflammation caused by microorganisms, or alcohol mixtures for

the removal of excess sebum. However, the skin of the microflora gradually becomes resistant to the antibiotic, alcohol dehydrates the skin, and the removal of sebum is inevitably accompanied by the dissolution of part of the epidermal lipids, violating the integrity of the lipid barrier of the skin. In addition, attention should be paid to the problem of the microflora of the skin, which is associated with the infectious-inflammatory process that develops in acne, or occurs as a consequence of treatment with anti-inflammatory drugs. In turn, keeping the microflora of the skin at the normal level will contribute to more effective protection against the infectious form of acne and the prevention of the disease and its relapse.

Aim. The solution of these problems is the use of therapeutic and preventive measures of complex action that will affect various aspects of dermatological problems, simultaneously suppressing pathogenic and opportunistic microflora, treating inflammation, removing excess of sebum, and normalizing the microflora of the skin. But today there is no such complex composition, therefore, in the framework of the paper research, we work on the development of the composition and technology of a complex drug with a probiotic for the treatment of dermatological diseases.

Materials and methods. At this stage, the selection of components that will form the basis of such a preparation is carried out. One of the promising components that is a part of the drugs for the treatment of acne is lactic acid, which belongs to the group of α-hydroxy acid (ANA), which possesses comedilolytic properties. In addition, according to the literature, lactic acid exhibits antifungal and some antibacterial properties.

Results and discussion. It should be noted that lactic acid is a metabolic metabolite of a macroorganism and can be considered as a biologically safe product, which differs favorably from other antimicrobial substances. It was assumed that, due to the physiology of acidic milk to probiotic cultures (lactic acid bacteria assimilate glycogen produced by cells of the flat epithelium of the vagina, and, by means of anaerobic glycolysis, split it into the endogenic acid of the milk), the strains of the ICD are sufficiently resistant to its action, which will allow to use dairy acid together with probiotic cultures in medicinal form.

Conclusions. Therefore, at this stage, at the department of biotechnology the optimal concentration of lactic acid in the medical product that we are developing, which will provide antifungal and antibacterial activity, while maintaining the viability of cells of probiotic strains of lactobacilli and manifestation of comedolitic properties is being determined.

EXPERIMENTS FOR OBTAINING THE MUSHROOM OF THE MUSHROOM OF THE PLEUROTUS OSTREATUS VESHENKA ON VARIOUS FOOD MEDIA

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Introduction. The study of the therapeutic properties of basidiomycetes and the creation of new medications on their basis is one of the actively developing areas of modern pharmacology and medicine. Of the studied strains of basidiomycetes, the most interesting are the cultures of edible fungi, the medicinal properties of which have been studied quite deeply.

Currently, the following medicines and dietary supplements have been introduced into the practice of medicine: from the fruit bodies of *Lentinus edodes* – lentinan (Japan); *Inonotus obliguus* – befungin (Russia); from the cultural liquid of *Schizophyllum commune* – sonifilan, PSG; schizophyllan (Japan); nutritional supplements "Mipro-VIT" (Russia), "Mikoton", Ukraine.

The analysis of numerous literature data shows that the potential of basidiomycetes as producers of nutrients is far from exhausted. Their content in fungi is - carbohydrates (47.0 - 48.0)% (glucose, galactose, mannose, arabinose, xylose, glucosamine); amino acids (3.5 - 9.6)% (essential: valine, leucine, isoleucine, lysine, methionine, threonine, phenylalanine, interchangeable: asparagine, serine, glutamine, proline, glycine, alanine, histidine, arginine, cysteine, tyrosine, ethanolamine, ornithine, oxylizine); higher fatty acids (0,6 - 0,9)%; organic acids (1,0 - 1,3)% (oil, lactic, acetic, malic, oxalic); vitamins (0.6 - 1.2)% (E, B1, B2, B6, C, D, B3, PP). Mineral substances are (1,4 - 1,9)%; water– 30,0%.