

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  $\alpha$ -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 obliquus* – 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, oxylyzine); 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%.

**Aim.** To master the methods of mycelium isolation from the *Pleurotus ostreatus* fruit bodies. Choose the right nutrient medium for optimum biomass accumulation. Compare the mycelium growth on different nutrient media.

**Materials and methods.** Traditional methods of mycological research were used in the work. Mycelium, was grown in regulated aseptic conditions on solid medium: potato-glucose agar, Czapek's medium, agar for wood-destroying fungi, Saburo medium.

Studies of the intensity of growth were carried out at the level of 3-4 passages by measuring the linear parameters of the colony diameter. In analyzing the results obtained, the methods of mathematical statistics were applied.

**Results and discussin.** As a result, it was shown that for the primary isolation of the mycelium from fungal fruiting bodies by the effectiveness of use, the nutrient media can be arranged in the following order: potato-glucose agar, Czapek's medium, agar for wood - destroying fungi, Sabouraud agar.

The most suitable media for further use were potato-glucose agar and Chapec's medium. Their advantages are in the simplicity of preparation, low probability of contamination, good mycelium growth, rapid mycelium adaptation.

We have established that the growth rate of the *Pleurotus ostreatus* mycelium on potato-glucose agar at the level of 3 passages (duration of the experiment is 27 days) is  $56.67 \pm 5.00$  mm, which is 1.4 times faster than the result of growth on Sabouraud medium.

**Conclusion.** The literature data analysis about *Pleurotus ostreatus* biological peculiarities, practical significance and growth conditions has been established that optimal for the *Pleurotus ostreatus* mycelium isolation from fruit bodies are: application of a 3% hydrogen peroxide solution as a disinfectant. The dependence of the *Pleurotus ostreatus* mycelium growth rate on the composition of the test nutrient media is established. Optimal nutrient medium for the mycelial biomass accumulation was selected – the potato-glucose solid nutrient medium and a 26 °C for cultivation.

## INFLUENCE OF SOME PREBIOTIC COMPONENTS ON COMMERCIAL AND CLINICAL STRAINS OF PROBIOTIC CULTURES

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**Introduction.** Probiotics and prebiotics are not only the subject of complex scientific research, but also represent an important commodity in the world market. Nowadays a wide range of consumers are available hundreds of probiotic and prebiotic foods and drugs whose manufacturers promise to address a wide range of health problems.

Without normal microflora, complete digestion and assimilation of food, maintenance of the constancy of the internal environment of the organism, its protection against pathogenic microflora is impossible. The number of beneficial bacteria that coexist with the macroorganism, approximately two orders of magnitude exceeds the number of cells of the macroorganism itself.

The search for ways to normalize the useful microflora in the body has become one of the most urgent tasks of science. Probiotic and prebiotic drugs, their widespread use and implementation are becoming increasingly relevant worldwide. Therefore, the theme of the work is relevant.

**Aim.** Research of the influence of prebiotic components on commercial and clinical strains of probiotic cultures, which will allow us to conclude that they can be used separately for stimulation of own microflora, as well as for probiotics in the design of effective drugs for the prevention and treatment of dysbiotic conditions.

**Materials and methods.** A key point in the characterization of prebiotics is their selective stimulation of the beneficial for the human body of the representatives of the intestinal microflora, to which in the first place are bifidobacteria and lactobacilli. The objects of the study were selected classic domestic probiotics - Lactobacterin and Bifidumbacterin, as well as clinical isolates, as representatives of human