

The type of fungus was identified on the basis of a set of features – morphological, cultural, biochemical. The study of antifungal properties was carried out by the method of diffusion into agar with the addition of antimycotics to the wells. Records of results were performed by measuring the growth inhibition zone, including the diameter of the wells. The processing of experimental data was performed using the methods of mathematical statistics in accordance with the requirements of HFCs using MS Excel 7.0 (statistical methods).

Results and discussion. In determining the sensitivity of *Candida spp.* strains isolated from patients with genital candidiasis. The following results were obtained for antimycotics (itraconazole, clotrimazole, amphotericin): 60% of *C. albicans* strains are sensitive to three antimycotic drugs. *C. tropicalis*, *C. glabrata* and *C. krusei* are most sensitive to clotrimazole – 75% of researches, to itraconazole – 73% of researches, to amphotericin-B – 68% of researches. The imidazole preparations currently used for the treatment of genital candidiasis – clotrimazole and itraconazole are the most effective, the polyene antibiotic amphotericin-B is the least effective.

Conclusions. The findings lead to the need for widespread use of modern antimycotic drugs. Also, continuous monitoring to identify strains with potential resistance to predict a decrease in antifungal sensitivity must be carried out continuously.

SOME BIOTECHNOLOGICAL ASPECTS OF CREATION A DERMATOLOGICAL THERAPEUTIC REMEDY WITH A PROBIOTIC

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Introduction. Acne is one of the most common diseases of humanity, a chronic disease of the apparatus of the sebaceous glands, which mainly manifests itself in the puberty period and is characterized by hyperproduction of sebum, a violation of the processes of follicular keratinization, colonization of *Cutibacterium acnes* and inflammation.

Despite the large assortment of drugs against acne, there is remedy uniquely effective for all, because microbiological aspect of the skin did not considered, although the role of the microflora of the skin can not be overestimated. Therefore, the promising approach in the treatment of acne is application of complex drugs with probiotic and prebiotic substances and components that simultaneously suppress pathogen and opportunistic microflora, treating inflammation and removing excess sebum.

Aim. To study a possibility of combine apply probiotic component with some prebiotic and antimicrobial components in one dosage form.

Materials and methods. To create a complex remedy for acne treatment by preliminary analysis and studies, were selected a strain of *Lactobacillus L. acidophilus* B-7016 (provided by the Institute of Microbiology and Virology named after D. K. Zabolotny). As auxiliary components were selected B vitamins which, according to literature, not only have a positive effect on the growth of lactic acid bacteria, showing synergistic effects with probiotics, but also belong to the group of "skin" vitamins, used as dermatoprotectors through their regenerating, anti-inflammatory, reparative action. Also, as active ingredients for research were selected: the complex of milk proteins – contains vitamins B6 and H (biotin), amino acids, which normalizes the functioning of the sebaceous glands, reduces the high level of fatty skin, regulates the process of keratinization; α -lipoic acid (thioctic xylitol), which has antioxidant, protective and moderate anti-inflammatory action. Propolis extract has an anti-inflammatory immunostimulating, bactericidal effects, promotes healing of wounds, has an epithelizing action. In the specified auxiliary components is possible to predict the presence of prebiotic properties. The concentration range was chosen according to analysis of drugs for dermatological diseases within their application.

As an antimicrobial and antiseptic component were chosen calendula oil, laurel and mustard oil and tea tree oil; hydroxyacids – lactic acid (AHA) and salicylic acid (BHA), azelaic acid and tannin.

Biotechnological studies were performed by the method of co-cultivating a probiotic strain in a liquid nutrient medium (MRS) with a specific active ingredient under optimal conditions for lactic acid bacteria ($35 \pm 2^\circ\text{C}$) and determining the number of cells by the Koch method.

Results and discussion. For the possibility of using these components together, a co-culture of probiotic strains was performed (sowing dose of 109 CFUs (colony forming units)/ml) with a certain active ingredient at certain concentrations used in the soft dosage forms. When analyzing existing preparations for local application, the following concentrations were selected from the minimum and median used with the appropriate step of dilution: pyridoxine hydrochloride, vitamin B6 – from 0.1 to 0.5%; calcium D-pantothenate, vitamin B5 – from 1 to 5%; D-panthenol, provitamin B5 – from 1 to 5%; methylcobalamin, vitamin B12 – from 0.5 to 1%; complex of milk proteins – from 0,1 to 0,5%; extraction of propolis – from 3 to 6%; α - lipoic acid – from 2 to 5%; basic and essential oils – from 0.1 to 1%; laurel oil – from 2 to 5%; lactic acid – from 0.01 to 1%; salicylic acid – from 0.5 to 5%; azelaic acid – from 15 to 20%; tannin – from 3 to 5%. After 5, 10, 15, and 20 days by Koch method (dipping the nutrient medium of a certain sample of ten times dilutions, counting the colonies grown on the surface of the medium, and determining the number of cells in the sample), the determination of the number of viable lactobacilli cells in each sample was compared and compared with control (sowing material without the addition of active ingredients). If the number of lactobacilli cells in the sample with the active ingredient was at the control level, this indicated the possibility of using this component in one dosage form, if higher than in the control – the presence of a synergistic effect, or, if lower – inhibition of the growth of lactobacilli and their incompatibility in composition of one dosage form.

Conclusion. For further studies on the development of a complex antitussive drug, we selected strains of lactic acid bacteria (initial dose 109 CFUs), the prebiotic component – vitamin B5 (in concentrations of 1-5%), calendula oil (at a concentration of about 0.1%), lactic acid (in concentration of about 0.01%). The final choice of concentrations of the probiotic strain and selected active components will depend on further research on their complex effects on each other and opportunistic microorganisms, which are factors of infectious dermatological diseases, including the infectious form of acne.

DEVELOPMENT OF THE FUNCTIONAL DRINK BASED ON PROPIONIC ACID BACTERIA ENRICHED WITH CRANBERRY EXTRACT AND HONEY

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Introduction. In recent years, the concept of human recovery and the prevention of aging of the body through the use of a diet of sour-milk products develops very rapidly. This is especially true for people of certain categories: children, adolescents, the elderly and those in whose lives physical activity plays an important role -athletes are professionals and lovers, for example.

The interconnection of the macroorganism and its microflora is very close. The insufficiency of representatives of healthy microflora causes weakening of both cellular and humoral factors of immunological defense. Normal microflora, due to pronounced antagonistic activity, protects the body from pathogenic microflora. The imbalance of human microbial ecology leads to serious illnesses both in the gastrointestinal tract in particular and in the body as a whole.

Normal microflora affects the structure of the intestinal mucosa and its adsorption capacity, participates in the exchange of fatty acids, lipid metabolism, bile acids, water-salt and gas exchange. Microorganisms of the gastrointestinal tract carry out a number of enzymatic reactions, synthesize vitamin K, vitamins B, nicotine, folic and pantothenic acids.

Aim. The development of the composition and technology of a vitamin drink for medical and preventive nutrition.