

The introduction process is carried out with needles for mesotherapy. The operation does not take much time. The patient's skin in the required area is treated with anesthetics and antiseptics, after which the drug is injected subcutaneously. A part of the obtained but unused fibroblasts is frozen and stored in a cryobank in liquid nitrogen, in separate cells. The procedure of rejuvenation can be carried out throughout life, with a frequency of one-month and a half sessions.

**Aim.** The ability to correct age-related changes in any parts of the body (face, neck, hands, décolleté); reduce the number of deep wrinkles; elimination of scars resulting from acne; the speedy recovery of the skin after peeling; as preparation before an operative intervention, and also during the postoperative period; as prevention of early wilting of the skin.

**Materials and methods.** The procedure has several stages. The first stage consists in taking a biopsy of the skin (a piece of skin, most often from the ear shell), from which fibroblasts are isolated from standard laboratory manipulations. Then the biomaterial is placed in a test tube with a special solution and transported to the laboratory. The second stage is the selection and cultivation of fibroblasts. It should be clarified that only young and active fibroblasts are subject to selection and stimulation. Then, in specialized laboratories, fibroblasts are reproduced to the required number. The third stage is the introduction of cultured resident fibroblasts into the patient's skin. Cellular material is delivered in special containers to the clinic, where patients are given a course of SPRS therapy. Conduct therapy with needles for mesotherapy. The drug is injected into problem areas of the skin that need correction. Often, injections are made over the entire facial parameter, evenly with a certain sequence.

**Results and discussions.** Skin recovered and visibly rejuvenated; the color has become fresh and evened out; improved elasticity; deep wrinkles diminished and became almost unnoticeable. The positive effect of the fibroblast rejuvenation procedure lasts from three to five years. The specialist determines in advance the activity of fibroblasts and predicts what result can be obtained in the end.

**Conclusion.** SPRS technology is a special technique. Unlike other methods of rejuvenation aimed at stimulating the emergence of new cells, the SPRS procedure changes the external imperfections of the skin, restoring its structure from the inside. The use of fibroblasts completely eliminates the appearance of allergic reactions, because the patient's cells are injected subcutaneously.

## THE RESISTANCE ANALYSIS OF CANDIDA TO SOME ANTIFUNGAL PREPARATIONS

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**Introduction.** Within the limited antifungal armamentarium, the azole antifungals are the most frequent class used to treat *Candida* infections. Azole antifungals such as clotrimazole, itraconazole, voriconazole are often preferred treatment for many *Candida* infections as they are inexpensive, exhibit limited toxicity, and are available for oral administration. The fungistatic nature and prolonged use of azoles to treat fungal infections leads emergence of drug resistant fungal strains also increased pathogenicity of the fungi themselves. Thus, constant monitoring of the sensitivity of *Candida* fungi to modern preparations is necessary.

**Aim.** The study of the sensitivity of yeast-like fungi *Candida spp.*, which are the causative agents of many candidal diseases, to some modern drugs – antimycotics.

**Materials and methods.** The objects of study are the strains of species *C. albicans*, *C. tropicalis*, *C. glabrata* and *C. krusei* from the collection of the biotechnology departments of the NUPh (reference microorganisms Ukrainian collection of microorganisms) and strains isolated from clinical material of patients with intestinal dysbiosis, inflammatory diseases of the oral cavity, the biomaterial of women with genital candidiasis, and identified as *C. albicans*, *C. tropicalis*, *C. glabrata* and *C. krusei*.

For the experiment used microscopic, cultural research methods and laboratory procedures, which were carried out according to generally accepted methods in biotechnology.

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;  $\alpha$ -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.