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THE EFFICIENCY TREATMENT OF MYCOSES

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Microfungi are widespread in nature totaling several hundred thousand species. They cause mycosis, mycotoxicosis and allergy, which are joined by one meaning - mycopathy. Nowadays mycopathy is one of the most important problems in veterinary, especially among small pets. Skin diseases in animals take sometimes to 70% of a total number of patients. Environmental pollution, the increase in background radiation, violation of zoo-hygiene feeding and keeping rules, using of immunosuppressive drugs, cytostatics, corticosteroids and broad-spectrum antibiotics are the main factors, which weaken natural defense mechanisms of animals and promote the progression of skin fungal diseases. Dermatormycosis (microsporiasis and trichophytosis), candidosis and lesions caused by yeast fungi *Malassezia* are the most common diseases among diagnosable superficial mycoses in dogs and cats. These diseases commonly occur in vagrant, homeless animals, which whereas constitute a great danger of infection spread.

For diagnostics of superficial mycoses, experts pursue a microscopic investigation of scrapes taking from affected skin areas and plating on nutrient mediums in order to obtain a fungal culture. Microsporiasis is also diagnosed by the luminescence analysis. The treatment efficiency of mycoses depends on the correct diagnostics and seasonable, strategically right and timely aid. Formalin solution has the most reliable disinfectant effect for all developmental stages of fungi among the disinfectants. However, formalin is a high-toxic and carcinogenic substance for warm-blooded animals and it is forbidden to be used in Europe. Nowadays veterinarians use widely polyene antimycotics (e.g. nystatin), imidazole (ketoconazole) and triazole (itraconazole) drugs for treatment of mycosis in small pets. Unfortunately, despite all its efficiency, these antifungal preparations have a broad range of side effects (hepato- and nephrotoxic effect, teratogenic action), especially when patients are treated for a long time. The PFUR's specialists of the department of microbiology invented a new preparation Lyticase against mycoses of cats and dogs. It represents an exoenzyme of soil bacteria, which affects only a mannoprotein layer of fungi and absolutely inoffensive for eukaryotic cells. It has been proven experimentally that fungi processed by Lyticase are phagocytized better, have no any adhesive ability and cannot produce aspartyl proteases; that the preparation is non-toxic, has no any cumulative effects, innocuous for humans and animals. In this experiment in vitro it has been proven a total fungicide effect of Lyticase in low concentration 10 ED/ml towards virulent clinical candida strains. During the investigations it was also found out that antimycotic total effect, in combination with Lyticase (e.g. such as nystatin and amphotericin B) was better in several times towards *Candida albicans* than without it.

Lyticase has a prolonged antimycotic action, has no local irritative effect (doesn't "burn"), toxicity, allergenicity, immunosuppressive and carcinogenic actions.