

Antibiotic Action of Cultivated Basidiomycetes

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The authors studied the antimicrobial effect of mycelia, culture liquids, and broth prepared from fruiting bodies of the nine strains of *Pleurotus ostreatus* (Jacq.: Fr.) Kumm. and *Flammulina velutipes* (Fr.) Sing. available in the pure culture collection of the Forest Institute, National Academy of Sciences of Belarus (Gomel). For test cultures we used such strains of prokaryotic microorganisms as *St. aureus*, *Bac. anthracoides*, *Bac. mycoides*, *Bac. megatherium*, *Bac. cereus*, *E. coli*, *S. infantis*, *Klebsiella*, *Citrobacter*, and *Pr. vulgaris* as well as atypical strains of enterobacteria selected from children suffering from disturbances of intestinal microbiocenosis.

It was determined that mycelia and culture liquids of all the strains of the basidiomycetes inhibit *Klebsiella* and *Pr. vulgaris* cultures selected from children suffering from disbiotic disturbances. Associations of these microorganisms are one of the microbiological criteria for subcompensated forms of disbacteriosis. The *Flammulina velutipes* culture liquid had the same action on both the Gram-negative and

Gram-positive microscopic floras, while the effect of its mycelium on the procaryotic microorganisms was missed.

The estimation of the antimicrobial influences of *Pleurotus ostreatus* on the intestinal luminal microscopic floras of children suffering from antibiotic disturbances shows that when the total amount of aerobic microorganisms is relatively steady the trend has been toward the decrease in the proportions of enterococci and staphylococci in a seeding of the pathological material treated with either native mycelium or broth. Once a seeding has been treated with either culture liquid or mycelium, the arbitrarily pathogenic hemolytic forms of enterobacteria can either decrease in number or disappear completely in comparison with the control.

The data obtained show the Basidiomycetes analyzed can produce a selective antimicrobial effect and can be used to recover the composition and functions of the intestinal autoflora at the early stages of bismicrobiocenosis.