

Screening of Strains of the Genus *Pleurotus* (Fr.) Kumm. with a Broad Spectrum of Antimicrobial Activity

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Many species of edible mushrooms including genus *Pleurotus* (Fr.) Kumm. were discovered to possess some antimicrobial activity. The primary task of this study was to compare the antimicrobial properties of genus *Pleurotus* strains.

The 23 strains of *P. ostreatus* (Jacq.: Fr.) Kumm., *P. cornucopiae* (Paul.) Roll., *P. sajor-caju* (Fr.) Sing., *P. djamor* (Fr.) Boedjin, and *P. f. florida* were tested. The strains were grown in submerged culture on different liquid media. The incubation time was 5–10 days. For antimicrobial activity analysis, samples of submerged mycelia and culture filtrates were extracted with ethyl acetate. Gram-positive and Gram-negative bacteria

(genera *Bacillus*, *Staphylococcus*, *Micrococcus*, *Pseudomonas*, *Comamonas*, *Escherichia*), filamentous fungi (genera *Aspergillus*, *Fusarium*), and yeast (genus *Candida*) were used as test objects.

The antimicrobial activities of materials obtained were evaluated with particular attention to dependence of their spectra on cultivation conditions. The SM strain of *P. ostreatus* was shown to have the broadest spectrum of antimicrobial activity. This strain inhibited the growth of all test organisms except *Fusarium bulbigenum* Cooke et Masee. The parameters of submerged cultivation were optimized for this strain.