

## STRAIN IMPROVEMENT OF A HYPOLIPIDEMIC YELLOW OYSTER MUSHROOM, *PLEUROTUS CITRINOPILEATUS* BY MATING TECHNIQUE

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### ABSTRACT

Oyster mushrooms (*Pleurotus* species) are cultivated widely and at present ranked second to the button mushroom in production. *Pleurotus citrinopileatus* (Yellow oyster mushroom) possessed antioxidants, antidiabetic and hypolipidemic properties that can be a good source of therapeutics for the prevention and treatment of cardiovascular disease. The sporophores has an attractive shape and bright yellow colour, however, the texture is very fragile and has a strong aroma, which is not preferred by consumers. Hence, the present study was conducted with the objective of improving the texture, aroma and yield of *P. citrinopileatus* by interspecies mating using uninucleate monokaryotic cell of *P. citrinopileatus* and *P. pulmonarius*. Ten uninucleate monokaryotic cultures of parental were crossed in all combinations to obtain hybrids. Three compatible pairs of isolates with good colony characters such as thick mycelial mat and fast growth were selected for evaluation of morphological characteristics and yield performance by growing on sawdust fruiting substrates in polyethylene bags. Morphological characters of three new hybrids selected exhibited high yielding sporophore characteristics i.e. improved colour, aroma, texture and yield. Hence, interspecies hybrids obtained by mating technique can lead to better strains of mushrooms for genetic improvement in the family *Pleurotus*.

**Keywords:** Medicinal Mushrooms, Biological Efficiency, Sporophore, Monokaryon, Dikaryon.