**Strain Improvement of Edible Mushrooms by Mating**

**Rosnina, A. G., Noorlidah Abdullahand S.Vikineswary**

*Institute of Biological Sciences, Faculty of Science, University of Malaya, 50603 Kuala Lumpur. Malaysia.*

Corresponding author: noorlidah@um.edu.my

Mushroom breeding and selection (development, evaluation and maintenance of new genotypes) have progressed at different rates for different species. Breeding high-yielding strains has traditionally been accomplished by trial and error, and large numbers of hybrid can be obtained by pairing monosporic cultures. In this study, ten monosporic cultures of *Pleurotus* *sajor-caju*, *P. flabellatus*, *P.florida and* *Lentinula edodes* in all combination on MEA plates and incubated at 25 **◦**C for two weeks. Mycelial plugs taken from the junction zones between colonies were examined for the presence of clamp connections. Hybridisation is said to have taken place in the presence of the clamp connection structure. Our preliminary results showed that mating between *P. sajor-caju* and *P. flabellatus* was most compatible where 7% showed the presence of clamp connection. However, the rest showed lower hybridisation percentage whereby mating between *P. sajor-caju* and *P. florida* were 4% positive for the presence of clamp connection, followed by *P. sajor-caju*  with *L.. edodes* (3%) and *P. flabellatus* with *L. edodes* and *P. florida* with *L .edodes* (2% each.).

**Keywords** : Hybridization, monokaryon, basidiomycetes, clamp connection