



# MAPPING OF A SCAR MARKER TIGHTLY LINKED TO THE *B* MATING TYPE LOCUS OF *LENTINULA EDODES* (SHIITAKE MUSHROOM) BY TETRAD ANALYSIS

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## ABSTRACT

We isolated 132 basidiosporic strains of 33 tetrads from the outbred strains MCR14 and MCR15 of *Lentinula edodes* for linkage analyses. Mating tests detected crossing over between genes of the *B* mating-type locus during meiosis in four strains, MCR14B-121-3 ( $B_3$ ), MCR14B-121-4 ( $B_4$ ), MCR14B-130-1 ( $B_3$ ), and MCR14B-130-4 ( $B_4$ ), as monokaryons having different mating types from the parental type ( $B_1$ ,  $B_2$ ). In MCR14B-121-3 and MCR14B-121-4, the recombination was also detected between a sequence characterized amplified region (SCAR) marker, sOPP19-560, tightly linked to the *B* mating-type locus and a random amplified polymorphic DNA (RAPD) marker, C02-0900t. Furthermore, sOPP19-560 mapped between the *B* mating-type locus and a RAPD marker, Y07-0820t.

**Key words:** *B* mating-type locus, crossing over, *Lentinula edodes*, tetrad analysis.

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