

Functional Characterization of the *stunted lemma/palea 1* Mutant Allele in Rice¹

Ya-Ling Hou²

Abstract

The rice *stunted lemma/palea 1* (*slp1*) mutant displays dwarf, shorten panicle length, seriously degenerated lemma/palea, and sterility. Previous study suggested that a missense mutation at the sixth amino acid of the *OsSPL16* protein was likely responsible for the *slp1* mutant phenotypes. The current study showed that overexpression of the wild-type *OsSPL16* allele in the *slp1/slp1* and *Slp1/slp1* mutants were unable to convert the *slp1* mutant phenotype to normal. However, introduction of the mutant *OsSPL16* allele into a normal rice cultivar resulted in the *slp1* mutant phenotypes displayed in the transgenic plants. These results concluded the missense mutation of *OsSPL16* is the *slp1* mutant allele and a neomorph allele which affects plant height and development of inflorescence and spikelet.

Key words : *Oryza sativa*, Lemma, Palea, *OsSPL16*.

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²Assistant Researcher of Taitung DARES, COA.