

Phylotype classification of *Ralstonia solanacearum* biovar 1 strains isolated from banana (*Musa* spp) in Malaysia

ABSTRACT

During 2011 to 2012, 15 bacterial isolates were obtained from wilting banana plants from seven locations in Malaysia. Characterisation of the Malaysian isolates was determined by biovar determination, pathogenicity test, phylotype-specific multiplex PCR (Pmx-PCR) and endoglucanase (*egl*) gene amplification. Based on the genotype, phenotype and pathogenic characteristics, all isolates were identified as *Ralstonia solanacearum*. Pmx- and *egl*-PCRs indicated that all isolates belong to phylotype II of *Ralstonia* species complex hierarchical classification. The neighbour joining phylogenetic tree of *egl* sequences also verified the results where the isolates were all clustered into phylotype II, together with the reference sequences strains, UW070 and UW162. Therefore, the results of our study may provide a better understanding on the taxonomy of *R. solanacearum* species occupying banana plantations in Malaysia. This study is indeed the first report of phylotype II classification of *R. solanacearum* biovar 1 strains isolated from banana plants in Malaysia.

Keyword: *Ralstonia solanacearum* strains; Biovar 1; Bacterial wilt; Moko disease; Phylotype-specific multiplex PCR; *Egl* gene PCR; Phylogeny