

Detection of Candidatus phytoplasma asteris' (16srI) associated with bitter gourd leaf and floral malformations in Malaysia

ABSTRACT

Bitter gourd vines (*Momordica charantia*) exhibiting symptoms of leaf and floral malformations including reduced leaf and flower size and shortened internodes were observed in farmer's fields in Selangor, Malaysia. The causal agent was detected by nested and semi nested Polymerase Chain Reaction (PCR) using phytoplasma universal primers based on 16SrRNA and SecA gene sequences. Sequence analysis of 1.2 kb and 480 bp amplicons of the 16SrRNA and SecA gene respectively confirmed the presence of phytoplasma DNA associated with Candidatus phytoplasma asteris (Group16SrI) in the symptomatic bitter gourd samples. Phylogenetic analysis of the 16SrDNA and SecA sequences placed the bitter gourd phytoplasma in the 16SrI phytoplasma group. This is the first report of phytoplasma infection in bitter gourd in Malaysia.

Keyword: Phytoplasma; Bitter gourd; Molecular identification; Malaysia