First report of cucumber mosaic virus infecting *Solanum pseudocapsicum* in Korea

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Jerusalem cherry (*Solanum pseudocapsicum*) has been recently become popular as a potted ornamental plant in Korea. During a survey in July 2017, virus-like symptoms, including mosaic, mottling, and leaf malformation were observed on *S. pseudocapsicum* in a farm located in Chungju, Korea. To identify the causative virus, 10 symptomatic leaves were selected and analyzed by DAS-ELISA using specific polyclonal antibodies to cucumber mosaic virus (CMV), pepper mottle virus (PepMoV), paprika mild mottle virus (PaMMV), and tomato spotted wilt virus (TSWV) (Agdia, Elkhart, U.S.A). None of the samples reacted with any of the antisera, except for that to CMV. The virus (named CMV-Sp) caused necrotic local lesions on *Chenopodium quinoa* and *Vigna unguiculata* at 5 days post inoculation (dpi), while severe systemic mosaic symptoms were observed in *Cucumis sativus*, *Nicotiana tabacum* cv. Xanthi nc, and *Perilla frutescens* var. *japonica* 10 to 14 dpi. For further confirmation of CMV infection, RT-PCR was performed using cucumovirus genus-specific primers designed from a highly conserved region of the coat

protein (CP) gene (5'- YASYTTTDRGGTTCAATTCC-3' and 5'- GACTGACCATTAAAGCCG-3') (Choi et al. 1999). DNA fragments of the expected sizes (950 bp) were amplified, cloned, and then sequenced. BLAST analysis of a CMV sequence (LC371681) showed 99% and 98% identity with CMV-RP16 (KC527745) and CMV-Henan (KJ438786), respectively. Furthermore, phylogenetic analysis revealed that CMV-Sp belongs to CMV group IA. To our knowledge, this is the first report of CMV infection in *S. pseudocapsicum* in Korea.

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Reference

Choi S-K, Choi J-K, Park W-M, Ryu K-H (1999) RT-PCR detection and identification of three species of cucumoviruses with a genus-specific single pair of primers. J Virol Methods 83:67–73

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