



Natural occurrence of *Clerodendron yellow mosaic virus* on *Bougainvillea* in India

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Bougainvillea (*Bougainvillea peruviana*) is a common and popular ornamental plant of the family *Nyctaginaceae* commonly grown in the gardens of India. During a survey in the spring seasons of 2012 and 2013, bougainvillea plants throughout Rajasthan State, India exhibited typical symptoms for a begomovirus infection, including leaf curling and stunted growth (Fig. 1). Total DNAs were extracted from leaf samples of ten symptom-bearing and one symptomless plant, and analysed by PCR using virus component-specific primers (Wyatt & Brown, 1996). Agarose gel electrophoresis of the PCR products showed amplicons of the expected size (~550 bp) suggesting the presence of DNA-A genomic components in the plants exhibiting symptoms. Efforts to detect DNA-B components and associated satellite molecules were also made by PCR using specific primers, PCRc1/PBL1v2040 (Rojas *et al.*, 1993) and beta01/beta02 (Briddon *et al.*, 2002), respectively, but were not successful.

PCR-positive samples were subjected to rolling circle amplification (RCA, TempliPhi kit, GE healthcare, USA) to obtain the full-length viral genomes. RCA products were digested with *EcoRI*, *BamHI*, *HindIII*, *Sall*, *XhoI*, *PstI* and *XbaI*. After gel electrophoresis all the ten samples showed single fragments of ~2.7 kbp, which were cloned into pGEMT vector using *EcoRI* restriction sites. Five independent clones (one clone/plant) were sequenced and showed 100% identity with each other (GenBank Accession No. KF704391). Sequence analysis of DNA-A revealed 98% identity at nucleotide level with *Clerodendron yellow mosaic virus* (CIYMV) isolates (Fig. 2) suggesting that our isolate is an isolate of CIYMV. To the best of our knowledge this is the first report of natural occurrence of CIYMV on *B. peruviana* in India. However, there is a need for more detailed study about

CIYMV as it is broadening its host range.

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Figure 1

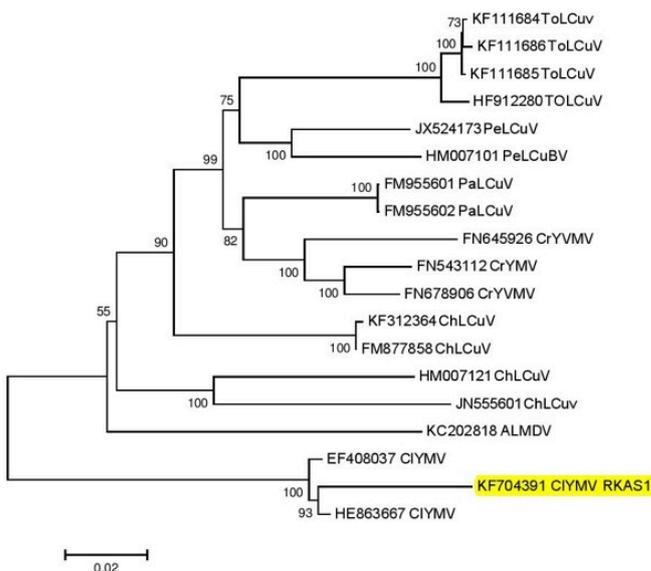


Figure 2

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