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Molecular identification of begomoviruses affecting important ornamental plants in India

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A number of plant species are grown in India as ornamentals for their aesthetic values. Several viruses have been reported to cause various diseases on them which affected their quality and production. During the survey in 2011-2013 some ornamental plants viz. Hibiscus rosa-sinensis, crape jasmine (*Tabernaemontana coronaria*), night blooming jasmine (*Cestrum nocturnum*), *Jatropha podagrica*, *Jatropha multifida*, *Jatropha integerrima*, Hollyhock (*Alcea rosea*), Aster (*Aster alpinus*) and ornamental ageratum species growing at various gardens in Lucknow U.P., India were found to be exhibiting begomovirus like symptoms. The amplicon of begomovirus were successfully amplified in naturally infected ornamental plant species by PCR/RCA using begomovirus specific primers and RCA Kit. The amplicons/genome obtained were sequenced by both the direction and sequence data were deposited in GenBank database under Accession numbers: JN807763 (*H. rosa-sinensis*), JN807764 (*T. coronaria*), JQ012790 (*C. nocturnum*), HQ848382 (*J. podagrica*) HQ848381 (*J. multifida*), JQ043440 (*J. integerrima*), JQ911766 (*A. rosea*), JQ954859 (*A. alpinus*) and JQ911767 (ornamental ageratum). The sequence analyses results were suggested occurrence of diverse begomovirus species on these ornamental plant species viz. Cotton leaf curl Multan virus on *H. rosa-sinensis*, Pedilanthus leaf curl virus on *T. coronaria*, Tomato leaf curl Pakistan virus on *C. nocturnum*, *Jatropha* mosaic India virus on *J. podagrica*, Tomato leaf curl Patna virus on *J. multifida*, Papaya leaf curl virus on *J. integerrima*, Hollyhock yellow vein mosaic virus on Hollyhock, Papaya leaf curl virus on Aster and Ageratum enation virus on ornamental ageratum were partially identified. The details of research work on detection and identification of begomoviruses done by us at NBRI, Lucknow will be discussed in the conference.

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