

Lettuce Mosaic Potyvirus is the Causal Agent of a New Disease in *Bupleurum* spp.

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Mosaic symptoms were seen on the ornamental plant *Bupleurum falcatum* (Apiaceae) grown in a commercial nursery in Israel. Examination by electron microscopy (EM) of samples from diseased plants revealed elongated filamentous virus particles. Here we provide evidence that *B. falcatum* is an alternate host for Lettuce mosaic potyvirus (LMV). Several lines of evidence indicated that *Bupleurum* was infected by LMV, including double antibody sandwich enzyme-linked immunosorbent assay (DAS-ELISA), immunosorbent electron microscopy, and sap and aphid transmission of LMV to lettuce and other host plants. Additionally, general primers derived from a conserved region of the 3'-terminus of the potyvirus genome were used in a reverse transcription-polymerase chain reaction (RT-PCR) assay and gave an expected amplification product of 672 bp. A similar approach was carried out to amplify the corresponding fragment from LMV-infected lettuce. The PCR product was cloned and sequenced; it encompassed an open reading frame encoding 153 amino acids and a 3' untranslated region (UTR) of 273 nucleotides, very similar to the coat protein (CP) and the 3' UTR nucleotide sequence, respectively, of other LMV isolates. Analysis of the amino acid sequences of the putative CP of the *Bupleurum* isolate showed complete identity to the lettuce isolate of LMV. The *Bupleurum* isolate had no new nucleotide changes which have not been established in other published LMV strain sequences. It is concluded that LMV is the causal agent of the disease in *B. falcatum* in Israel.

KEY WORDS: Apiaceae; *Bupleurum*; detection; electron microscopy; Lettuce mosaic potyvirus; sequence.

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