First report of a lettuce-infecting sequivirus in Chile

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Sequiviruses are isometric aphidborne plant viruses. *Dandelion yellow mosaic virus* (DaYMV), genus *Sequivirus*, was isolated from dandelion and lettuce in Europe. Lettuce mottle virus (LeMoV), a putative sequivirus, is often found in mixed infections with *Lettuce mosaic virus* (LMV) in Brazil (3). DaYMV, LeMoV and LMV cause similar mosaics in field-grown lettuce. Differences in biology and sequence suggest that DaYMV and LeMoV are distinct species (2). Forty-two and 101 lettuce samples with mosaic symptoms collected from two locations near Santiago during a survey of lettuce viruses in Chile in 2002 and 2003, respectively, were analyzed for the presence of LeMoV using reverse transcription polymerase chain reaction (RT-PCR). Total RNA was extracted (1) and used for RT-PCR with the specific LeMoV primers pairs Lmo3 (5' ACATGAGCACTAGTGAGG 3') and Lmo4 (5' AGATAGAGCCGTCTGGCG 3') (2). One of the 42 and three of the 101 samples produced the expected 300-bp fragment. Isometric particles of 30 nm diameter, typical of a sequivirus, were visualized by transmission electron microscopy. These samples were tested using RT-PCR for the presence of LMV and *Cucumber mosaic virus* (CMV), but no mixed infections were observed. One isolate, Ch36, was reamplified with the degenerate primer pairs DALE 1 (5' GARTTCAACATGCACGCCAG 3') and DALE 2 (5' TTTTTCTCCCCATYCGTCAT 3') which amplify part of the putative replicase gene (2) and produced a 563-bp fragment that was cloned on pGEM-T Easy (Promega, Madison, WI) and sequenced. The Ch36 product (EMBL Accession No. AM039965) showed 97% amino acid identity with LeMoV from Brazil, 79% with DaYMV, 72% with the sequivirus *Parsnip yellow fleck virus*, and 34% with the waikavirus *Maize chlorotic dwarf virus*. To our knowledge, this is the first report of a sequivirus in field lettuce in Chile, and although the virus was found at low incidence, this report extends the range of LeMoV to the western side of the Cordillera de Los Andes. The impact of LeMoV needs to be further analyzed in Chile, Brazil, and possibly other South American countries.

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