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Disease Notes

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The antidote vines or nhandirobas (*Fevillea trilobata* L. [Cucurbitaceae]) are dioecious plant species native to the South American Neotropics (1). Genetic materials of these species are now being domesticated and evaluated as potential crops for seed-oil extraction aiming to produce biodiesel fuel (2). Plants of *F. trilobata* (Accession No. CNPH-001) were cultivated from seeds under open field conditions during the years 2008 through 2011 in Brasília-DF, Brazil. Approximately 200 plants exhibiting mosaic symptoms and severe leaf malformation (with typical bubble-like patches) were found in all fields every year. Apical mosaic was slightly more severe in female than in male plants. Electron microscopy examination of negatively stained extracts of symptomatic leaf tissue showed the presence of filamentous particles about 700 to 800 nm long. Analysis of ultra-thin sections of the same tissues revealed the presence of lamellar inclusions typical of a potyvirus infection. No aphid colonies were observed on field-grown *F. trilobata* plants. The virus was mechanically transmitted to healthy *Cucurbita pepo* cv. Caserta and *Luffa cylindrica*, causing systemic mosaic. Sap from these infected

plants reacted in PTA-ELISA with polyclonal antiserum against *Zucchini yellow mosaic virus* (ZYMV), but not with antisera against *Papaya ringspot virus* – type W (PRSV-W), *Cucumber mosaic virus* (CMV), and *Zucchini lethal chlorosis virus* (ZLCV). Total RNA extracted from experimentally infected *C. pepo* was analyzed by RT-PCR using specific pairs of primers for the coat protein gene of ZYMV (3). A cDNA fragment of approximately 1,186 bp was amplified and the nucleotide sequence obtained by direct sequencing. Comparisons of the nucleotide (837 nt) and deduced amino acid (279 aa) sequences of the coat protein genomic segment (GenBank Accession No. JX502677) revealed 93 to 98% and 97 to 98% identity, respectively, with the corresponding nucleotide and amino acid sequences of a group of ZYMV isolates from distinct hosts (AY188994, AY279000, and NC_003224). The infection by ZYMV might cause fruit yield losses to *F. trilobata*. In addition, the infected *F. trilobata* crops might work as a reservoir of ZYMV providing inoculum to other cucurbit hosts since it has been managed as a semi-perennial crop. To our knowledge, this is the first report of the genus *Fevillea* as a natural host of ZYMV.

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