Disease Note

ASSOCIATION OF BERMUDA WHITE LEAF PHYTOPLASMA WITH *JUSTICIA GENDARUSSA* WITH WITCHES' BROOM SYMPTOMS IN INDIA

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Justicia gendarussa Burm. f. (family Acanthaceae) is a shade-loving, quick-growing evergreen ornamental hedge plant mostly found in moist areas. It is believed to be native to China and is distributed widely across India, Sri Lanka and Malaysia. Witches' broom and little leaf symptoms were observed on *J. gendarussa* plants in Shahjahanpur district, Uttar Pradesh, India in 2013-14 with 2% incidence. Three symptomatic and one symptomless plants were analyzed by nested PCR using primer pairs P1/P6 (Deng and Hiruki, 1991) and R16F2n/R2 (Gundersen and Lee, 1996), which yielded products *ca*. 1.2 kbp in size only in nested PCR assays from symptomatic samples. All three amplicons were directly sequenced from both directions and one sequence was submitted to the GenBank (accession No. KT365865). In pairwise sequence comparison, 100% sequence identity was observed with members of the '*Candidatus* Phytoplasma cynodontis' taxon (16SrXIV group) reported from various parts of the world, which was confirmed upon analysis of a phylogenetic tree constructed by neighbor-joining method. The *i*PhyClassifier virtual RFLP analysis (Zhao *et al*., 2009) using 17 restriction enzymes revealed that the *J. gendarussa* phytoplasma produced RFLP profiles identical to those of the reference strain of '*Ca.* P. cynodontis' (KM220612) classified in the 16Sr XIV-A subgroup. To the best of our knowledge, *J. gendarussa* is a new host of a phytoplasma belonging to the 16Sr XIV-A subgroup in India.

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Disease Note

FIRST REPORT OF PERSIMMON CRYPTIC VIRUS IN TURKEY

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Persimmon cryptic virus (PeCV), a putative member of the genus *Deltapartitivirus*, family *Partitiviridae*, was first identified in a Japanese persimmon (*Diospyros kaki*) tree growing in Apulia (southern Italy), and showing an extensive necrosis of the veinlets on both sides of the leaf blades (Morelli *et al*., 2012). In the early summer of 2015, similar symptoms were observed on several trees of some autochthonous cultivars growing in two distinct orchards in Samsun province (northern Turkey).

The presence of PeCV was ascertained in Turkish persimmon accessions by RT-PCR using the specific primer pair CryKaF/CryNeR, designed in the coat protein (CP) gene encoded by RNA2 (Morelli *et al*., 2015). A 144-bp amplicon, obtained from symptomatic accession S3, was cloned into pSC-A-amp/kan and custom-sequenced (Macrogen Europe, The Netherlands). BLAST analyses showed that the cloned PeCV sequence, deposited in GenBank under accession no. KT962117, shared *ca.* 96% identity at the nucleotide level with that of the Italian isolate SSPI (HE805114). All tested samples were negative for Persimmon virus A (PeVA), another cytorhabdovirus species putatively associated with persimmon vein necrosis disease (Morelli *et al*., 2014). Nevertheless, whether or not PeCV is involved in symptom appearance, remains to be ascertained. To our knowledge, this is the first report of PeCV in a country other than Italy.

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