

DISEASE NOTE

FIRST REPORT OF *CATHARANTHUS* YELLOW MOSAIC VIRUS INFECTING *DURANTA REPENS* IN PAKISTAN

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Duranta repens (pigeon berry) is an ornamental shrub that, in Pakistan, frequently exhibits leaf curl symptoms that are typical of begomovirus infection (genus *Begomovirus*, family *Geminiviridae*). Leaf samples from two *D. repens* plants with mild leaf curl and from one apparently symptomless plant, were collected from areas around Islamabad during 2013. Total DNA was isolated from both types of samples by the CTAB method. Diagnostic PCR produced an amplification product of the expected size (*ca.* 750 bp) from the symptomatic samples only. An amplification product of *ca.* 2,800 bp was obtained by PCR with an abutting primer pair (BGAF/BGAR; Tahir *et al.*, 2010) designed to amplify the complete genomes of monopartite begomoviruses or DNA A components of bipartite begomoviruses. The amplicon from one sample was cloned and its sequence (2752 nt) was submitted to GenBank (accession No. LK028570). The sequence from *D. repens* had the highest nucleotide identity (95%) with that of the begomovirus *Catharanthus yellow mosaic virus* (CYMV; HE580234). Attempts to identify a possible second component (DNA B and/or betasatellite) in the infected *D. repens* by PCR with universal betasatellite primers (Briddon *et al.*, 2002) or DNA B primers (BGBF/BGBR; Tahir *et al.*, 2010), were negative. Leaf curl disease of *D. repens* is thus associated with a monopartite begomovirus, CYMV, without a betasatellite, in agreement with Ilyas *et al.* (2013) who first isolated this virus from *Catharanthus roseus* and showed it to be monopartite and not associated with a betasatellite. Previously only the bipartite begomovirus *Tomato leaf curl New Delhi* had been found in *D. repens* in Pakistan. This is the first report of a CYMV infecting *D. repens*.

Briddon R.W., Bull S.E., Mansoor S., Amin I., Markham P.G., 2002. Universal primers for the PCR-mediated amplification of DNA β ; a molecule associated with some monopartite begomoviruses. *Molecular Biotechnology* **20**: 315-318.

Tahir M., Haider M.S., Briddon R.W., 2010. Complete nucleotide sequences of a distinct bipartite begomovirus, Bitter gourd yellow vein virus, infecting *Momordica charantia*. *Archives of Virology* **155**: 1901-1905.

Ilyas M., Nawaz K., Shafiq M., Haider M.S., Shahid A.A., 2013. Complete nucleotide sequences of two begomoviruses infecting Madagascar periwinkle (*Catharanthus roseus*) from Pakistan. *Archives of Virology* **158**: 505-510.

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FIRST REPORT OF A *PANTOEA* sp.-INDUCED BACTERIAL BLIGHT OF *PLEUROTUS ERYNGII* IN CHINA

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In October 2013, a blight condition was observed on the fruiting bodies of *Pleurotus eryngii* in Beijing (China). Symptoms began as yellow spots on the stipe surface near the pilei, fruiting bodies became blighted and their growth stopped. Pieces from the inside of diseased fruiting bodies were excised, placed in 0.85% NaCl and the suspension was spread on trypticase soy agar (TSA) plates that were incubated at 30°C. Round yellow cultures were obtained, made up of bacterial cells 2.0-3.0 × 1.0 μm in size. The 16S rRNA and the *atpD*, *gyrB*, *infB*, *rpoB* genes of four isolates were amplified and sequenced (GenBank accession Nos. KJ654341-KJ654345). Although neighbour-joining tree constructed with 16S rRNA sequences and a multilocus sequence analysis (MLSA) showed that these isolates had the highest similarity with *Pantoea agglomerans* JCM 1236^T (99.8% and 99.3%, respectively) the results of biochemical properties based on API 20E, 20NE, ZYM (bioMérieux) and GN2 MicroPlate (Biolog) disclosed 18 differences with *P. agglomerans* JCM 1236^T. Bacterial suspensions in PBS (pH 7.0) *ca.* 1 × 10⁶ CFU/ml were sprayed onto the surfaces of healthy fruiting bodies which 5-10 days post inoculation reacted with symptoms similar to those observed in the naturally infected samples, while the negative control sprayed with sterile PBS remained symptomless. Koch's postulates were fulfilled by re-isolating a bacterium identical to that used for inoculation based on biochemical properties, 16S rRNA gene and MLSA. *P. agglomerans* was reported as the causal agent of blight disease of several hosts in many countries (Lee *et al.*, 2010; Kim *et al.*, 2015). To the best of our knowledge, this is the first report of *Pantoea* sp.-induced bacterial blight of *P. eryngii* in China.

Kim E.T., Wiriyaitsomboon P., Hausbeck M., 2015. First report of *Pantoea agglomerans* causing onion leaf blight and bulb rot in Michigan. *Plant Disease*, DOI: <http://dx.doi.org/10.1094/PDIS-01-15-0091-PDN>.

Lee H.B., Hong J.P., Kim S.B., 2010. First report of leaf blight caused by *Pantoea agglomerans* on rice in Korea. *Plant Disease* **94**: 1372.

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