



First report of *Pantoea agglomerans* on *Oryza sativa* in Turkey

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Since 2016, new symptoms of brown-to-slightly reddish spots on the upper blades of the leaves, finally causing leaf blight on rice (*Oryza sativa* L.) have been observed sporadically in commercial fields of Kastamonu province in Turkey. Bacteria isolated from leaves with symptoms showed circular, yellow, convex with entire edges, smooth and mucoid colonies after 24 h at 28 °C on NA and only one of the five isolate with hypersensitive reaction on tobacco plants by injections infiltration technique was selected from only one paddy field. An isolate named PagK35b was Gram negative, facultatively anaerobic, rod shaped with peritrichous flagella and motile. It showed positive results for catalase, produced acid from inositol and Voges-Proskauer test and negative results for indole production, produced acid from melibiose and arginine dihydrolase. On the basis of these biochemical diagnostic tests, the isolate was presumptively identified as *Pantoea agglomerans* (Deletoile et al. 2009). The gene encoding the 16S rRNA from the isolate PagK35b was sequenced after PCR amplification (Weisburg et al. 1991). The sequence of the isolate PagK35b (GenBank Accession No. MH549219), showed 100% nucleotide identity with *P. agglomerans* strain IASSTS1. Further multilocus sequence analysis (*recA*, *rpoB*, *fusA*, and *gyrB* genes with accession Nos. MK125036 to MK125039, respectively) showed that the isolate PagK35b was closely related to *P. agglomerans* according to the protocol described previously for the genes (Deletoile et al. 2009). There was a 98 to 100% similarity of the *rpoB*, *recA*, *fusA*, and *gyrB* gene sequences with *P. agglomerans* strain UMAF3103, H11, DC432, strain LMG 1286, respectively. The isolate was also tested for pathogenicity on four-week-old rice plants

(*Oryza sativa* cv. ‘Osmancik’). The bacterial suspensions (10^8 cfu/ml) was inoculated with clipping about 5 cm below tips of the leaves and five days later, symptoms that developed were similar to those originally observed in the greenhouses. PCR amplification of the gene encoding the 16S rRNA from the isolate PagK35b re-isolated from inoculated plants was sequenced and showed 100% nucleotide identity with the original bacterial isolates. To our knowledge, this is the first report of rice leaf blight caused by *P. agglomerans* in Turkey. This bacterium has been reported before, in 2015, from Venezuela (González et al. 2015) and other *Pantoea* spp. from India (Mondal et al. 2011; Vinodhini et al. 2017) and Togo (Kini et al. 2017).

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