



## First report of potato blackleg and soft rot caused by *Pectobacterium wasabiae* in Turkey

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In 2015, blackleg symptoms were observed in potato (*Solanum tuberosum*) cvs. Agria, Elfe, Granola and Jelly in Yozgat province (Sorgun town) in the Central Anatolian Region of Turkey. Disease incidence varied from 5-20%. Seventeen infected stem and tuber samples each from nine commercial potato fields were collected, homogenised and plated on nutrient agar medium. After 24 h incubation at 28°C bacteria were transferred to Luria broth agar or crystal violet pectate medium (CVP) plates and incubated for 24 h at 28°C. Identification of bacteria forming cavities on CVP medium and capable of causing potato tuber maceration in whole tuber assay (Potrykus *et al.*, 2016) was accomplished with Y1/Y2 primers specific for *Pectobacterium* (Darasse *et al.*, 1994), Y45/Y46 primers specific for *P. atrosepticum* (Frechon *et al.*, 1998), and EXPCCF/R primers designed for both *P. carotovorum* subsp. *carotovorum* and *P. wasabiae* (Kang *et al.*, 2003). Six strains which yielded positive results with EXPCCF/R primers were further tested with PhF/R primers (De Boer *et al.*, 2012) for the identification of *P. wasabiae*; two of these strains isolated from tubers (cv. Jelly) yielded an amplicon characteristic for *P. wasabiae*. BLAST analysis of the *recA* gene sequence from one of these strains (YS18Y5; GenBank Accession No. KX548226) showed 100% identity to the sequence of *recA* of *P. wasabiae* strain SCC3193. Phylogenetic analysis based on *recA* gene sequences (Waleron *et al.*, 2013) available in GenBank was performed by the maximum likelihood method, and served as further confirmation that strain YS18Y5 belongs to *P. wasabiae* (Fig. 1).

Strain YS18Y5 is a motile, oxidase-negative, facultative anaerobe growing on 5% NaCl (aq., w/v), capable of utilising lactose, D-trehalose, D-cellobiose, unable to use maltose and D-sorbitol as carbon sources and unable to grow at 39°C. The tuber maceration test indicated that strain YS18Y5 (applied as a suspension of 5 on the McFarland scale) is able to cause soft rot symptoms on potato tuber tissue using a whole tuber assay (Fig. 2). To the best of our knowledge this represents the first report on the occurrence of *P. wasabiae* in Turkey.

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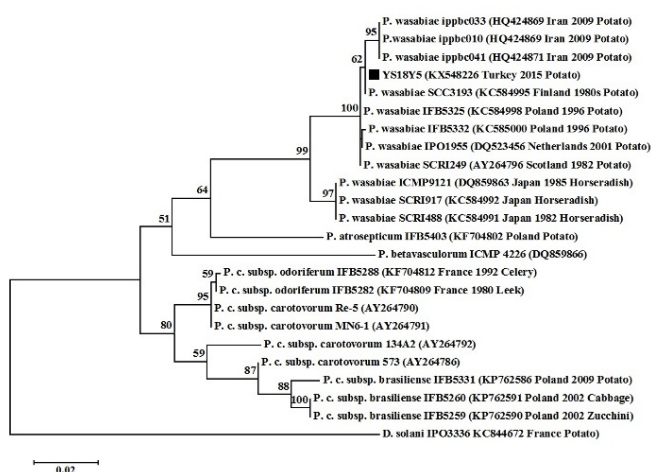


Figure 1



Figure 2

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