First report on *Xanthomonas campestris* pv. *campestris* causing bacterial black rot disease of cauliflower in Turkey

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In the Black Sea region of Turkey, cauliflower (*Brassica oleracea* var. *botrytis* L.) is an alternative and economically important crop grown in 750 ha in Samsun province (Bafra town) cultivated in winter season. Black rot disease was observed on some cauliflower plants in the growing season of 2016. V-shaped chlorotic leaf tissue of collected plants was macerated and plated on Nutrient agar medium. Yellow, convex, mucoid colonies were purified on Luria agar (Merck, Germany) to perform identification tests. The obtained 15 isolates and reference strain Xcc13 from cabbage (available in Bacteriology laboratory, Plant Protection Department of Ondokuz Mayıs University) were gram-negative, aerobic, non-fluorescent, oxidase negative and catalase positive, hydrolyzed gelatin and esculin, and produced acid from d-arabinose, mannose and trehalose. Partial 16S rDNA of isolates KP19, KS27, BD14 and BT13 (GenBank accession Nos. MG149776 to MG149779) was amplified by PCR assay for sequence analysis (Weisburg et al. 1991). BlastN search with obtained sequences showed 99% nucleotide identity to the complete genome of *Xanthomonas campestris* pv. *campestris* ATCC 33913^T. The *gyrB* gene of isolate BK19 was sequenced for further confirmation. A partial 777 nt sequence of KP19

(MG550108) shared 100% identity with the complete genome of *X. campestris* pv. *campestris* strain 100 and *gyrB* gene of other strains deposited in GenBank. Pathogenicity was performed on cauliflower seedlings (cv. Igloo) with bacterial suspensions (10^8 CFU/ml) by spray inoculation on leaves. Isolates and reference strain Xcc13 caused small dark spots with typical V-shaped lesions within seven days. Lesions enlarged, became yellow to brown, and dried out. Reisolated colonies were similar in appearance to those obtained from naturally infected plants and exhibited the same traits of the inoculated isolates. To our knowledge, this is the first report on *X. campestris* pv. *campestris* caused disease on cauliflower in Turkey.

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Reference

Weisburg WG, Barns SM, Pelletier DA, Lane DJ (1991) 16S ribosomal DNA amplification for phylogenetic study. J Bacteriol 173:697–703

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