First report of *Colletotrichum karstii* causing anthracnose on citrus in the Mediterranean region of Turkey

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In the early 2011, anthracnose-like symptoms were observed on lemon (*Citrus lemon* L.) cv. ‘Kütdiken’ and mandarin (*Citrus reticulata* L.) cv. ‘Okitsu’ in Southern Turkey. Symptoms appeared as dieback and wither-tip of twigs, followed by circular light tan areas with purple margins on leaves. In severe attack infections, diseased fruits produced black acervuli on lesions (1–3 mm). Single spore isolations on potato dextrose agar (PDA) formed flat cultures with entire margins, white aerial mycelia and pink conidial masses. Conidia were hyaline, one celled, cylindrical, measuring $11.54\text{--}16.0 \times 4.0\text{--}5.6 \mu\text{m}$ ($n = 40$). The isolates were assigned to the *C. karstii* (Guarnaccia et al. 2017). Fungal DNA was amplified using primers ITS1/ITS4, GDF1/GDR1, ACT-512F/ACT-783R, and CHS-79F/CHS-345R (Damm et al. 2012). These sequences were deposited in GenBank under mandarin isolate MC1 (Accession Nos. MH051303, MG387955, MG951774, and MG951825) and lemon isolate LC7 (Accession Nos. MH028213, MF616515, MG951784, and MG951820) for ITS, ACT, GAPDH, CHS-1, respectively. A BLASTn search of these sequences showed 100% identity to those of *Colletotrichum karstii* as per Damm et al. 2012. Pathogenicity was carried out

on previously wounded lemon cv. ‘Kütdiken’ leaves and fruits by inoculating with a conidial suspension (1×10^6 conidia per ml) of *C. karstii* isolates. Control plant organs were treated with sterilized water. All inoculated plants developed symptoms similar to those observed on naturally affected plants, whereas no lesions developed on the control. The pathogen has previously been reported from Asia, Europe, and South Africa (Farr and Rossman 2018). To our knowledge, this is the first report of *C. karstii* infecting citrus species in Turkey.

References

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