First report of *Neofusicoccum parvum* causing branch dieback on *Juglans regia* in Turkey

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During June 2019, dieback symptoms and cankers were observed on branches of English walnut (*Juglans regia* L.) trees growing in Hatay provinces of Turkey. Isolations were made from surface disinfected diseased branches and cankers tissues on potato dextrose agar (PDA). Colonies of the fungal isolate were initially pale to white with but diffused yellow pigment into PDA seven days later. Single-conidial cultures were induced to sporulate on 2% water agar bearing double-autoclaved pine needles. Brown, globular conidiomata were 250 to 525 µm in diameter. Hyaline, aseptate rod shaped conidia were 3.5–5.5 × 1.5–2.5 µm. Hyaline, 1–2 septate macroconidia were 16.0–19.5 × 4.5–6.0 µm. The morphological characteristics closely resembled those described for *Neofusicoccum parvum* (Pennycook & Samuels) Crous, Slippers & A.J.L. Phillips (Slippers et al. 2004). The internal transcribed spacer (ITS) and β-tubulin gene (TUB) regions were amplified from DNA of the representative isolate WNP31 with primers ITS4/ITS5 and Bt2a/Bt2b (Glass and Donaldson 1995). The consensus sequences of ITS (GenBank accession N. MT012295) and TUB (MT015600) genes showed 99.8–100% identity with sequences of *N. parvum* (MH623075, KF778959). Pathogenicity test was performed on branches of 2-year-old walnut sapling (cv. Chandler) by inoculating mycelial plugs into bark wounds on branches of sapling kept in a growth room at 25 °C. Controls were inoculated with sterile PDA plugs. Typical necrotic lesions were observed at the inoculation sites of inoculated branches three weeks after inoculation. No lesions were observed on the control branches. *N. parvum* was re-isolated from inoculated branches and

identified as described above. Based on morphological characteristics and phylogenetic analyses of the sequences of ITS and TUB gene regions, *Neofusicoccum parvum* was identified. This disease agent has been reported on walnut trees in Iran, Spain, USA and China (Farr and Rossman 2020). To best of our knowledge, this is the first report of *N. parvum* infecting walnut in Turkey.

Compliance with ethical standards

Conflict of interest The authors declares that there is no conflict of interest for this submission.

Research involving human participants and/or animals This article does not contain any studies with human participants or animals performed by any of the authors.

Informed consent This manuscript is new and not being considered elsewhere. The authors have read and approved the submission of this manuscript.

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