



# First report of *Apiospora marii* causing wilt and dieback in olive trees in Spain

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In 2021, a 10-month-old olive (*Olea europaea* L.) orchard of cv. Arbequina located in Albatana (Albacete, Castilla-La Mancha, Spain), growing in super-high-density showed foliar chlorosis, twig defoliation, wilt, dieback, internal wood discoloration and general decline in 20% of 10,000 trees surveyed. Fast growing fungal colonies were consistently isolated on antibiotic PDA. Two representative isolates (21014-3; 21014-15) were selected. The colonies were flat, with abundant aerial mycelium, white to beige with oliveaceous gray patches. Conidia were brown, smooth, granular, globose to elongate ellipsoid (average  $8.14 \times 6.5 \mu\text{m}$ ;  $n = 30$  per isolate). They were identified by morphology as *Arthrimum* sp. (Samuels et al. 1981). The TUB and EF gene regions were sequenced with primer pairs T1/Bt2b and EF1-728 F/EF1-986R, respectively. Sequences were deposited in GenBank (Accession Nos.: TUB: OM417231, OM417232; EF: OM417229, OM417230). BLAST showed high identity (>99%) with the reference sequences of *Apiospora marii* KF144992 (TUB) and MK017961 (EF). A multilocus alignment was used to confirm their identity by phylogenetic analysis. The two isolates were identified as *Apiospora marii* (anamorph *Arthrimum marii*). Pathogenicity tests were conducted on 9-month-old olive plants ('Arbequina'), by dipping the roots overnight in a conidial suspension ( $10^5$  conidia/ml), and planted in 0.7 l plastic pots containing

sterile peat moss ( $n = 12$  per isolate). Plants dipped in sterile distilled water were included as control ( $n = 12$ ). Chlorotic leaves, wilt and internal wood discoloration were observed on inoculated plants at 3 months after inoculation. No symptoms were observed on controls. The pathogen was consistently reisolated from the basal stem and roots of inoculated plants. *Apiospora marii* has been reported in olive in Italy, causing tree dieback (Gerin et al. 2020). To our knowledge, this is the first report of *A. marii* causing wilt, dieback and tree decline in olive in Spain (Farr and Rossman 2022).

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## Declarations

**Conflict of Interest** The authors declare no conflict of interest.

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