First report of *Globisporangium ultimum* causing damping-off of wild rocket seedlings

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Received: 16 December 2020 / Accepted: 26 February 2021 / Published online: 8 March 2021
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Keywords Baby-leaf vegetables · Oomycetes · Plant diseases · Phytopathogens

Wild rocket (*Diplotaxis tenuifolia* (L.) DC.) is a cruciferous baby-leaf cultivated for ready-to-eat salads. In October 2020, survey of emerged seedlings (cv. Yeti) on raised beds under a plastic tunnel (Pontecagnano Faiano, Italy) revealed the occurrence of damping-off symptoms on about 30% of surface ($13\text{ }^{\circ}\text{C} \leq T \leq 24\text{ }^{\circ}\text{C}$, $66\% \leq \text{UR} \leq 90\%$). Disease started as root and crown rot until to the plants collapse; seedlings showed brown-dark rotted on collar and root deliquescence. Collar tissue (2 mm^2) were surface-sterilized in 1% sodium hypochlorite, washed with sterile water, plated on PDA + 0.1% lactic acid, and incubated at $22 \pm 1\text{ }^{\circ}\text{C}$ for 5 days. Microscopy (Nikon Eclipse 80i; $40\times$ magnification) revealed morphology of the oomycete *Globisporangium ultimum* (Trow) Uzuhashi, Tojo and Kakish. (syn. *Pythium ultimum* Trow) (van der Plaats-Niterink 1981; Uzuhashi et al. 2010) such as: aseptate mycelium, hyphal diameter of $3\text{--}7.36\text{ }\mu\text{m}$, spherical terminal hyphal swellings of $11.95\text{--}14.29\text{ }\mu\text{m}$ along with intercalary sporangia of $14.62\text{--}22.73\text{ }\mu\text{m}$. The molecular identification was performed by ITS1/ITS4 and DC6/ITS4 (White et al. 1990; Chen et al. 1992) region sequencing. Sequences of 789 and 1167 bp, respectively, were deposited in GenBank (accession numbers MW369642 and MW369641). BLAST analyses revealed 99% nucleotide similarity to previously published *Pythium ultimum* sequences (HQ643885.1, AY598657.2). Pathogenicity was assayed on 30 two-week-old wild rocket seedlings by infecting the collar with 5 mm mycelium plugs obtained from one-week-old culture on PDA. Inoculated and non-inoculated plants were kept in growth chamber at $23\text{ }^{\circ}\text{C}$. After 10 days, the isolate

produced the same symptoms observed in the field, whereas control plants remained healthy. *G. ultimum* was re-isolated from the infected seedlings, confirming Koch's postulates and the pathogenicity on wild rocket. Despite *Pythium* damping-off has been previously observed on wild rockets in Italy (Gilardi et al. 2018), this is the first report in which molecular identification and Koch's postulates have been accomplished.

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