



Neopestalotiopsis guajavicola sp. nov. causing a new leaf spot on *Psidium guajava* in Pakistan

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In 2016 and 2017, a destructive leaf spot disease of *Psidium guajava* was observed, with 63% disease incidence and 55% severity at various Pakistan locations with warm temperature and heavy rainfall. Irregularly distributed light to dark brown leaf spots, later covered by black acervuli leading to death of leaves, were recorded. Sixty leaf samples were collected, cut into 3–5 mm pieces, sterilized with 3% sodium hypochlorite, and placed on potato dextrose agar (PDA). Seven isolates of *Neopestalotiopsis* were obtained. Among them the representative FMB-Guv-L2A produced on PDA undulating edge white to honey-coloured aerial mycelium with black-colored gregarious conidiometa. Conidia (23.3 ± 1.6 μm long and 6.5 ± 0.5 μm wide) were straight, ellipsoid, and clavate, contained four septations and three median cells. Two to three tubular unbranched apical appendages (21.8 ± 2.7 μm long) were produced. In addition, a conical basal cell with a single unbranched basal appendage was observed. The isolate was further identified by a phylogenetic tree with sequences of ITS (MH209245), TEF 1- α (MH460870), LSU (MH478108), TUB (MH460873) genes/regions. The analysis delineated it as *Neopestalotiopsis guajavicola* (Haq et al., 2021; Fiorenza et al., 2022). The pathogenicity test was conducted on two-year-old *P. guajava* healthy plants, grown in earthen pots under natural conditions. Leaves of 120 plants were inoculated by spraying the conidial suspension of *N. guajavicola* (1×10^6 spores/ml) (Baggio et al., 2021). Sterile distilled water was sprayed on control plants. After inoculation,

plants were covered by polythene bags for three days. Similar leaf spot symptoms, as observed during the field visits, were recorded after 14 days on inoculated leaves. Control plants were asymptomatic. The pathogenicity test was performed twice. The strain of *N. guajavicola* was deposited in the Fungal molecular biology culture collection (FMB-CC-UAF) with accession number FMB0129. To our knowledge, *N. guajavicola* is a new pathogen causing leaf spot of *P. guajava* in Pakistan.

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Declarations

Conflict of interest All authors declare that they have no conflict of interests.

Ethical statement This article does not contain any studies with human participants or animals.

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