First report of *Leveillula taurica* causing powdery mildew on cucumber in Mexico

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During January and February 2017, symptoms and signs of powdery mildew were observed on approx. 30% of cucumber (*Cucumis sativus* L.) plants grown in a greenhouse in Ahome, Sinaloa, Mexico. Diseased leaves exhibited chlorotic angular lesions which became necrotic on both leaf surfaces afterwards. Later, white sporulation covered these lesions. A voucher specimen was deposited in the Herbarium of the Department of Agricultural Parasitology at the Chapingo Autonomous University (UACH-H190). Microscopic examination showed conidiophores that were hyaline, erect, straight, cylindrical, measuring $183\text{--}268 \times 5.2\text{--}6.1 \mu\text{m}$, forming conidia singly. Primary conidia were lanceolate, measuring $54.5\text{--}75.2 \times 14.7\text{--}18.3 \mu\text{m}$. Secondary conidia were subcylindrical to cylindrical, measuring $50.8\text{--}71.2 \times 13.1\text{--}15.7 \mu\text{m}$. Chasmothecia were not observed. The morphology of the fungus was consistent with that of

Leveillula taurica (Lév.) G. Arnaud (Braun and Cook 2012). To confirm the identification, genomic DNA was extracted, and the Internal Transcribed Spacer (ITS) region was amplified using the primers ITS5/ITS4, and sequenced. A BLASTn search of the sequence (GenBank Accession No. MG571545) showed 99% identity to those of *L. taurica* on *Capsicum annuum* L. from Mexico (KU886148) and *Catharanthus roseus* (L.) G. Don from USA (KF703447). Pathogenicity was confirmed by gently dusting conidia from infected leaves onto 10 healthy leaves of 1-month-old cucumber plants. Ten leaves sprayed with sterile distilled water served as controls. All plants were maintained in a glasshouse at temperatures ranging from 25 to 35 °C. All inoculated plants developed chlorotic angular lesions 8 days after inoculation, whereas the control plants remained symptomless. The fungus present on the inoculated plants was morphologically identical to that of the originally observed on field samples. *Leveillula taurica* has been reported on cucumbers in Bulgaria, Greece, USA, Israel, Japan, Kenya, Lebanon, Libya, Morocco, Romania, Senegal, and USSR (Farr and Rossman 2018). To our knowledge, this is the first report of powdery mildew caused by *L. taurica* on cucumber in Mexico.

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