First report of powdery mildew caused by *Podosphaera fusca* on *Euphorbia hirta* in Odisha state, India

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Euphorbia hirta L. is a small, annual herb with medicinal properties belonging to Euphorbiaceae family found in tropical regions of the world. In 2015–2016 between October and January, powdery mildew signs and symptoms were observed on *E. hirta* growing along grass lands of Chandaka forest (20°18'16.6"N, 85°39.5'50"E), Odisha, India. The disease incidence was estimated at 40%. A reference specimen (EHRPRC05) was deposited in the culture collection of the Orissa University of Agriculture and Technology (Odisha, India). Symptoms initially appeared as small circular white colonies on both leaf surfaces. Hyphae were branched, septate, straight, with nipple-shaped to almost absent appressoria. Conidiophores were unbranched, straight, measuring 100 to 250 × 10 to 12 µm, arising laterally from hyphal mother cells and produced 3 to 4 immature conidia in chains. Foot cells of the conidiophore were cylindrical, straight with constriction at basal septa, measuring 30–80 µm long and followed by 1–3 short cells. Conidia were hyaline, ellipsoid to ovate, 30 to 50 µm long and 15 to 20 µm wide, with an average length/width ratio of 1.5 to 2.5. Distinct fibrosin bodies were found. Chasmothecia were not found on sampled plants. The microscopic observations were in compliance with the morphological description of *Podosphaera xanthii* [current name *P. fusca* (Fr.) U. Braun & Shishkoff] (Mukhtar and Van Peer 2017). To confirm the morphological identification, the Internal Transcribed Spacer (ITS) region of rDNA was amplified with

ITS1/ITS4 primer pair (White et al. 1990). The obtained sequence (GenBank accession No. MG786537) showed 99% similarity with *P. xanthii* (KY388504) isolated from *E. hirta* using BLASTn. For pathogenicity tests, healthy seedlings pot-grown in a glasshouse at 25 ± 2 °C with 80% relative humidity were inoculated with 5 ml of a conidial suspension (10⁵ conidia/ml) and control plants treated with sterile water (Yamagishi et al. 2009). All inoculated plants developed powdery mildew signs and symptoms 7–10 days after inoculation, whereas control plants remained symptomless. To the best of our knowledge, this is the first report of powdery mildew disease on *E. hirta* caused by *P. fusca* in Odisha State, India.

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