

Exophiala nidicola



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***Exophiala nidicola* Gené, Madrid & Guarro, sp. nov.**

Etymology. The name refers to the habitat where this fungus was found, the nest of a bird.

Classification — *Herpotrichiellaceae*, *Chaetothyriales*, *Eurotiomycetes*.

On oatmeal agar (OA): *Mycelium* consisting of septate, branched, subhyaline, smooth, thin-walled hyphae mostly up to 4 µm wide, with moniliform segments consisting of swollen, verruculose, thick-walled cells up to 8 µm wide; the swollen cells can show meristematic growth and form microsclerotia up to 40 µm wide. *Conidiophores* poorly differentiated, simple or rarely branched, mostly formed by 2–3 cells. *Conidiogenous cells* intercalary, terminal or lateral, cylindrical, ellipsoidal or lageniform, annellidic, with one or rarely two conidiogenous loci up to 1 µm wide and inconspicuous annellations; intercalary conidiogenous cells 9–12 × 2–3 µm; terminal and lateral conidiogenous cells 5–9 × 2.5–4 µm. *Conidia* narrowly obovoidal to allantoid, hyaline, smooth, thin-walled, 3–5 × 1–1.5 µm. *Yeast cells* abundant, subcylindrical, ellipsoidal or reniform, 0–1-septate, subhyaline, thick-walled, 6–8 × 2–4 µm, with one or rarely two conidiogenous loci 0.5–1 µm wide, with inconspicuous annellations. *Sexual morph* not observed.

Culture characteristics — Colonies after 14 d at 24 °C attaining 13 mm on OA, floccose to lanose, brownish grey, raised at the centre, with an entire margin and a dark brown to grey reverse; colonies on MEA and SNA attaining 16 mm. On rich media such as Sabouraud dextrose agar and PDA, the fungus formed yeast-like colonies with an abundant cream-coloured mucilaginous exudate and a brownish diffusible pigment at room temperature. Growth positive in the range 6–37 °C, optimum temperature 30 °C, no growth observed at 40 °C.

Typus. SPAIN, Tarragona Province, L'Arbolí, isolated from the nest of an unidentified bird, Jan. 1990, J. Gené (holotype CBS H-21834, ex-type culture CBS 138589 = FMR 3889, ITS and LSU sequences GenBank MG701055 and MG701056, MycoBank MB823878).

Colour illustrations. L'Arbolí, Tarragona, Spain, where the sample was collected; colony sporulating on OA after 14 d at 25 °C; yeast cells and conidiogenous cells (scale bars = 10 µm); conidia (scale bar = 5 µm) and microsclerotia (scale bars = 20 µm).

Notes — The genus *Exophiala* includes common agents of phaeohyphomycosis and occasional agents of chromoblastomycosis and mycetoma in humans (Zeng et al. 2007, Revankar & Sutton 2010), as well as pathogens of various other warm- and cold-blooded animals (De Hoog et al. 2011, Seyedmousavi et al. 2013). It also includes numerous environmental, apparently non-pathogenic taxa occurring as saprophytes in soil and on plant material, and extremotolerant colonizers of nutrient-poor or polluted habitats (De Hoog et al. 2006, Isola et al. 2016, Madrid et al. 2016).

BLAST searches with the ITS sequence of isolate CBS 138589 revealed affinities with members of the '*Exophiala dermatitidis* clade' (De Hoog et al. 2003), such as *E. heteromorpha* CBS 232.33 ex-type (GenBank ITS: AY857524) and other strains 95–96 % identical, *E. phaeomuriformis* CBS 131.88 ex-type (GenBank ITS: AJ244259) 90 % identical, and *E. dermatitidis* CBS 207.35 ex-type (GenBank ITS: KF928444) and other strains 90 % identical. Considering that *Exophiala* spp. are widely represented in GenBank and that the cut-off for ITS-based species identifications in this genus is 99 % (Zeng et al. 2007, Madrid et al. 2016), strain CBS 138589 is regarded as a novel taxon. The distinguishing characters of *E. nidicola* are the production of some allantoid conidia and the absence of growth at 40 °C. However, its ability to grow at 37 °C and the production of strongly mucoid colonies on sugar-rich media are remarkable. Since extracellular polysaccharides, often forming slimy capsules, are considered putative virulence factors in *Exophiala* (Yurlova & De Hoog 2002), *E. nidicola* might represent another potential opportunistic pathogen. However, this hypothesis should be tested experimentally.

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