Blastobotrys meliponae
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**Blastobotrys meliponae** R.N. Barbosa, Boekhout, G.A. Silva, Souza-Motta & N. Oliveira, sp. nov.

*Etymology. me.li.po'nae. N.L. gen. m. meliponae, of the bee genus Meli­pona.*

Classification — *Trichomonascaceae, Saccharomycetales, Saccharomyces.*

**Hyphae** thin, 1–1.5 µm wide, septate, branched, hyaline. *Chlamydospores* globose or subglobose, terminal or intercalary, up to 5.5 µm diam. *Conidiophores* erect, sympodially branched, 130–260 µm long or more, 2.0–2.6 µm wide, simple or branched, tapering upwards, producing 1–2 joint conidiogenous cells. *Conidiogenous cells* are discrete, shortly pedicellate, globose or subglobose, (1.6–)2.5–3(–4) µm, with one seta. The conidiogenous cells separate easily from the conidiophores and are densely covered with conidia (up to 15 conidia, but mostly 6–13). Setae straight, sometimes slightly curved, narrowing towards the apex, 1-septate, not deciduous, 55–124 µm long or more (260 µm after 18 d of growth). *Conidia* holoblastic, globose, smooth, sessile, 1–1.5 (can be up to 2) µm diam; may form directly on 1–2 µm diam hyphae below and the tip of conidiophores. In yeast-like colonies, growth with budding observed on hyphae. Glucose, galactose and sucrose are fermented, and maltose, raffinose and xylose are not fermented. L-Arabinose, lactose, D-maltose, L-sorbose and L-rhamnose are assimilated. D-glucosamine, glycerol, raffinose, and mellibiose are not assimilated. Nitrate and citrate are not assimilated. Does not hydrolyse urea.

Culture characteristics — Colonies on 5 % malt extract agar (5 % ME) at 25 °C grow slowly, white with irregular margins, delicately downy, cerebriform, opaque, with light brownish reverse; 8 mm after 7 d. Colonies on yeast malt agar (YM) similar to those on 5 % ME but with light yellowish reverse; 11 mm in 7 d. Colonies on restricted growth agar (RG) similar to those on 5 % ME, but differ by plane colonies, and a colourless reverse; 5 mm in 7 d. Colonies at 27 °C, 28 °C, 30 °C and 37 °C were similar to colonies at 25 °C. At 10 °C no growth was observed.

**Typus. Brazil.** Recife, Pernambuco, isolated from honey of the bee Meli­pona scutellaris collected in Atlantic Forest (S8°7'30" W34°52'30") (metabolically inactive culture, holotype URM 7224, isolate CBS 14100, ITS sequences GenBank KT448719, KT448720, KT448721, LSU sequences GenBank KR779215, KR779216, KR779217, MycoBank MB812601).

Notes — Based on phylogenetic analyses using only sequences of the D1/D2 domains, the three isolates formed a clade with *B. proliferans*, but the sequences showed only 91 % identity with the LSU sequences of that species in a BLASTn analysis, indicating that these isolates represented a new yeast species of *Blastobotrys*. Members of *Blastobotrys* with a high similarity of the LSU rDNA D1/D2 domains to the new species were: *B. attinorum* (GenBank GU373758; 92 %), *B. proliferans* (GenBank EF584541; 91 %) and *B. nivea* (GenBank DQ442690; 90 %). *Blastobotrys meliponae* differs from *B. nivea* in having sympodially branched conidiophores, lacking budding cells and chlamydospores, but with lateral conidia forming directly on the hyphae. The species can be distinguished from *B. aristata* by the size of the conidiogenous cells (3–8 × 4.5–9 µm), conidiophore branching, number and size (100 µm) of setae, absence of lateral conidia formed directly on the hyphae, absence of chlamydospores and growth at 37 °C. *Blastobotrys proliferans* has a different branching of the conidiophores, conidiogenous cell size (3–4.5 × 4.5–7 µm), setae with a spathulate apex in older cultures and presence of distinct refractive bodies in the conidiogenous cells.

**Colour illustrations.** Bees and pot honey in the nest of *Melipona scutellaris*; chlamydospores, hyaline conidia on hyphae and conidiophores on YM agar for 7 d at 28 °C. Scale bars = 10 µm.