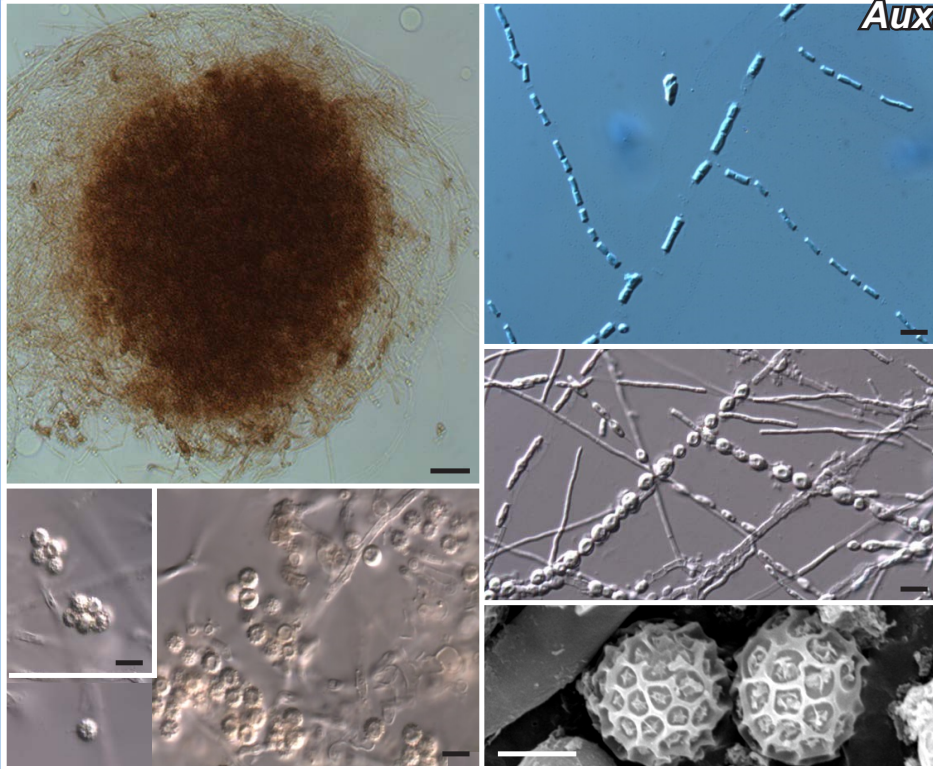


Auxarthron longisporum



Fungal Planet 198 – 26 November 2013

Auxarthron longisporum Stchigel, Y. Marín, Guarro & Cano, *sp. nov.*

Etymology. *longus*- and *-sporum* (L.), referring to the long arthroconidia.

Mycelium composed of hyaline, branched, septate, smooth- and thick-walled hyphae, 1–4 µm wide. *Ascomata* superficial, scattered or aggregated, globose, 170–450 µm diam, initially white, soon becoming orange-brown to reddish brown; peridial hyphae pale yellow to orange-brown, thick-walled, tuberculate, septate, 1.5–2.5 µm wide, branched and anastomosed to form a loosely reticulate network. *Asci* 8-spored, globose, 9–11 × 7.5–10 µm, evanescent. *Ascospores* subhyaline to golden-yellow or reddish brown, spherical, 3.5–4.5 µm, regularly reticulate, with small polygonal meshes, and narrow and conspicuous ridges. *Conidia* entero-arthric, aseptate, cylindrical, barrel-shaped or irregularly shaped, hyaline, 4–24 × 1–5.5 µm, formed from broad primary hyphae and from narrow, flexuose lateral branches, which sometimes are slightly curved. *Chlamydospores* present in mycelium, spherical to pyriform, 3.5–10 µm.

Culture characteristics — Colonies on oatmeal agar attaining 50–55 mm diam after 15 d at 25 °C, velvety and slightly cottony, margins arachnoid, yellowish white to light yellow (M. 3A3–3A5) (Kornerup & Wanscher 1984); reverse yellowish white to pale yellow (4A2–A3). Colonies on potato dextrose agar attaining 41–47 mm diam after 15 d at 25 °C, cottony to slightly granulate, white to pale yellow (3A1–3A3); reverse pale yellow to light yellow (4A3–4A5). Minimum and maximum temperature of growth: 5 and 30 °C, respectively. Ascomata are not produced at 30 °C. Optimal ascomatal production at 25 °C.

Typus. PORTUGAL, Beja, Castro Verde, from forest soil, 28 Dec. 1996, coll. A.M. Stchigel, J. Guarro & S.K. Abdullah, isol. A.M. Stchigel (holotype CBS H-21352, cultures ex-type CBS 135817 = FMR 12768, ITS sequence GenBank HG326873, LSU sequence GenBank HG326874, MycoBank MB804882).

Notes — Hitherto, the genus *Auxarthron* encompassed 18 species. Some phylogenetic studies placed this genus into the family *Onygenaceae* (Sigler et al. 2002, Sugiyama et al. 2002). To date, species of this genus has not been considered as human pathogens. However, Hubka et al. (2013) recently described *Auxarthron ostraviense* associated with a confirmed case of onychomycosis. A Blast search of the LSU sequence of our isolate showed a high degree of similarity (95 %) with those of *Auxarthron californiense* (AF038352), *Malbranchea gypsea* (AB359425) and *Malbranchea flocciformis* (AB359421). A Blast search using the ITS sequence of our isolate showed a 92 % similarity with those of *Auxarthron chlamydosporum* (AJ426458) and *A. concentricum* (AJ271428). Morphologically, the species most similar to *A. longisporum* are *A. chlamydosporum*, due to the production of chlamydospores and tuberculate peridial hyphae, and *A. concentricum*, with similar ascospore ornamentation (under the scanning microscope). However, *A. longisporum* can be distinguished from *A. concentricum* by the presence of ascospores with smaller polygonal meshes in the former, and from *A. chlamydosporum* because the arthroconidia are twice as long in *A. longisporum* than in *A. chlamydosporum*. On the other hand, *A. longisporum* is not able to grow above 30 °C, while *A. chlamydosporum* and *A. concentricum* grow at this temperature.

Colour illustrations. Castro Verde, Beja, Portugal; ascoma, arthroconidia, chlamydospores, asci and ascospores. Scale bars: ascoma = 50 µm; arthroconidia, chlamydospores, asci and ascospores = 5 µm; ascospore (SEM) = 2 µm.