Planamyces parisiensis
Planamyces Crous & Decock, gen. nov.

Etymology. Named after its characteristic conidia, which are flattened in side view.

Classification — Pyronemataceae, Pezizales, Pezizomycetes.

Mycelium consisting of hyaline, smooth, branched, septate hyphae. Conidiophores solitary, erect, arising from superficial hyphae, hyaline, smooth, subcylindrical, multisepalate, flexuous, developing terminal and intercalary branches that give rise to clusters of conidiophores; lateral branches hyaline, smooth, subcylindrical, giving rise to conidiogenous cells, frequently two, with bifurcate positioning. Conidiogenous cells subcylindrical, hyaline, smooth, clavate at apex; apex with several denticles, with apical and lateral holoblastic loci. Conidia solitary, globose but flattened in side view, hyaline, smooth, aseptate, becoming saffron with age, and developing small warts. Type species. Planamyces parisiensis Crous & Decock. MycoBank MB823383.

Planamyces parisiensis Crous & Decock, sp. nov.

Etymology. Named refers to Paris, the city where this species was collected.

Mycelium consisting of hyaline, smooth, branched, septate hyphae. Conidiophores solitary, erect, arising from superficial hyphae, hyaline, smooth, subcylindrical, multisepalate, flexuous, developing terminal and intercalary branches that give rise to clusters of conidiophores; lateral branches hyaline, smooth, subcylindrical, 15–35 × 5–7 µm, giving rise to conidiogenous cells, frequently two, with bifurcate positioning. Conidiogenous cells subcylindrical, hyaline, smooth, clavate at apex, 15–35 × 5–10 µm; apex with several denticles, 3–6 × 2–3 µm, with apical and lateral holoblastic loci. Conidia solitary, globose but flattened in side view, hyaline, smooth, aseptate, becoming saffron with age, and developing small warts, (6–)7–8(–9) µm in surface view, 5–6 µm diam in side view.

Culture characteristics — Colonies spreading, abundant aerial mycelium, covering dish after 2 wk at 25 °C. On MEA, PDA and OA surface and reverse dirty white with patches of peach.


Notes — Based on morphology, Planamyces appears quite distinct from the genera of hyphomycetes presently known (Seifert et al. 2011). Its hyaline conidiophores give rise to a cluster of conidiogenous cells, that in turn produce several denticles, forming globose conidia (flattened in side view) that turn saffron and finely warty with age. Planamyces is related to the sexual genera Monascus and Warcupia, but these genera lack asexual morphs, complicating a direct morphological comparison.

Based on a megablast search using the ITS sequence, the closest matches in NCBI’s GenBank nucleotide database were Monascus botryosa (GenBank NR_145208; Identities 534/624 (86 %), 41 gaps (6 %)), Sporendonema purpurascens (GenBank GQ272632; Identities 514/601 (86 %), 25 gaps (4 %)) and Scutellinia cejpi (GenBank KJ619951; Identities 519/639 (81 %), 46 gaps (7 %)). The highest similarities using the LSU sequence were Monascus botryosa (GenBank KC012688; Identities 842/856 (98 %), no gaps), Warcupia terrestris (GenBank DQ220467; Identities 842/856 (98 %), no gaps) and Melastiza flavorubens (GenBank DQ220369; Identities 822/856 (96 %), no gaps). The highest similarities using the rpb2 sequence were distant hits with Otidea mirabilis (GenBank JN993547; Identities 653/821 (80 %), 6 gaps (0 %)), Otidea concinna (GenBank JN993545; Identities 654/822 (80 %), 8 gaps (0 %)) and Otidea onotica (GenBank JN993551; Identities 650/819 (79 %), 6 gaps (0 %)).