



Fungal Planet 746 – 13 July 2018

Queiroziella C.R. Félix, J.D.P. Bezerra, R.P. Neves & Landell, *gen. nov.*

Etymology. Named for Luzinete Acioli de Queiroz, in acknowledgement for her contributions to the study of yeasts in the former Institute of Mycology of the University of Recife, Brazil.

Classification — *Incertae sedis*, *Cystobasidiomycetes*, *Pucciniomycotina*, *Basidiomycota*.

Pseudohyphae and *true hyphae* not formed. *Sexual reproduction* not observed. *Ballistoconidial* production absent. *Colonies*

are pink to salmon, smooth, butyrous to mucoid and glistening. *Budding cells* present. *Fermentation* not observed.

Type species. *Queiroziella brasiliensis* C.R. Félix, P. Valente & Landell. MycoBank MB822321.

Queiroziella brasiliensis C.R. Félix, P. Valente & Landell, *sp. nov.*

Etymology. Name refers to the country, Brazil, where this yeast was isolated.

On YEPD agar after 3 d at 22–25 °C, cells are globose to oval (4–6 × 3–4 μm), and the colonies are pink to salmon, smooth, butyrous to mucoid and glistening. *Vegetative reproduction* is by single budding. After 3 wk in Dalmou plate culture on cornmeal agar, *pseudohyphae* or *true hyphae* are not formed. *Sexual reproduction* is not observed. *Ballistoconidia* production is absent. *Fermentation ability* is negative. The following carbon compounds are assimilated: N-Acetylglucosamine, D-arabinose, erythritol, galactose, D-mannitol, raffinose, soluble starch, sorbitol, inulin (slow), D-glucose (slow), DL-lactate (slow), melezitose (slow), melibiose (slow), D-ribose (slow), D-trehalose (slow), tween 80 (slow), xylytol (slow), cellobiose (variable), glycerol (variable), lactose (variable), D-maltose (variable), sodium gluconate (variable), sucrose (variable) and tween 20 (variable). No assimilation of L-arabinose, galacturonate, myo-inositol, L-arabinitol, L-rhamnose, xylose, succinate, galactitol, citrate and salicin. Assimilation of nitrogen compound L-lysine is variable and no assimilation of potassium nitrate, sodium nitrite, ethylamine and cadaverine. Growth at 22, 25 and 30 °C and no growth was observed at 35 °C. Growth is not observed on YPD with 50 % glucose. No growth in the presence of 10 % sodium chloride. After 21 d, growth is observed in the presence of 0.01 % and 0.1 % cycloheximide. Urease activity and diazonium blue B reaction are positive.

Typus. BRAZIL, União dos Palmares municipality, Alagoas state, Serra da Barriga, S09°10'11" W36°05'19", as epiphytic yeast on leaves of *Portea leptantha* (*Bromeliaceae*), 31 July 2013, C.R. Félix & M.F. Landell (holotype as metabolically inactive culture, CBS 14582 = UFMG-CM-Y6102 = BSB 15, ITS, LSU and *rpb2* sequences GenBank KY305143, KX348021 and MH187958, MycoBank MB824924).

Additional material examined. BRAZIL, Viamão municipality, Rio Grande do Sul state, Parque de Itapuã, S30°21'19" W51°01'57", as epiphytic yeast on leaves of *Tillandsia geminiflora* (*Bromeliaceae*), 5 Apr. 2004, P. Valente & M.F. Landell, cultures CBS 11152 = MYA-4544 = BI 02, ITS, LSU and *rpb2* sequences GenBank MH244424, EU200783 and MH187959; on *Vriesea gigantea* (*Bromeliaceae*), 25 May 2007, P. Valente & M.F. Landell, cultures CBS 11151 = MYA-4543 = BI 327, ITS and LSU sequences GenBank MH244425 and GU566018.

Colour illustrations. Bromeliad *Tillandsia* sp. in the Serra da Barriga, União dos Palmares, Alagoas, Brazil (photo credit H.M.N. Casanova); microscopy showing the yeast microstructures and colonial macromorphology. Scale bar = 10 μm.

Notes — The new genus *Queiroziella* is proposed based on a phylogenetic analysis and physiological and biochemical features. Phylogenetic inferences of LSU (D1/D2 domain) and ITS rDNA and *rpb2* sequences of *Queiroziella* placed the new genus in a single clade with high support values related to *Sakaguchia*, *Cystobasidium* and *Occultifur*. According to the BLASTn searches (9 Apr. 2018) the LSU rDNA sequences have low identity (93 %) to sequences deposited as *Cystobasidium* spp. (e.g., GenBank FJ515245), *Buckleyzyma armeniaca* (GenBank AF189920), *Symmetrospora* spp. (e.g., GenBank AF189984) and *Occultifur* sp. (GenBank KC698874), amongst others. The ITS rDNA sequences have low identity (90–91 %) to some sequences deposited as *Occultifur* sp. (e.g., GenBank KC698874) and *Cystobasidium* spp. (e.g., *C. minutum*, CBS 2177, GenBank AF190010). The *rpb2* sequences have low identity (77–78 %) to sequences deposited as *Cystobasidium* spp. (e.g., GenBank KJ708214), *Sakaguchia* spp. (e.g., GenBank KJ708346.1), *Microsporomyces bloemfonteinensis* (e.g., GenBank KJ708215), amongst others. *Queiroziella brasiliensis* differs physiologically and biochemically from *Sakaguchia* species by inulin assimilation, from *Cystobasidium* species by assimilation of melibiose and from *Occultifur* species by assimilation of soluble starch and raffinose (Libkind et al. 2010, Fell et al. 2011, Kurtzman et al. 2011, Laich et al. 2013, Wang et al. 2015, Yurkov et al. 2015).

Legend and tree are in MycoBank.

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