

Outlineoffungi.org - Note 1475 *Pichiomyces*

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Pichiomyces W.P. Wu & Y.Z. Diao

Pichiomyces was introduced to accommodate *Pichiales* M. Groenew., Hittinger, Opulente & A. Rokas as the type order according to morphological characteristics, physiological features, and a concatenation single-model (LG+G4) approach on a data matrix of 1672 taxa (1644 fungi and 28 outgroups) and 290 BUSCO genes (Groenewald et al. 2023). *Pichiomyces* encompasses several orders, including *Alaninales*, *Pichiales*, and *Serinales*. The order-specific protein families OG0005494 and OG0005374 are identified within the *Alaninales*, *Pichiales*, and *Serinales* (Groenewald et al. 2023). Phylogenetic analyses in these orders utilize DNA sequences encoding LSU rDNA, SSU rDNA, EF-1 α , and mtSSU rDNA were conducted to study the evolutionary relationships within this group (Daniel et al. 2014). The new order was typified by *Pichiaceae* M. Groenew., Hittinger, Opulente & A. Rokas, *Pichia* E.C. Hansen, *Pichia membranifaciens* (E.C. Hansen) E.C. Hansen as type family, type genus, and type species, respectively. Some genera that were formerly designated within the *Saccharomycetales incertae sedis* by Kurtzman et al. (2011) have now been incorporated into the order *Pichiales*. This includes genera from *Pichiaceae*, as well as the recently introduced genus *Allodekкера* by Jutakanoke et al. (2017). Additionally, while *Komagataella* was originally classified in *Phaffomycetaceae* by Kurtzman et al. (2011), genome-scale analyses have indicated its reassignment to the order *Pichiales*. The taxonomic placement of this new class is *Saccharomycotina* and *Ascomycota* (Groenewald et al. 2023).

References

- Daniel HM, Lachance MA, Kurtzman CP. 2014 – On the reclassification of species assigned to *Candida* and other anamorphic ascomycetous yeast genera based on phylogenetic circumscription. *Antonie Van Leeuwenhoek* 106, 67-84.
- Groenewald M, Hittinger CT, Bensch K, Opulente DA, et al. 2023 – A genome-informed higher rank classification of the biotechnologically important fungal subphylum *Saccharomycotina*. *Studies in Mycology* 105(1), 1– 22.
- Jutakanoke R, Endoh R, Takashima M, Ohkuma M, et al. 2017 – *Allodekкера sacchari* gen. nov., sp. nov., a yeast species in the *Saccharomycetales* isolated from a sugar factory. *International Journal of Systematic and Evolutionary Microbiology* 67(2), 250– 5.
- Kurtzman C, Fell JW, Boekhout T, editors. 2011 – *The yeasts: a taxonomic study*. Elsevier.

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