

Outlineoffungi.org - Note 1464 *Lipomycetales*

Web-links: [Index Fungorum](#), [Facesoffungi](#), [MycoBank](#), [GenBank](#)

Lipomycetales M. Groenew., Hittinger, Ofulente & A. Rokas

Lipomycetales was erected to accommodate *Lipomycetaceae* E.K. Novák & Zsolt as the type family based on morphological characteristics, physiological features, and a combined 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). The type genus and type species are *Lipomyces* Lodder & Kreger *Lipomyces starkeyi* Lodder & Kreger, respectively. *Lipomycetales* is classified under *Lipomycetes*, *Saccharomycotina*, *Ascomycota* (Groenewald et al. 2023). *Lipomycetaceae* is the only family in the *Lipomycetales*. The genera that have been identified in the *Lipomycetales* are *Babjevia*, *Dipodascopsis*, *Kockiozyma*, and *Lipomyces* (with the asexual morph known as *Myxozyma*). Groenewald et al. 2023). The diagnosis of *Lipomycetales* was based on order-specific protein families OG0010973, OG0011052, OG0008472, OG0097159 OG0009553 and phylogenetic analyses, utilizing LSU rDNA or DNA sequences that encode SSU rDNA, LSU rDNA, mtSSU rDNA, and EF-1 α (Kurtzman et al. 2007). These taxa can produce intracellular lipids and extracellular starch-like compounds. They do not engage in fermentation, and they do not assimilate nitrate (Groenewald et al. 2023).

References

- Groenewald M, Hittinger CT, Bensch K, Ofulente DA, et al. 2023 – A genome-informed higher rank classification of the biotechnologically important fungal subphylum *Saccharomycotina*. *Studies in Mycology* 105(1), 1– 22.
- Kurtzman CP, Albertyn J, Basehoar-Powers E. 2007 – Multigene phylogenetic analysis of the *Lipomycetaceae* and the proposed transfer of *Zygozyma* species to *Lipomyces* and *Babjevia anomala* to *Dipodascopsis* *FEMS Yeast Research* 7, 1027–1034.

Entry by

Maryam Tavakol Noorabadi, Innovative Institute for Plant Health, Zhongkai University of Agriculture and Engineering, Guangzhou 510225, People's Republic of China

(Edited by **Kevin D Hyde**)

Published online 24 July 2024