

## Outlineoffungi.org - Note 837 *Capellomyces*

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*Capellomyces* Hanafy, Vikram B. Lanjekar, Prashant K. Dhakephalkar, T.M. Callaghan, Dagar, 513 G.W. Griff, Elshahed, and N.H. Youssef

*Capellomyces* was established by Hanafy et al. (2020) to accommodate *C. foraminis* Hanafy, Vikram B. Lanjekar, Prashant K. Dhakephalkar, T.M. Callaghan, Dagar, G.W. Griff, Elshahed, and N.H. Youssef as the type species, based on morphology and phylogenetic analysis with ITS and D1-D2 LSU sequence data. The genus currently has two species including *C. foraminis*, isolated from fecal samples of a Boer goat, Texas, USA, and *C. elongatus*, isolated from fecal samples of a domesticated but forest grazing goat in Kerala, India. Phylogenetic analysis based on ITS1, D1/D2 LSU, and RPB1, along with phylogenomic analysis places *Capellomyces* in *Anaeromycetaceae* (Hanfey et al. 2023). The life cycle of *Capellomyces* involves the production and release of motile spores (zoospores) from sporangia (Hanafy et al. 2020). These zoospores encyst, germinate, and develop into a thallus structure, anchoring the formation of new sporangia. *Capellomyces* spores are monoflagellate and sporangia are pleomorphic. Sporangiohores in *C. foraminis* are unbranched and shorter, in contrast to the extremely long and multisporangiate thalli of *C. elongatus*. The genus exhibits monocentric thallus development and filamentous rhizoidal growth pattern. The taxonomic placement of *Capellomyces* is in *Anaeromycetaceae*, *Neocallimastigales*, *Neocallimastigomycetes*, *Neocallimastigomycotina*, and *Neocallimastigomycota*.

### References

- Hanafy RA, Lanjekar VB, Dhakephalkar PK, Callaghan TM, Dagar SS et al. 2020 – Seven new *Neocallimastigomycota* genera from wild, zoo-housed, and domesticated herbivores greatly expand the taxonomic diversity of the phylum. *Mycologia* 112, 1212–1239. <https://doi.org/10.1080/00275514.2019.1696619>
- Hanafy RA, Wang Y, Stajich J., Youssef NH, Pratt CJ et al. 2023 – Phylogenomic analysis of the *Neocallimastigomycota*: Proposal of *Caecomycetaceae* fam. nov., *Piromycetaceae* fam. nov., and emended description of the families *Neocallimastigaceae* and *Anaeromycetaceae*. *International Journal of Systematic and Evolutionary Microbiology* 73(2), 5735. <https://doi.org/10.1099/ijsem.0.005735>

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