

Outlineoffungi.org - Note 930 *Malbranchea*

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Malbranchea Sacc.

Saccardo (1882) established *Malbranchea* with the type species *M. pulchella* which is associated with wet paper or cardboard as a saprophyte in terrestrial habitats in Normandy, France (Saccardo 1882). Currently, 40 species are accepted in *Malbranchea* (Index Fungorum 2023). The majority of *Malbranchea* are distributed from animal and human infections (Sigler and Carmichael 1976; Benda and Corey 1994; Lyskova 2007, Salar and Aneja 2007; Govind et al. 2017; Durdu et al. 2019; Rodríguez-Andrade et al. 2021; Kandemir et al. 2022). Based on the analysis of multigene (LSU, ITS, *TUB*, *RP60S*, *TEF1*, *TEF3*, *RPB1*, and *RPB2*) sequences data this genus forms a clade separate from *Onygenaceae* family and was accommodated in the new family *Malbrancheaceae*; (Kandemir et al. 2022). This genus is characterized by alternate, hyaline arthroconidia produced in the curved branches from the vegetative hyphae. The sexual morph genus *Auxarthron* (originally classified in *Onygenaceae*, *Onygenales*) has reddish brown, appendaged gymnothecial ascomata, 8-spored, globose, prototunicate asci with globose or oblate, reticulate ascospores (Solé et al. 2002). It initially has a close relationship with the asexual genus *Malbranchea*, i.e., *A. conjugatum* has a malbranchea-like asexual morph, and *M. albolutea* produces a sexual morph similar to *Auxarthron* (Sigler and Carmichael 1976). In addition, *M. filamentosa* has been reported and connected with *Auxarthron* according to molecular evidence and morphologically similar ascomata produced by *Auxarthron* (Sigler et al. 2002). Thus, *Auxarthron* has connected with the asexual morph and is accepted as a synonym of *Malbranchea* according to molecular data and the principle of priority (Turland et al. 2018; Rodríguez-Andrade et al. 2021; Kandemir et al. 2022). Morphologically, species with enteroarthric conidia are generally classified under *Malbranchea* in the order Onygenales (Kandemir et al. 2022). Malbranchea-like species are also present in the genus *Arachnomyces* (*A. glareosus*, *A. kanei*, *A. nodosetosus*, *A. peruvianus*) and *Spiromastigoides* (*S. albida*) which have been also implicated in animal and human infections (Malloch and Cain 1970; Guarro et al. 1993; Gibas et al. 2004; Stuchlík et al. 2011; Järv 2015; Gupta et al. 2016; Brasch et al. 2017; Stchigel et al. 2017; Sun et al. 2019).

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Published online 5 April 2024