

Outlineoffungi.org - Note 1527 *Pseudocastanedospora*

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Pseudocastanedospora M. Li, M. Raza & L. Cai

The monotypic genus *Pseudocastanedospora* was introduced by Li et al. (2023) under *Extremaceae* (*Mycosphaerellales*, *Dothideomycetidae*, *Dothideomycetes*, *Pezizomycotina*, *Ascomycota*) to accommodate *Pseudocastanedospora guangdongensis* M. Li & L. Cai according to morphology and phylogeny using a concatenated dataset of ITS and LSU sequences. In the asexual morph of *Pseudocastanedospora*, the conidiophores are observed as solitary structures occurring at the terminal, lateral, or intercalary positions on the hyphae. These conidiophores are often branched and display a thick-walled, pale to medium-brown appearance. They are characterized as micro- to macronematous, septate, and exhibit a constricted appearance at the septa. The overall structure can be described as subcylindrical, showing variations from straight to geniculate or even irregularly curved forms, indicating a degree of flexibility in growth patterns. The conidiogenous cells, responsible for the production of conidia, appear at the terminal, intercalary, or lateral points and are distinguished by their straight, darkened, and thickened subcylindrical shape. Conidia themselves are produced either as solitary units or in chains, taking on shapes that range from subglobose to irregular. Their coloration is typically pale brown, and they possess a smooth, thick-walled structure that allows for resilience. The conidia range from 0 to 1 septate, indicating variability in septation that may impact their viability and dispersal mechanisms. Notably, the sexual morph of the genus *Pseudocastanedospora* has not been observed (Li et al. 2023). Phylogenetically, the analysis revealed that two strains of *Pseudocastanedospora guangdongensis* clustered within an independent clade, positioned as a sister group to the genus *Castanedospora*. Morphologically, significant differences were observed in the shape of conidiophores, conidiogenous cells, and conidia. In *Pseudocastanedospora*, the conidiophores are characterized by a smooth texture, while the conidiogenous cells are predominantly subcylindrical, contributing to the production of conidia that are typically 0–1 septate. In contrast, *Castanedospora* exhibits a more complex morphology, with conidiophores that are verrucose in appearance. The conidiogenous cells in this genus take on doliiform or cylindrical shapes. Furthermore, the conidia of *Castanedospora* are significantly more variable, exhibiting a range of 31–200 septate structures (Li et al. 2023).

Reference

Li M, Raza M, Song S, Hou L, et al. 2023 – Application of culturomics in fungal isolation from mangrove sediments. *Microbiome* 11(1), 272.

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