



## A corticioid fungus, *Gloeocystidiellum yunnanense* sp. nov. (Russulales) with characteristic gloeocystidia from southern China

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With 4 figures and 1 table

**Abstract:** A new species, *Gloeocystidiellum yunnanense*, is proposed based on morphological and molecular evidences. *Gloeocystidiellum yunnanense* is characterized by resupinate basidiomata with cracking hymenial surface, a monomitic hyphal system with generative hyphae bearing clamp connections, presence of two types of gloeocystidia and ellipsoid, colorless, slightly thick-walled, aculeate, amyloid, acyanophilous basidiospores measuring as  $3.9\text{--}4.7 \times 3\text{--}3.5 \mu\text{m}$ . Sequences of ITS and LSU nrRNA gene regions of the studied samples were generated, and phylogenetic analyses were performed with maximum likelihood, maximum parsimony and Bayesian inference methods. The phylogenetic analysis based on molecular data of ITS+nLSU in Russulales showed that *Gloeocystidiellum yunnanense* nested into family Stereaceae, in which *G. yunnanense* grouped with *G. porosum*. The ITS sequences indicated that the new species clustered into genus *Gloeocystidiellum*, in which *G. yunnanense* was sister to *G. porosum*.

**Keywords:** Molecular phylogeny; Stereaceae; taxonomy; wood-rotting fungi; Yunnan Province

## Introduction

Corticioid fungi are mainly a diverse and heterogeneous group of basidiomycete fungi, in which basidiomes are generally diverse configurations as smooth, grandinoid, odontoid or poroid hymenophore (Gorjón 2020). Molecular phylogenetic studies revealed that the