

Phylogeographic Messages Encoded in the rDNA of the Commercial Mushroom *Zhenghonggu*[®] From Fujian, China

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Individualities of precious health mushroom called *Zhenghonggu*[®] from respective protections scattered among all main mountains of Fujian China were collected and recognized locally, then compared with *Russula griseocarnosa*. Their internal transcribed spacer (ITS) region (ITS1, ITS2 and 5.8S rDNA) of the nuclear rDNA were amplified, AMOVA analyzed, nested clade analyzed and then compared with the ITS sequences of relative *Russula* species from other regions of China to confirm the taxonomic status of *Zhenghonggu*[®] and its population structure. Total 23 haplotypes from different protections of Fujian can be clustered into three clades similar to the three lineages of *Dahongjun*[®] from southeastern China reported by Li et al. The geographic distribution characteristic of these three phylogeny clades may be closely coupled with the vegetation regionalization and/or the differences of coenosium construction of *Fagaceae* that is the host of *Russula griseocarnosa*. The correlation of taxonomy, phylogeny and geographical distribution of *Russula* are discussed.

Keywords : Geographical distribution, ITS region, Phylogeny relationship, *Russula griseocarnosa* X.H. Wang, Zhu L. Yang & Knudsen, symbiotic specialization