

Activity *in vitro* and *in vivo* against Plant Pathogenic Fungi of Grifolin Isolated from the Basidiomycete *Albatrellus dispansus*

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In the course of screening for novel naturally occurring fungicides from mushrooms in Yunnan province, China, the ethanol extract of the fruiting bodies of *Albatrellus dispansus* was found to show antifungal activity against plant pathogenic fungi. The active compound was isolated from the fruiting bodies of *A. dispansus* by bioassay-guided fractionation of the extract and identified as grifolin by IR, ¹H and ¹³C NMR and mass spectral analysis. Its antifungal activities were evaluated *in vitro* against 9 plant pathogenic fungi and *in vivo* against the plant disease of *Erysiphe graminis*. *In vitro*, *Sclerotinia sclerotiorum* and *Fusarium graminearum* were the most sensitive fungi to grifolin, and their mycelial growth inhibition were 86.4 and 80.9% at 304.9 μ M, respectively. Spore germination of *F. graminearum*, *Gloeosporium fructigenum* and *Pyricularia oryzae* was almost completely inhibited by 38.1 μ M grifolin. *In vivo*, the curative effect of grifolin against *E. graminis* was 65.5% at 304.9 μ M after 8 days.

Key words: Grifolin, *Albatrellus dispansus*, Antifungal Activity, Plant Pathogenic Fungi