

## Phytochemistry Vol. 114

## Contents

## Special Issue: Ganoderma Phytochemistry

## EDITORIAL

Editorial for the special issue on *Ganoderma*

pp 5–6

R. Russell M. Paterson\*, Nelson Lima

## ARTICLES

Global diversity of the *Ganoderma lucidum* complex (Ganodermataceae, Polyporales) inferred from morphology and multilocus phylogeny

pp 7–15

Li-Wei Zhou, Yun Cao, Sheng-Hua Wu, Josef Vlasák, De-Wei Li, Meng-Jie Li, Yu-Cheng Dai\*



*Ganoderma lingzhi* is the most widely cultivated medicinal species within the *Ganoderma lucidum* complex, within which 13 species have been recognized from morphology and phylogeny.

Failed PCR of *Ganoderma* type specimens affects nomenclature

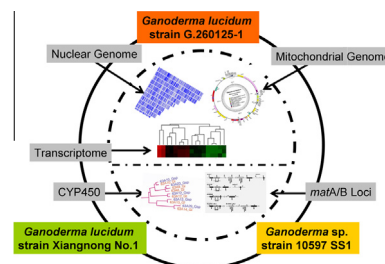
pp 16–17

R.R.M. Paterson\*, N. Lima

Genome analysis of medicinal *Ganoderma* spp. with plant-pathogenic and saprotrophic life-styles

pp 18–37

Ursula Kües, David R. Nelson, Chang Liu\*, Guo-Jun Yu, Jianhui Zhang, Jianqin Li, Xin-Cun Wang, Hui Sun

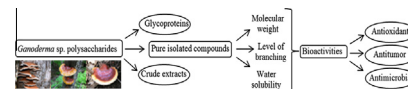


This review carries out a detailed comparison of the nuclear genomes, mitochondrial genomes and transcriptomes from several *Ganoderma* species. Genes involved in biosynthetic pathways such as CYP450 genes and in cellular development such as *matA* and *matB* genes are characterized and compared in detail.

### Chemical features of *Ganoderma* polysaccharides with antioxidant, antitumor and antimicrobial activities

pp 38–55

Isabel C.F.R. Ferreira\*, Sandrina A. Heleno, Filipa S. Reis, Dejan Stojkovic, Maria João R.P. Queiroz, M. Helena Vasconcelos, Marina Sokovic

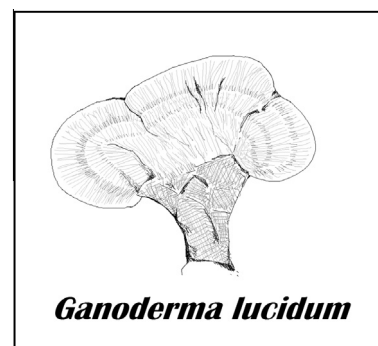


This review aims to contribute to the knowledge on bioactivity (antioxidant, antitumor and antimicrobial properties) of polysaccharides, glycoproteins and polysaccharidic extracts obtained from *Ganoderma* species. The chemical features were analyzed and related with the correspondent bioactivity.

### From 2000 years of *Ganoderma lucidum* to recent developments in nutraceuticals

pp 56–65

Karen S. Bishop\*, Chi H.J. Kao, Yuanye Xu, Marcus P. Glucina, R. Russell M. Paterson, Lynnette R. Ferguson

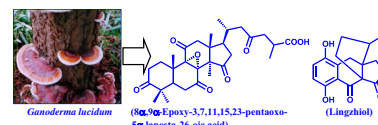


A review. *Ganoderma lucidum* has been revered as a medicinal mushroom to treat assorted diseases and prolong life. Nowadays it is a multi-billion dollar industry.

### Secondary metabolites from *Ganoderma*

pp 66–101

Sabulal Baby\*, Anil John Johnson, Balaji Govindan

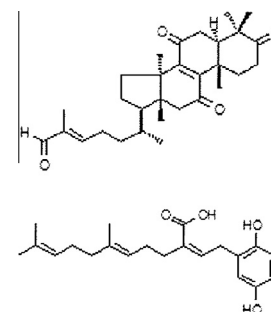


*Ganoderma* is a genus of medicinal mushrooms. Phytochemical studies led to the isolation of over 380 terpenoids (ganoderic acids, lucidenic acids, meroterpenoids) from genus *Ganoderma*. More than 30 steroidal compounds were also isolated from the genus. Terpenoids, steroids (and polysaccharides) isolated from *Ganoderma* showed significant biological activities.

### *Ganoderma pfeifferi* – A European relative of *Ganoderma lucidum*

pp 102–108

Ulrike Lindequist\*, Wolf-Dieter Jülich, Sabine Witt



*Ganoderma pfeifferi* contains farnesylhydroquinones named ganomycins and several triterpenoid compounds. Extracts and some of the isolated compounds possess antibacterial, antiviral and other biological activities.

Download English Version:

<https://daneshyari.com/en/article/5164376>

Download Persian Version:

<https://daneshyari.com/article/5164376>

[Daneshyari.com](https://daneshyari.com)