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Pharmacology and Clinical Application of *Ganoderma lucidum* (Curt.: Fr.) P. Karst. Spores

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Ganoderma lucidum (Curt.: Fr.) P. Karst. has been used as a medicine and health food in China. Many studies were focused mainly on the fruiting body of *G. lucidum*. In the author's laboratory, the pharmacological and clinical use of *G. lucidum* spores was studied. The alcohol–water-soluble portion of *G. lucidum* (AWGL) given by injection has protective action against immunological myositis in rats and in 2,4-D-induced myotonia in mice expressed in lowering serum creatine phosphokinase (CPK) and aldolase. AWGL also inhibited lipid peroxidative damage of rat leg muscle homogenates induced by oxygen free radicals and eliminated superoxide anion produced in a xanthine/xanthine oxidase system *in vitro*. AWGL has a stimulating effect on rat peritoneal macrophage activity and significantly antagonized the suppressive effects of prednisolone on spleen DNA biosynthesis in mice, indicating that AWGL may modulate the immune function. In addition, injection of AWGL markedly enhanced barbiturate-induced sleeping time and reduced spontaneous motor activity in mice. AWGL could promote brain and heart microcirculation in mice. The injections made from the alcohol–water-soluble fraction of *G. lucidum* spores have been used for treating several kinds of neuromuscular diseases such as dermatomyositis, polymyositis, scleroderma, alopecia, and neurasthenia. The patients' symptoms improved. No side effects were observed. The results suggested that *G. lucidum* spores have multiple pharmacological activities in animals and therapeutic effects on several human neuromuscular diseases.

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