

Ganoderma. Atividade antiproliferativa de duas espécies de Ganoderma em linhagens de células tumorais

Evaluation of antiproliferative activities and action mechanisms of extracts from two species of Ganoderma on tumor cell lines.

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Source

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Abstract

The antiproliferative activities on tumoral cells, namely, human breast cancer (MCF-7 and MDA-MB-231), hepatoma (HepG2) and myeloid leukemia (HL-60), of ethanolic extracts from two species of Ganoderma, *G. lucidum* and *G. sinense*, were investigated. Though both extracts had certain antiproliferative activities, their chemical characteristics, including nucleosides, triterpenoids and sterols, were significantly different. Their effects on MDA-MB-231 cells were further studied using apoptotic detection and cell cycle analyses. As a result, both had apoptosis induction through the alternation of mitochondrial transmembrane depolarization, though no triterpenoids were detected in ethanolic extract of *G. sinense*. Furthermore, the two extracts from *G. lucidum* and *G. sinense* could arrest cell cycle at different phases. This study showed that ethanol extracts of both *G. lucidum* and *G. sinense* have antitumoral proliferation effect through both apoptosis pathway and cell cycle arrest effect, and some other compounds such as sterols and/or nucleosides may contribute to their activity besides triterpenoids.

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