

## **Anti-Proliferative Effect of Chanterelle (Cantharellus) Mushroom Extracts on Glioblastoma Multiforme Cell Line U87MG**

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**Abstract :** For centuries, mushrooms have been used in folk medicine; however, knowledge of the composition and properties of fungi comes from the last twenty years. Mushrooms show antibacterial, antioxidant, antitumor and immune-stimulating properties; however, there is a lack of reports, on anticancer treatment of brain gliomas. The aim of this study was to examine influence of Chanterelle mushroom (*Cantharellus Adans. ex Fr.*) ethanolic (CHE) and water (CHW) extracts, on glioblastoma multiforme cell line (U87MG). Anti-proliferative activity of CHE and CHW in concentration (50-1000 µg/mL) was determined by a cytotoxicity test and DNA binding by [<sup>3</sup>H]-thymidine incorporation after 24, 48 and 72h of incubation with U87MG glioblastoma cell line. The statistical analysis was performed using Statistica v. 13.0 software. Significant differences were assumed for  $p < 0.05$ . We examined that CHE extracts in all the tested concentrations (50, 100, 250, 500, 1000 µg/mL) after all hours of incubation significantly decreased cell viability ( $p < 0.05$ ) on U87MG cell line, which was confirmed by the significant ( $p < 0.05$ ) reduction of DNA synthesis. Our results suggest that only CHE extract a cytotoxic and anti-proliferation activities on U87MG cell line.

**Keywords :** anticancer, food, glioblastoma, mushroom

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