

Inhibitory Effects on HepG2 Cell Proliferation and Induction of Cell Cycle Arrest by Dry Ethanolic Extract of *Glinus oppositifolius*

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SUMMARY. Even with recent advances in the treatment of liver cancer, it remains one of the most difficult cancers to treat, ranks fifth for the most frequent fatal malignancy. Patients are frequently diagnosed in advanced stages, contributing to its poor prognosis but treatment with natural compounds provide better outcomes for lower systemic toxicity. The anticancer activity of *Glinus oppositifolius* (GO) against leukemia, has been proven. However, the mechanism that can inhibit liver cancer cell growth is still unclear. In the present study we investigated the anticancer activity of ethanolic GO (EGO) against HepG2 cells. Total flavonoid of 2.15% was found in the EGO extract. The proliferation of HepG2 was significantly lower after 72 h of incubation with ½ IC50 of EGO. HepG2 cells treated with EGO extracted were accumulated in the G0-G1 phase. These results indicated that *Glinus oppositifolius* leaves could inhibit the proliferation of HepG2 cells and induce cell cycle arrest.

RESUMEN. Incluso con los recientes avances en el tratamiento del cáncer de hígado, sigue siendo uno de los cánceres más difíciles de tratar y ocupa el quinto lugar entre las neoplasias malignas mortales más frecuentes. Los pacientes suelen ser diagnosticados en etapas avanzadas, lo que contribuye a su mal pronóstico, pero el tratamiento con compuestos naturales proporciona mejores resultados con una menor toxicidad sistémica. Se ha demostrado la actividad anticancerígena de *Glinus oppositifolius* (GO) contra la leucemia. Sin embargo, el mecanismo que puede inhibir el crecimiento de células cancerosas de hígado aún no está claro. En el presente estudio investigamos la actividad anticancerígena del GO etanólico (EGO) contra las células HepG2. En el extracto de EGO se encontró un total de flavonoides del 2,15%. La proliferación de HepG2 fue significativamente menor después de 72 h de incubación con ½ CI50 de EGO. Las células HepG2 tratadas con EGO extraído se acumularon en la fase G0-G1. Estos resultados indicaron que las hojas de *Glinus oppositifolius* podrían inhibir la proliferación de células HepG2 e inducir la detención del ciclo celular.

KEY WORDS: antioxidant, flavonoids, hepatocellular carcinoma, MTT.

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