



## Effect of Griffipavixanthone on the Proliferation, Apoptosis, and Cell Cycle of Human Gastric Carcinoma Cells

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**SUMMARY.** Griffipavixanthone (GPX) is a bioactive compound isolated from *Garcinia oblongifolia* Champ. The present study aimed at investigating the effect of GPX on proliferation, apoptosis, and cell cycle of human gastric carcinoma cells. BGC-803 and HGC-27 cells were treated by various concentrations of GPX (0, 1, 3, 5, 10, 15, and 20  $\mu$ M). Cell proliferation was determined by CCK8 assay, and apoptosis was detected by Annexin V/propidium iodide (PI) assays. Finally, cell cycle was analyzed by flow cytometry. GPX inhibits BGC-803 and HGC-27 cells proliferation in a dose-dependent manner. Apoptosis is induced in both BGC-803 and HGC-27 after GPX treatment. Cell-cycle analysis revealed that only remarkable cell cycle arrest occurred at the S phase in BGC-803 cells at 48 h post-incubation. GPX inhibits cell proliferation and induces apoptosis in BGC-803 and HGC-27 cells, but it only affects the cell cycle in BGC-803 cells.

**RESUMEN.** Griffipavixanthone (GPX) es un compuesto bioactivo aislado de *Garcinia oblongifolia* Champ. El presente estudio tuvo como objetivo investigar el efecto de GPX sobre la proliferación, la apoptosis y el ciclo celular de las células del carcinoma gástrico humano. Las células BGC-803 y HGC-27 se trataron mediante diversas concentraciones de GPX (0, 1, 3, 5, 10, 15 y 20  $\mu$ M). La proliferación celular se determinó mediante el ensayo CCK8 y la apoptosis se detectó mediante ensayos con anexina V/yoduro de propidio (PI). Finalmente, el ciclo celular se analizó mediante citometría de flujo. GPX inhibe la proliferación de células BGC-803 y HGC-27 de una manera dependiente de la dosis. La apoptosis se induce tanto en BGC-803 como en HGC-27 después del tratamiento con GPX. El análisis del ciclo celular reveló que solo se produjo una detención notable del ciclo celular en la fase S en las células BGC-803 a las 48 h después de la incubación. GPX inhibe la proliferación celular e induce la apoptosis en las células BGC-803 y HGC-27, pero solo afecta el ciclo celular en las células BGC-803.

**KEY WORDS:** apoptosis, cell cycle, griffipavixanthone, human gastric carcinoma cells, proliferation.

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