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**YC-1, soluble guanylate cyclase stimulator, induces G0/G1 arrest and apoptotic cell death in Cisplatin-resistant human oral cancer CAR cells**

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In this study, YC-1, a soluble guanylate cyclase stimulator, suppressed viability in Cisplatin-resistant human oral cancer CAR cells via inhibiting cell proliferation, G0/G1 phase arrest and triggering apoptosis. Results from flow cytometry analysis indicated that YC-1 promoted G0/G1 phase arrest and provoked apoptosis in CAR cells. YC-1 treatment up-regulated p21 and down-regulated cyclin A, D, E, CDK2 and protein expression. YC-1 caused apoptotic cell death and DNA fragmentation evidenced by DAPI/TUNEL staining. YC-1 time-dependently disrupted the mitochondrial membrane potential ( $\Delta\Psi_m$ ). It enhanced the protein levels of cytochrome c, Bax, Bak as well as attenuated Bcl-2 expression in CAR cells. Our results support the potentially therapeutic application of YC-1 in drug resistant oral cancer in the future.

**Biography**

Miau-Rong Lee has dedicated 25 years to basic Life Science Education. She was involved in the cross discipline education program sponsored by the Ministry of Education of the Republic of China (Taiwan). Her main research interests include exploring molecular mechanisms of herbal medicine and synthetic compounds on immunomodulation and anti-cancer effects.

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