Cancer treatment using newly synthesized natural compound

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Our lab synthesizing new compounds, compound A, based on natural extracts. Compound A was modified by some residues of natural extracts. Compound A has lower side effects than well-known anticancer agents and has a higher cancer therapeutic effect than from backbone natural extracts used in the production of Compound A. Our experimental results that cell viability was decreased in dose-dependent manner via the MTS assay. Compound A repressed cell viability of HepG2 cell line after 24 hours treatment with dose ranged from 25 μM to 100 μM. We also confirm the cell death marker through Western blotting and FACs analysis and investigated that compound A induces apoptosis. In western blot data, Compound A was treated for 24 hours, dose-dependent manner on HepG2 cells and the apoptosis marker protein Cleaved-Caspase 3, Cleaved-PARP was dose-dependently increased. In addition, the pro-apoptotic marker Bax increased and anti-apoptotic marker Bcl2 was decreased. In FACs data, HepG2 cells were exposed to Compound A for 24 hours, which resulted in an accumulation of cells in G2/Mphase. According our data, we expect that we develop promising therapeutic agents that are lower price than the well-known drugs for liver cancer and have lower side effects and higher effectiveness using Compound A.

Biography

Young-Seok Lee has completed his Master’s degree at Kyunghee University, Seoul, South Korea. Presently, he is a Doctoral student, studying about liver cancer therapy using newly-synthesized compound and protein proteasomal-degradation.

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