Hepatoprotective effects of flavonoid compounds is dependant on the antioxidant and detoxificant enzyme activity

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Abstract We used primary cultured rat hepatocytes injured by carbon tetrachloride as a model to screen for hepatoprotective effect of naturl flavonoid compounds. To determine the protection effect of these compounds we measured the activity of GPT, LDH, and the levels of GSH and MDA.
CCl4-induced liver toxicity on primary cultured rat hepatocytes was seen significantly elevation GPT, LDH , MDA and decrease GSH level.
Four flavonoid compounds showed anti-hepatotoxic effect by decrease GPT, LDH activity and MDA level and preserve GSH level, Moreover we mesured radical scavenging effect, detoxifying enzyme (glutation S-transferase , quinone reductase) and antioxidant enzyme (SOD, Catalase) activity.
Based on these results, we suggest that hepatoprotective activity of these four compounds preserve antioxidant status by scavenging reactive oxygen species and increasing detoxifying enzyme activity.

[PC1-20] [10/20/2000 (Fri) 15:30 - 16:30 / [Hall B]]

EDTA Attenuate Kalopanaxsaponin A-Induced Apoptosis in U937 Human Luekemia Cell.

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In previous study we screened that kalopanaxsaponin A induced apoptosis through inhibition of PTK, Bcl-2, c-myc, topoisoemrase II-α and activation of Bax, PKC-α and caspase-3. This research was proposed to describe what was the crucial factor for apoptosis induced by kalopanaxsaponin A. Thereby we used NAC(N-acetyl-L-cysteine), vitamin E(α-tocopherol), vitamin C(ascorbic acid) and EDTA(ethylenediaminetetraacetic acid) to study the role of extra-cellular/intra-cellular ROS(reactive oxygen species) and metals. Only pre-treated EDTA blocked kalopanaxsaponin A-induced apoptosis by propidium iodide staining. Whereas antioxidant such as NAC, vitamin E and vitamin C did not show any effect. These result suggest that metals are associated with kalopanaxsaponin A-induced apoptosis through multi target signal transduction in U937 human leukemia cell.

[PC1-21] [10/20/2000 (Fri) 15:30 - 16:30 / [Hall B]]

Antitumor Activities of Manassatin A and B by Induction of Cell Differentiation and Apoptosis in Human Leukemia HL-60 cells

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