Effect of flavonols on human cell lines induced oxidative stress

Oh JyYoung°, Kim AnKeun

College of Pharmacy,Sookmyung Women's University

In the screening step, we investigated the effect of free radical scavenge of various flavonol-*quercetin,myricetin,kaempferol,rutin*. Presentative antioxidant vitamin E,(+)catechin are used controls and this step proceeded by DPPH method. Quercetin and myricetin are a strong free radical scavenger than other flavonols and controls.
After treating oxidative stress material H2O2 for 3hr on tumor cell lines (HepG2,SK-N-MC,B16),we examined antioxidant effect according to various concentration's flavonol by MTT assay.
Also, We examined antioxidant enzyme ativity -Glutathione Peroxidase(GPX),Superoxide Dismutase (SOD), Catalase (CAT)- of flavonols on oxidative stressed cell lines.

[PC1-3] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Inhibitory Effects of Benzofurans and Furonaphthoquinones on COX-2 and COX-1

Ahn Ki Young°, Min Kyung Rak, Kim Youngsoo

College of Pharmacy, Chungbuk National University

Benzofuran(BF) and Furonaphthoquinone(FNQ) compounds were previously reported to have many physiologic and pharmacologic effects. Because COX-2 is an inducible enzyme to produce prostanoids for inflammation and mitogenesis, many research groups have been trying to search a more effective and selective COX-2 inhibitor. In this investigation, we also tested a possibility of BF and FNQ compounds as the selective COX-2 inhibitors. For this test, we have evaluated inhibitory effect of a hundred of BF and FNQ compounds on COX-2 and COX-1 by using a chemiluminescence assay. As the selective COX-2 inhibitor, 2-methyl-2-(2-methyl-propenyl)-2,3-dihydronaphtho[2,3-b]furan-4,9-dione was identified. The compound showed inhibitory effects on COX-2 (IC50=3.3 uM) and COX-1 (IC50=91.2 uM), where the ratio of COX-1/COX-2 was 28.

[PC1-4] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Antioxidative effect of taurine on cancer cell lines in the presence of cisplatin

Kim Ankeun, Hue JeongSim°

College of Pharmacy, Sookmyung Women's University.

In this study, we investigated the effect of inhibition of proliferation and antioxidant effect on various cancer cell lines in the presence of cisplatin.we examined by MTT assay and also examined in antioxidant enzyme activities in the presence of taurine with cisplatine. it was taurine concentration 10mM, 5mM, 2.5mM, 1mM with cisplatine.The effect of taurine in inhibition of proliferation on cancer cell lines examined by MTT assay and antioxidant enzyme activities investigated by Superoxide dimutase (SOD), Glutathione peroxidase(GPX), Catalase activity(CAT). The results indicated a dose-dependent reduction in the effect of inhibition of proliferation on each cancer cell lines. On the contrary, in the presence of cisplatine , 2.5mM taurine was significantly inhibited the cell proliferation.and the antioxidant enzyme activites were increased in combination with taurine than only cisplatine treated and GPX,CAT acivity were increased in the presence of cisplatin with taurine