

[OA1-1] [ 2004-10-22 13:30 - 13:45 / Room 205 ]

### **Hesperetin inhibits rabbit platelet aggregation by inhibition of PLC $\gamma$ 2 phosphorylation and cyclooxygenase activity**

**Jin Yong-Ri**<sup>o</sup>, Cho Mi-Ra, Yuk Dong-Yeon, Yun Yeo-Pyo

*College of Pharmacy, Chungbuk National University, Cheongju 361-763, Korea, College of Pharmacy, Research Center for Bioresource and Health, Chungbuk National University, Cheongju 361-763, Korea*

The objective of present study was to investigate antiplatelet activity of hesperetin in vitro and ex vivo. In addition, possible antiplatelet mechanism was also investigated. Hesperetin concentration-dependently inhibited washed rabbit platelet aggregation induced by collagen and arachidonic acid, with IC<sub>50</sub> of 20.5 ± 3.5 and 69.2 ± 5.1 μM, respectively, while has little effect on thromboxane A<sub>2</sub> mimic, U46619- or thrombin-mediated platelet aggregation, suggesting that hesperetin may selectively inhibited collagen-mediated signal transduction. In accordance with these findings, hesperetin revealed blocking of the collagen-mediated phospholipase C gamma2 phosphorylation, and caused a concentration-dependent decrease of arachidonic acid liberation, cytosolic calcium mobilization and serotonin release. It was also supported by the ex vivo platelet aggregation study that administration of hesperetin (100 mg/kg) potently inhibited collagen-induced platelet aggregation in rats. Furthermore, hesperetin inhibited arachidonic acid-mediated platelet aggregation by interfering with cyclooxygenase activity as established by measuring the productions of thromboxane A<sub>2</sub> and prostaglandin D<sub>2</sub> when arachidonic acid was added. Taken together, the present results provide a molecular basis for the antiplatelet activity of hesperetin, through inhibition of phospholipase C gamma2 phosphorylation and cyclooxygenase activity.

[OB3-1] [ 2004-10-22 13:45 - 14:00 / Room 205 ]

### **Transcriptional regulation of glial cell-specific JC virus early promoter by phorbol ester and Interlukin-1 $\beta$**

**Kim So young**<sup>o</sup>, Choi Eung chil, Kim Hee sun

*College of pharmacy, Seoul national university and Department of Neuroscience, Ewha Womans University School of Medicine, College of pharmacy, Seoul national university, Department of Neuroscience, Ewha Womans University School of Medicine*