synthetic compound SY014 exhibited a neuroprotective effect on global ischemia induced 4-vessel occlusion in rat. Also Compound SY014 inhibited the production of NO in BV2 cell line responded to LPS in a dose dependent manner. Furthermore, we investigated whether Compound SY014 can produce protective effect against hypoxia induced oxidative damage in brain slice culture. ATP is estimated as a parameter of cellular injury. With treatment of Compound SY014, production of ATP in brain slice culture was significantly decreased. In conclusion, the present results that compound014 have a neuroprotective effect on global ischemia induced 4-VO in rat, and that this may be involved in antioxidative effect against hypoxia-induced cell death.

[PA1-20] [04/20/2001 (Fri) 10:30 - 11:30 / Hall 4]

The effects of quercetin-3-O-β-D-glucuronopyranoside on the Reflux Esophagitis Induced Surgically in Rats

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It has been shown that quercetin-3-O-β-D-glucuronopyranoside (QGC) extracted from Rumex aquatica has increased vascular permeability and reduced on PBQ-induced writhing syndrome induced by in mice (Hwang et al, 1999). We studied QGC may increase inhibiting effects on the development of the reflux esophagitis induced surgically and on gastric secretion in rats. Intraduodenally administered QGC significantly and dose-dependently prevented the development of reflux esophagitis. QGC dose-dependently inhibited the gastric secretion. We investigated the influence of reflux esophagitis on lipid peroxidation by measuring esophagitis mucosa thiobarbituric acid reactive substances (TBARS), which is a marker of oxidative stress. Malonyldialdehyde content, the end product of lipid peroxidation, increased significantly after the induction of reflux esophagitis. These results suggest that QGC can inhibit the development of reflux esophagitis.

[PA1-21] [04/20/2001 (Fri) 10:30 - 11:30 / Hall 4]

The Mechanism on Diuretic Action Induced by SKF 81297, Dopamine D1 Receptor Agonist, in Dog

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It had been reproted previously that (±)6-chloro-7,8-dihydroxy-1-phenyl 2,3,4,5-tetrahydro-1H-3 benzazepine (SKF 81297), dopamine D1 receptor agonist, produced diuresis by both indirect action through central function and direct action being induced in kidney. This study was attempted in order to examine the diuresis mechanism of such SKF 81297. Diuretic action of SKF 81297 given into the vein or the carotid artery was not affected by renal denervation, whereas diuretic action of SKF 81297 administered into a renal artery was blocked completely by renal denervation, and then diuretic action of SKF 81297 injected into carotid artery was inhibited by SCH 23390, dopamine D1 receptor antagonist, given into carotid artery. Above results suggest that central diuretic action of SKF 81297 elicites through central dopamine D1 receptor and direct diuresis in kidney by influence of renal nerves.

[PA1-22] [04/20/2001 (Fri) 10:30 - 11:30 / Hall 4]

GABA-gated chloride channels modulate morphine-induced hyperactivity, reverse tolerance and dopamine receptor supersensitivity.