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.

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This study was performed to investigate the effect of muscimol, (a potent and specific $GABA_A$ receptor agonist), and picrotoxin, (chloride channel blocker associated with $GABA_A$ receptor), on morphine-induced hyperactivity, reverse tolerance and postsynaptic dopamine receptor supersensitivity in mice. A single administration of morphine-induced hyperactivity. The morphine-induced hyperactivity was inhibited dose-dependently by the administration of muscimol and enhanced by the administration of picrotoxin. Daily repeated administrations of morphine developed reverse tolerance to the hyperactivity of morphine. The administration of muscimol and picrotoxin prior to a single injection of morphine dose-dependently modulates the morphine-induced hyperactivity and reverse tolerance. Postsynaptic dopamine receptor supersensitivity was also developed in reverse tolerant mice that had received the same morphine. The development of postsynaptic dopamine receptor supersensitivity was evidenced by the enhanced ambulatory activity of apomorphine. Muscimol and picrotoxin also modulated the development of postsynaptic dopamine receptor supersensitivity induced by the repeated administration of morphine. These results suggest that the hyperactivity, reverse tolerance and postsynaptic dopamine receptor supersensitivity induced by morphine can be modulated via the activation of GABA-gated chloride channels.

[PA1-23] [04/20/2001 (Fri) 10:30 - 11:30 / Hall 4]

The Determination of Nanoparticle Formed by Modified Water Soluble Chitosan

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Chitosan, having the structure similar to cellulose, has increasing the interesting as drug carriers due to its biocompatibility, biodegradability and nontoxicity. Especially, modified chitosan with various different group was used to treat the desease of human as deliver drug at the target site. In this study, we prepared the nanoparticle by dialysis method using hydrophobically modified-chitosan and investiagted the potential of application as delivery system and its characteristics. This system would be used to both of intravenous injection and oral administration of hydrophobic drugs due to their adequate size for administration. The hydrophobically modified chitosan-nanoparticles were expected to increase the solubility of the hydrophobic drug and, by incorporation of PEG, steric stabilization of chitosan nanoparticles would be increased. We measured NMR, IR, and particle size to investigate the characteristics of the nanoparticles. From the results of surface morphology observed by SEM and TEM, good spherical nanoparticle was identified. Resultantly, targeting drug carriers using hydrophobically modified-chitosan was tested as a suitable device for the drug targeting system to the tumor cell.

[PA1-24] [04/20/2001 (Fri) 10:30 - 11:30 / Hall 4]

Inhibitory Effects of Godulbaegi Extracts on the Proliferation of Human Cancer Cells

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