Studies on the effect of long term administration of green tea extract on the memory are limited. The green tea extract (0.2 % and 0.5 %) was administered in place of water for 6 months to senescence-accelerated mouse (SAM) R1 and P8. The changes in the levels of acetylcholine, choline, norepinephrine (NE), dopamine (DA) and serotonin (5-HT) in five forebrain regions (cortex, hippocampus, striatum, cerebellum and midbrain) were examined. Green tea administration in SAM-R1 and SAM-P8 decreased acetylcholine levels significantly in hippocampus, striatum and midbrain, respectively. The changes of DA, NE and 5-HT concentrations in SAM-R1 treated with green tea extract were negligible except the significant increase of 5-HT in the midbrain. In SAM-P8 treated with green tea extract, DA levels in the hippocampus and striatum were significantly decreased but 5-HT contents in cortex and midbrain were significantly increased. These results suggest that the improvement of the learning ability may be linked not to acetylcholine but to aminergic neurotransmitters. (This study was supported by HMP-97-ND-4-0027).

[PA1-16] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Isolation, chemical structure, and characterization of anti-inflammatory principle from cactus

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Cactus (*Opuntia ficus-indica var. saboten Makino*) has been widely used as folk medicine. It was previously found that the ethanolic extract of cactus showed potent anti-angiogenic action. In the present study, the active principle of anti-angiogenic action was purified from cactus stems by solvent extraction and column chromatoraphy,based on adjuvant-induced chronic inflammation model in mice with chemical and spectroscopic methods, the purified anti-angiogenesis component was identified to be β-sitosterol.

[PA1-17] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

The Effect of Higenamine on Endotoxin-induced Experimental Disseminated Intravascular Coagulation (DIC) in Rats

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Disseminated intravascular coagulation (DIC) is a pathological syndrome which occurs following the uncontrolled activation of clotting factors and fibrinolytic enzymes throughout small blood vessels; fibrin is deposited, platelets and clotting factors are consumed, and fibrin degradation products inhibit fibrin polymeriztion, resulting in tissue necrosis and bleeding.
The indications for DICs include a decrease in the number of platelets in blood, a decrease of fibrinogen level and an increase of fibrin/fibrinogen degradation product (FDP) level in blood, and an extention of prothrombin time (PT) and activated partial thromboplastin time (aPTT). These indices for LPS-induced DIC were improved by the administration of higenamine. Higenamine prevented the decrease of the number of platelets and the concentration of fibrinogen in blood, the increase of FDP level, and the extention of PT and aPTT induced by LPS.
The parameters of multiple organ failure (MOF), such as serum glutamic oxalacetic transaminase (S-GOT), serum glutamic pyruvic transaminase (S-GPT) and blood urea nitrogen (BUN), were also assayed. Higenamine significantly suppressed the increase in S-GOT. The increase in S-GPT and BUN were also suppressed.