

acid > sinapinic acid > cinnamic acid. > ferulic acid > quinic acid. These differences of anti-inflammatory activity may be due to structural difference of phenylpropanoids. These data showed that phenylpropanoid has the anti-inflammatory activity in which the more has hydroxy group of benzene ring, the more has potent anti-inflammatory activity. From these results, phenylpropanoids can be developed a led compound as a anti-inflammatory agents.

[PB2-2] [04/19/2001 (Thr) 15:30 – 16:30 / Hall 4]

Analgesic activity and Inhibitory Action of Capillary Permeability of phenylpropanoids in the HAC-induced Peritonitis

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In this study, the structure-activity relationship of phenylpropanoids in analgesic activity and inhibitory activity of capillary permeability were evaluated in the HAC-induced peritonitis. The writhing syndrome 10 min after i.p. injection of 0.1 ml/20g of 0.7 % acetic acid was measured for 10 min. The capillary permeability into peritoneal cavity 10 min after i.p. injection of 0.1 ml/20g of 0.7 % acetic acid and simultaneously i.v. injection of 0.1ml/20g of 1 % Evan's blue solution was measured. The peritoneal exudate 30 min after intravenous injection of Evan's blue was taken and the contents of Evan's blue was spectrophotometrically measured by ELISA microplate reader at 615 nm. It shows that all of phenylpropanoids have dose-dependently analgesic activity and inhibitory action of capillary permeability at a oral dose of 25mg/kg. Caffeic acid have the most activity, but their activity was less cative than indomethacin and ibuprofen. Their efficiency of analgesic action and inhibitory action of capillary permeability in the order: caffeic acid > chlorogenic acid > p-coumaric acid > sinapinic acid > cinnamic acid. > ferulic acid > quinic acid. These differences of anti-inflammatory activity may be due to structural difference of phenylpropanoids. These data showed that phenylpropanoid has the anti-inflammatory activity in which the more has hydroxy group of benzene ring, the more has potent anti-inflammatory activity.

Poster Presentations – Field B3. Neuroscience

[PB3-1] [04/19/2001 (Thr) 15:30 – 16:30 / Hall 4]

Changes in behavior and the levels of neurotransmitters after bilateral entorhinal cortex lesions

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To determine the effects of entorhinal cortex lesions on hippocampus and other regions, rats were bilaterally treated with ibotenic acid (20 nmol) into entorhinal cortex. On one week after the treatment, water maze and avoidance tasks were performed in each rat. In addition, changes in the levels of dopamine, serotonin and glutamate were determined in various brain regions. Ibotenic acid-treated rats showed impaired retention and acquisition compared to controls. In Morris water maze and passive avoidance tasks, the treated rats were more impaired in retention of memory than in acquisition. However, more impairments of acquisition than retention were shown in active avoidance tasks. In the biochemical studies, the activities of caspase-3 were increased in entorhinal cortex