

[PD2-50] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Antioxidative activities of butein isolated from *Anacardiae*

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Butein (2',4',3',4-tetrahydrochalcone), isolated from *Anacardia* is a chalcone compound belonging to the flavonoid subclass. Various antioxidative activities of butein were studied. Butein significantly reduced 8-OHdG formation from calf thymus DNA treated with UV irradiation or Fenton reaction. It also showed excellent hydrogen peroxide scavenging effect, protective activity of metal-catalyzed enzyme inhibition, and reducing effect of lipid peroxidation induced by Fenton reaction in rat liver homogenate. These results suggest that the antioxidant effect of butein is originated from the complex mechanism of metal ion chelation as well as free radical scavenging activity.

[PD2-51] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Constituents from *Beta vulgaris* L. var. *cicla* with the inhibitory effect on nitric oxide production

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Four phenolic amides (1-4), a coumarochromone (5) and a flavone (6) were isolated from *Beta vulgaris* L. var. *cicla* L. (Chenopodiaceae). These isolated compounds were identified as N-cis-feruloyl 3-O-methyltyramine (1), N-cis-feruloyl 3-O-methyltyramine (2), N-trans-feruloyl 3-O-methyltyramine (3), N-cis-feruloyl 3-O-methyltyramine (4), 5,7,3'-trihydroxy-6-methoxy coumarochromone (5), and 5-hydroxy-6,7-methylenedioxyflavone (6), respectively, by spectroscopic analysis. Among them, phenolic amides 1-4 exhibited modest inhibitory activity on LPS-activated nitrite production dose-dependently in RAW264.7 cells.

[PD2-52] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Constituents of Inhibiting a Drug Metabolizing Enzyme CYP3A4 from the White Pepper

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Pepper (*Piper nigrum* L.) has been used as a spice worldwide, and phytochemical studies revealed six hundred constituents classified in various structural categories, such as terpenes, steroids, lignans, flavones and alkaloids. Piperine, a main metabolite in pepper, displayed a variety of pharmacological activities such as antifungal, antidiarrhoeal, anti-inflammatory, as well as 5-lipoxygenase and cyclooxygenase-1 inhibitory activities. One new dimeric alkaloid has been isolated from the white pepper along with known piperine and piperlylin. Their structures were determined on the basis of spectral data, and new compound is presumably generated by [2p + 2p] Diels-Alder cycloaddition of piperine and piperlylin, this is optically inactive, enzyme may not be involved in the biosynthesis. New dimeric alkaloid, piperine and piperlylin inhibited cytochrome P450(CYP) 3A4, a drug metabolizing enzyme. Since the regulation of the drug metabolites is important for pharmacokinetics of drugs and their bioavailability, the significant activities of dimeric alkaloid is noticeable.