

[PD2-12] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Hepatoprotective constituents from *Beta vulgaris* var. *cycla*

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In the course of hepatoprotective screening for domestic plants, the aerial parts of *B. vulgaris* var. *cycla* exhibited hepatoprotective activity which was determined by using the primary cultures of rat hepatocytes injured by H₂O₂. Bioactivity-guided separation for this plant gave a new flavonoid (1) and the known compounds (2-4), which structures were elucidated by ¹H-NMR, HMQC, ¹H-¹H COSY and HMBC as compound 1, apigenin 8-C-,7-O-di-β-D-glucopyranoside, compound 2, vitexin 2"-O-β-D-glucopyranoside, compound 3, (+)-dehydrovomifoliol, and compound 4, 3-hydroxy-5α,6α-epoxy-β-ionone.

[PD2-13] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Chemical Components and their Antioxidative Effect of *Distylium racemosum*

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This study was carried out to isolate and to identify the compounds and to find out antioxidants from the leaf of *Distylium racemosum* which belongs to Hamamelidaceae family. To isolate compounds, leaf of this plant were extracted with 50% Acetone and then crude extracts was partitioned with hexane, ether and ethyl acetate (EtOAc) successively. After partitioned, EtOAc fraction was subjected to column chromatography with various solvent systems in silica gel and/or Sephadex LH-20. To identify compounds, instrumental analysis (NMR spectroscopic techniques including by ¹H-¹H COSY, NOESY, HMQC and HMBC spectroscopy) was performed. The antioxidant activity test was investigated by measuring the DPPH (1,1-diphenyl-2-picrylhydrazyl) free radical scavenging effect.

From the leaf of *D. racemosum*, three phenolic compounds were isolated and identified as followed: methyl gallate (1), kaempferol (2) and quercetin (3). These compounds are the first report from *D. racemosum*. The order of the radical scavenging activity against DPPH radical is EtOAc fraction > Crude extracts > Residue fraction > hexane fraction > ether fraction, under the experimental conditions. Among these compounds, the free radical scavenging activities were 79.9%, 93.1% and 93.6% at 10 μg/ml, respectively. The IC₅₀ of comp 1, comp 2 and comp 3 were 6.1, 4.1 and 3.6 μg/ml, respectively. These three compounds have higher antioxidative activity compared with reference compounds, ascorbic acid (IC₅₀=9.6 μg/ml).

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Isolation of specific butyrylcholinesterase (BuChE) inhibitors from the rhizome extract of *Curcuma zedoaria*