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The overproduction of nitric oxide (NO) by inducible nitric oxide synthase (i-NOS) is one of the major characteristic features of inflammation and sepsis. We intended to find the i-NOS inhibitors from plants by using the macrophage cell culture system. RAW 264.7 cells were activated by lipopolysaccharide (LPS) in the presence of plant samples, and the amounts of NO formed by i-NOS were determined by using Griess reagent in the form of NO_2^- . One active compound was purified from *Broussonetia kazinoki* by activity-guided fractionation, and the structure was identified as kazinol B from the spectral analysis. This compound showed strong inhibitory activity of NO production in LPS-activated macrophages and the IC_{50} value (the concentration required for the 50% inhibition of NO production compared to the LPS control) was 21.6 μM . The co-treatment of kazinol B with LPS to the cells caused the decrease of NO production, while the post-treatment of sample didn't. These results might come from the inhibition of i-NOS expression by kazinol B in LPS-treated macrophages, not from the inhibition of i-NOS enzyme activity.

[PD2-13] [04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3]]

Isolation of Monoamine Oxidase-B Inhibitory Compounds from the fruit and the stem of *Opuntia ficus-indica* var. *saboten*

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Three kinds of citric acid methylesters and malic acid monomethylester were isolated from the fruit and the stem of *Opuntia ficus-indica* var. *saboten* Makino using *in vitro* monoamine oxidase inhibition assay-guided isolation method. The MAO-B IC_{50} values of citric acid monomethylester, citric acid dimethylester, citric acid trimethylester, and malic acid monomethylester were 0.35mg, 0.40mg, 1.27mg, and 0.27mg, respectively. However, the MAO-A IC_{50} values showed the only marginal activities. These data indicated that the separated organic acid methylesters inhibited MAO-B activity more strongly than that of MAO-A.

[PD2-14] [04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3]]

A Bioactive Aliphatic Diamine, Harmonine, from Ladybird Beetles

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A known alkaloid, harmonine, has been isolated from two ladybird beetles, *Aiolocaria hexaspilota* and *Harmonia axyridis*. Harmonine was known as a defensive chemical of ladybird. The compound showed a significant toxicity to brine shrimp larvae and cytotoxicity against human tumor cells.

[PD2-15] [04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3]]

Phytochemical constituents and Biological activities from aerial part of *Angelica gigas* Nakai.