

In the course of our researches for biologically active compound from Korean algae, purification of the methanolic extracts of two brown algae (*Sagassum Sagamianum* and *Ishige Okamurae*) collected off Jeju Island afforded an antioxidant polyphenolic compound (1). The molecular formula of 1 was established as C₂₄H₁₆O₁₃ on the basis of the FAB mass and ¹³C NMR spectrum. Its structure was elucidated by detailed analysis of 2D NMR data of 1. Compound 1 was named as hydroxyphloroecol. Compound 1 showed potent radical scavenging effect on DPPH radicals with RC₅₀ value of 7 µg/ml.

[PD2-19] [04/18/2003 (Fri) 13:30 – 16:30 / Hall P]

A Rapid Manufacturing Process of Crude Cordycepin Containing Adenosine (CCCA) from Cultured Fruiting Bodies of *Cordyceps Militaris* (CM) for Developing Anti-leukemic Agents.

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Anti-tumor, anti-viral and anti-leukemic activity of cordycepin are well known. Adenosine was reported to induce an apoptosis in human leukemia cells. CM has been widely used as traditional medicinal herbs in China. Previously, we reported the results relating the isolation and characterization of cordycepin and adenosine from the cultured fruiting bodies of CM. We further studied the manufacturing process of CCCA for the purpose of developing anti-leukemic agents. Water extract of cultured fruiting bodies was concentrated with a vacuum evaporator at 70°C, and it was diluted three times with water. And about 8 times of its volume of 99% ethanol was added to the water extract. The supernatant was decanted and concentrated at 55°C. The ethanol precipitate was discarded. The concentrate of ethanol-soluble supernatant was diluted with water, and its diluted solution was used to prepare CCCA. The CCCA was further purified using the strong cation exchange resin SK1B (Diaion), the strong anion exchange resin SA21A (Diaion) and synthetic adsorbents HP20. The contents of cordycepin and adenosine in CCCA analyzed by HPLC were 164 mg/g (16.4%) and 253 mg/g (25.3%), respectively. Contents of cordycepin and adenosine calculated in dried fruiting bodies resulted in 1068 mg/kg (0.11%) and 1349 mg/kg (0.14%), respectively. This method can be applied to the rapid manufacturing process of CCCA.

[PD2-20] [04/18/2003 (Fri) 13:30 – 16:30 / Hall P]

Cytotoxic constituents of the roots of *Zingiber cassumunar* Roxb.

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Two phenylbutenoids, 4-(3',4'-dimethoxyphenyl)buta-1,3-diene (1) and 4-(2',4',5'-