tyrosine catalyzed by mushroom tyrosinase with IC₅₀ of 16.8 μM and 21.5 μM, respectively. It compared well with kojic acid, a well-known tyrosinase inhibitor, with an IC₅₀ of 22.4 μM. The inhibitory kinetics, analyzed by a Lineweaver-Burk plot, found rosmarinic acid and its methyl ester to be competitive inhibitors with Kᵢ of 2.35×10⁻⁵ M and 1.52×10⁻⁵ M, respectively. In addition, compounds 1 and 2 showed the scavenging activities on DPPH radical, with IC₅₀ of 4.27 μM and 3.05 μM, respectively. These scavenging effects were more potent than that of L-ascorbic acid (IC₅₀ = 11.75 μM).

[PD2-50]  [10/17/2002 (Thr) 09:30 – 12:30 / Hall C ]

Study on antifungal activity of herb oils against Trichophyton spp.

Shin SeungWon⁰, Kim JiHyun, Lim Sook, Pyun MiSun

College of Pharmacy, Duksum Women’s University

The antifungal activities of the essential oils from Citrus bergamia, Ciderus atlantica, Cymbopogon citratus, Eucalyptus globulus, Juniperus communis, Lavandula angustifolia, Melaleuca alternifolia, Pelargonium graveolens, Pogestemon patchoul, Rosmarinus officinalis, Styxerox tonkinensis, and Thymus vulgaris, which are recommended for the treatment of microbial infections in aromatherapy and complementary medicines, were tested against Trichophyton spp. The activities were measured by broth dilution method and disk diffusion assay. As the results, most of the test oils inhibited growth of T. tonsurans, T. mentagrophytes, T. ferrugineum, and T. rubrum. Especially, the essential oils from C. atlantica, C. citratus, E. globulus, and P. graveolens showed the strongest activity among the tested herb oils showing MICs between <0.09 and 0.39 mg/ml.

[PD2-51]  [10/17/2002 (Thr) 09:30 – 12:30 / Hall C ]

In vitro Antiinflammatory Activity of the Essential Oil Extracted from Chrysanthemum sibiricum in Murine Macrophage RAW 264.7 Cells

Lee KyungTae¹, Kim RyungKyu¹, Ji SaYoung¹, Shin KyungMin¹, Choi Jongwon², Jung HyunJu³, Park HeeJuhn⁰³

¹College of Pharmacy, Kyung-Hee University Seoul 130-701, ²College of Pharmacy, Kyungsung University, Pusan 608-736 and ³Division of Applied Plant Sciences, SangJi University, Wonju 220-702

This research was undertaken to find the in vitro anti-inflammation activity of the essential oil (CS-oil) extracted from Chrysanthemum sibiricum (Compositae) herbs. We investigated the effects of the CS-oil not only on the formation NO and PGE₂ and TNF-α but also on inducible nitric oxide synthase and cyclooxygenase-2 (COX-2) in lipopolysaccharide (LPS)-induced murine macrophage 264.7. The data obtained were consistent with the modulation of iNOS enzyme expression. A similar fashion was also observed when LPS-induced PGE₂ release and COX-2 expression were tested. The significant inhibitory effects were shown in concentration-dependent manners. In addition, CS-oil also mildly but significantly reduced the formation of TNF-α. These actions may contribute to the availability of CS-oil as an antiinflammatory essential oil. GC-MS data on the oil led to the finding of 2-methoxythioanisol, (+)-camphor, geraniol, citral, thymol, eugenol, β-caryophyllene oxide, β-caryophyllene, β-eudesmol, juniper camphor together with an unknown substance contained more than 3% of the total oil.

[PD2-52]  [10/17/2002 (Thr) 09:30 – 12:30 / Hall C ]

Antigastritic and anti-ulcerative constituent from Panax ginseng head and its pharmacological activity

Jeong ChoonSik⁰, Hyun JInEe¹, Li DaWei, Lee EunBang, Kim YeongShik²