College of Phamacy, Chonnam National University, Gwangju, Korea

In order to induce production of methylnissolin, sterol biosyntheis inhibitor, in the adventitious root of *Astragalus membranaceus* the effect of methyl jasmonate(MeJ), a growth regulator of plant, was investigated. After treatment of MeJ (0μM, 10μM,100μM) to the adventitious root which was harvested in the time interval of 0, 7, 14, 21, 28days and the fresh weight, dry weight and the contents of methylnissolin was determined. The growth of the root was significantly decreased by the treatment of MeJ. Whereas MeJ strongly enhanced production of methylnissolin in a does-dependent manner. At the day of 14 after elicitation, production of methylnissolin was higher than untreated hairy root. There were no significant differences between elicitation period(on days 0 and 7) on enhancing of prodution of methylnissolin. On the other hand, production of methylnissolin was slightly promoted by the treatment of 10μM of MeJ. Even the treatment of 100μM of MeJ decreased production of methylnissolin.

[PD2-32] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Prenylated Flavonoids, Inhibitors of Diacylglycerol Acyltransferase by the root of *Sophora flavescens*

Chung MiYeon°, Ko JeongSuk, Ryu ShiYoung, Jeune KyungHee, Kim Koanhoi, Rho Mun-Chual, Lee HyunSun, Kim YoungKook

Laboratory of Lipid Metabolism, Korea Research Institute of Bioscience and Biotechnology, Korea Research Institute of Chemical Technology, Department of Biology, Yeungnam University

Diacylglycerol acyltransferase (DGAT) is a microsomal enzyme that plays a central role in the metabolism of cellular glycerolipid. Recently, the generation of DGAT-deficient mice has provided a better understanding of triglyceride synthesis and its relationship to obesity. Therefore, DGAT is an attractive target for treatments of triglyceride metabolism disorders, such as obesity or hypertriglyceridemia. In the course of our search for DGAT inhibitors from natural sources, the methanol extract of the root of *Sophora flavescens* was found to significantly inhibit DGAT prepared from the rat liver. Bioactivity-directed fractionation of ethyl acetate extract led to the isolation of two prenylated flavonoids, kurarinone (1) and kuraridine (2). They inhibited DGAT activity dose-dependently with IC_{50} values of 10.9μM (1), 9.8μM (2) in vitro and kurarinone also showed inhibition of triacylglycerol formation in intact Raji cells

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Tyrosinase Inhibitory Activity of the EtOH Extracts and Their Fractions of Crude Drugs

Li Xun°, Park SungUk, Kim YounChul

Spela Co., Ltd.;College of Pharmacy, Wonkwang University

Melanin biosynthesis inhibitors are useful not only for the materials used in cosmetics as skin-whitening agents but also for the remedy of hyperpigmentation. In order to find the new skin-whitening compounds from the natural products, screening of tyrosinase inhibitory activity *in vitro* has been carried out. The EtOH extracts of two hundred crude drugs were performed at the concentration of 500 μg/ml. Thirty-four samples have been shown the promising tyrosinase inhibitory effect. Of these seven ethanolic extracts had been partitioned using various organic solvents. Several *n*-hexane- and/or water-soluble fractions showed the significant effect on the inhibition of tyrosinase.