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[PA1-26] [10/19/2000 (Thr) 10:00 - 11:00 / [Hall B]]

Anti-obesity and Hypolipidemic Action of Leaves of Mulberry(Morus alba L.)

1Kim SY, 1Cho KH, 1Suk K, 1Hur JY, 1Park JY, 2Kim AJ, 3 Lim K and 1Kim H

1Depart. of Herbal Pharmacology, Graduate School of East-West Medical Science, Kyunghee Uni., Hoegi-Dong, Tongdaemoon-Ku, Seoul 130-701, Korea;2 Depart.of Food and Nutrition, Hyejeon College, 350-800, Korea; 3 Woosuk Univ., Chonbuk 565-701,Korea

Leaves of mulberry (Morus alba L.) have been traditionally reported to have anti-obesity effects in Oriental medicine. The present study was undertaken to investigate whether the obesity of obese Zucker (fa/fa) rats can be ameliorated by the oral administration of methanol extracts of mulberry leaves.
The weight of the whole body and adipose tissue, food intake, uncoupling protein-2 (UCP2) expression, and plasma levels of triglyceride, LDL, HDL, and insulin were measured in obese Zucker rats administered with methanol extracts of mulberry leaves (125 mg/kg, twice daily) for 3 weeks. These were then compared with those of control group administered with physiological saline solution.
Obese Zucker rats treated with methanol extracts of mulberry leaves, compared with those administrated with saline, weighed significantly less, and had lower liver weight. Animals that received methanol extracts of mulberry leaves showed less food consumption than those administered with saline. Also, extracts of mulberry leaves enhanced the expression UCP2 in brown adipose tissue (BAT) and liver, while decreasing plasma levels of cholesterol and triglyceride.
Oral administration of methanol extracts of mulberry leaves for 3 weeks has been shown to exert anti-obesity and hypolipidemic effects in obese Zucker rats. The extracts not only increased UCP2 expression in BAT and liver, but also reduced food intake and plasma levels of cholesterol and triglyceride, which contributed to mitigation of obesity. These results suggest that leaves of mulberry may be used as an effective crude drug for the treatment of obesity.

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The mechanism of ceramide-induced circular smooth muscle cells contraction in feline esophagus.

Shin CY°, Lee YP, Yim SH, Lee TS, Lee NI, Huh IH and Sohn UD

Department of Pharmacology, College of Pharmacy,Chung Ang University, Seoul 156-756, Republic of Korea

It has been shown that C_2-ceramide (C_2) plays a role in mediating contraction of ileal rabbit. In this study, we have investigated the mechanism of C_2 -induced circular smooth muscle cell contraction in feline esophagus. C_2 produced contraction of smooth muscle cells isolated by enzymatic digestion,peaked at 30sec and reached the maximal response at 10^{-7} M. C_2-induced contraction was inhibited by PLC inhibitor, neomycin, not by PLA_2 inhibitor,DEDA and not by PLD inhibitor, pCMB. We investigated that whether protein kinase C (PKC) or protein tyrosine kinase (PTK) pathway involved in the contraction by C_2. H-7, chelerythrine (PKC inhibitors) and genistein (PTK inhibitor) inhibited C_2-induced contraction. PKCεantibody inhibited the contraction by C_2. To examine which MAP kinases is involved in ceramide-induced contraction, specific MAP kinase inhibitors (MEK inhibitor, PD98059, and p38 MAP kinase inhibitor, SB202191) are used. Preincubation of PD98059 blocked the contraction induced by C_2 in a concentration dependent