

transferase. Given that oltipraz activates C/EBP β for gene transactivation and that the putative C/EBP binding site is located in the CYP1A1 promoter region, this study investigated the effect of oltipraz on CYP1A1 induction by 3-methylcholanthrene (3-MC). 3-MC induced CYP1A1 in H4IIE cells in a time- and concentration-dependent manner. Gel shift analysis showed that 3-MC increased the band intensity of protein binding to the XRE. Immunocompetition analysis verified the specificity of AhR-XRE binding. Oltipraz (30 μ M) induced CYP1A1 and CYP1A1 promoter-luciferase gene and increased AhR DNA binding activity, which were 10-20% of those in 3-MC (100 nM)-treated cells. However, AhR-XRE binding was not increased after 10 μ M oltipraz treatment. Oltipraz (10 μ M) significantly inhibited CYP1A1 and CYP1A1-luciferase gene induction by 3-MC with no increase in AhR DNA binding. Oltipraz enhanced protein binding to the C/EBP binding site in the gene promoter and the binding complex comprised of C/EBP β and partly C/EBP δ . Overexpression of dominant-negative mutant C/EBP significantly abolished the ability of oltipraz to suppress 3-MC-inducible CYP1A1 and CYP1A1-reporter gene expression. Consistently, C/EBP β overexpression blocked CYP1A1-reporter gene induction by 3-MC. These results provided evidence that oltipraz suppresses 3-MC induction of the CYP1A1 gene expression and that activation of C/EBP β by oltipraz contributes to suppression of 3-MC-inducible AhR-mediated CYP1A1 expression.

[PA1-29] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

Anti-stress effect of Archoke juice in ICR mice.

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High-dose extracts from artichoke leaves are traditionally used for treatment of stress related disorder, that is, hepatic disease, dyspeptic disorder, hyperlipidemic disorder and diuretic disorder. The aim of this study was to investigate anti-stress effects of Artichoke extract (Archoke juice produced from Choa company). The experiments were performed with the use of young (6-8 weeks of age) male mice of ICR strain weighing between 20 and 25 g at the time of first treatment with Archoke juice. They were grouped normal, control, Ginseng, diazepam and Archoke juice group. The normal ones were provide normal water and not exposed to stress. The control ones were provide normal water and exposed to stress. Ginseng, diazepam and Archoke juice ones were provide Ginseng extract 0.01%, diazepam 0.005% and Archoke juice 5% containing water for 12 days and exposed to stress for 5 days. They were stressed by immobilization for 30 minutes and electro-shock (1mA/20 secs) for 5 minutes. At first, they were pretreated with Ginseng extract, diazepam and Archoke juice for 7 days, and followed by the treatments in combination with the exposure to stress for 5 days. We recorded stress related behavioral changes of experimental animals induced by over stress using Etho-vision system. Smelling and grooming activity, plus maze moved distance and rearing, and Y-maze moved distance decreased by stress were increased by treatment of Archoke juice. Freezing activity, plus maze-staying time in closed area increased by stress were decreased by treatment of Archoke juice. But total activity and activities of face washing, burrowing and rearing were not significantly changed although there were recovering trends from stress induced behavioral change. These results suggest that Artichoke protect partially the living organism from stress attack in some case.

[PA1-30] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

Antifibrotic and Antioxidative Effect of Solanum lycopersicum in Liver fibrosis (Cirrhosis) induced Rats

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Introduction: Liver fibrosis is defined unbalance of collagen metabolism, especially a stimulation of collagen