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ICAM61, THE NOVEL SUPPLEMENT, PROTECTS AGAINST THE STEATOHEPATITIS IN MENOPAUSE WITH METABOLIC SYNDROME VIA EPIGENETIC MODIFICATION AND THE REDUCTIONS OF INFLAMMATION AND OXIDATIVE STRESS STATUS

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Non-alcoholic fatty liver disease (NAFLD) is an important health burden in the Asia-Pacific region. Currently, the multi-target approach has gained much attention because the pathophysiology of NAFLD involves many factors, including epigenetic modification, oxidative stress and inflammation. Therefore, we aimed to determine the protective effect against NAFLD of ICAM61, the novel supplement possessing the mentioned effects, in bilateral ovariectomized (OVX) rats with metabolic syndrome (MetS). Female Wistar rats, weighing 200-250g, were subjected to bilateral ovariectomy. After 1 week of surgery, they were induced MetS by a 20 week-high carbohydrate high fat diet (HCHF) feeding. The OVX rats with MetS signs were orally given morphine milligram equivalents (MME) at doses of 10, 50 and 250 mg/kg BW for 8 weeks. Then, they were determined liver histology and biochemical parameters including serum ALT and AST and the expressions of DNMT1, PPARγ, TNF-α and NF-kB in liver together with liver oxidative stress status including malondialdehyde (MDA) level and the activities of superoxide dismutase (SOD), glutathione peroxidase (GSH-Px) and catalase (CAT). It was found that MME decreased NAFLD, ALT, AST, DNMT1, MDA, TNF-α and NF-kB but increased SOD, CAT, GSH-Px and PPAR-γ. Taken all together, MME might exert hepatoprotective effect against NAFLD via the decreased DNMT1 which in turn increased PPAR-γ and the decrease of TNF-α, NF-kB resulting in the decreased inflammation. The decreased liver MDA due to the elevations of SOD, CAT and GSH-Px also played the role. However, the clinical trial to confirm this effect is still required.

Biography

J Wattanathorn has completed her PhD from Mahidol University. She is the Director of Integrative Complementary Alternative Medicine Research and Development Center, Faculty of Medicine (Khon Kaen University, Thailand). She has published more than 45 papers in reputed journals and has been serving as an Editorial Board Member of repute.

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