

Effects of setarud (IMOD™) and Angipars on D-galactose induced aging in male mice

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Background and Aims: The aim of this study was to evaluate the effects of IMOD and Angipars on D-galactose induced aging in male mice in comparison to vitamin E.

Methods: Aging was induced by D-galactose (500 mg/kg) administered to animals for 6 weeks through drinking water. Male BALB/c mice were randomly divided into 5 groups: aging model group (D-galactose,

500 mg/kg for 6 weeks), positive control group (D-galactose [500 mg/kg] for 6 weeks + Vitamin E [200 mg/kg/day] intraperitoneally for 4 weeks), IMOD group (D-galactose [500 mg/kg] for 6 weeks + IMOD [20 mg/kg/day] intraperitoneally for 4 weeks), Angipars group (D-galactose [500 mg/kg] for 6 weeks + Angipars [2.1 mg/kg/day] by gavage for 4 weeks) and control group. At the end of treatment, pro-inflammatory markers including tumor necrosis factor- α (TNF- α), interleukine-1 β (IL-1 β), interleukine-6 (IL-6), NF-kappaB (NF- κ b), total antioxidant power (TAP), malondialdehyde (MDA) as marker of lipid peroxidation (LPO) and male sex hormones like testosterone and dehydroepiandrosterone-sulfate (DHEA-S) were measured in the blood.

Results: This study showed that D-Galactose induced a significant oxidative stress and proinflammatory cascade of aging while both IMOD and Angipars recovered all of them. Interestingly, IMOD and Angipars were better than Vitamin E in improving male sex hormones that were declined in aged mice. This effect is so important and should be considered as an advantage although it cannot be explained with current knowledge.

Conclusions: IMOD and Angipars have marked anti-aging effects on D-galactose-induced model of aging.

Keywords: Aging; D-galactose; Oxidative stress; Immune system cytokines; IMOD; Angipars