

Allantoin may modulate aging impairments, symptoms and cancers

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Abstract

Allantoin increases in different stress conditions and environment such as physical activity, amniotic fluids and oxidative stress. So, we inspired to explore the role of allantoin as a metabolic by-product in health improvement and protection using irradiation as simulator for oxidative stress. Allantoin was injected i.p. (100 mg/kg) in senile male rats in irradiated and non-irradiated groups in comparison to sham operated group. The studied parameters were superoxide dismutase, Glutathione reductase, Glutathione, total antioxidant capacity, collagenase, urea, creatine kinase, alanine transaminase, aspartate aminotransferase, triglycerides, total cholesterol, and HDL and LDL cholesterol. Allantoin in vitro **antitumor activity** was MTT assayed for some age dependent cancers. Allantoin showed improvement in all in vivo studied oxidative stress parameters. Allantoin showed an increase in lipogenesis was recorded as a hepatic energy targeting muscles. Allantoin improves aging process indicated by its collagenase inhibitory effect. Allantoin showed **cytotoxicity against prostate, colon, intestinal ovarian and breast cancers and weak inhibitory against larynx cancer**. Allantoin may be the possible mysterious key factor involved in health and aging improvement and **cancer protection in** stress conditions such as physically activity and **radiation hazards**.