

Antioxidant Effects of Withania Somnifera (Ashwagandha) on Brain

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Abstract : Damage to cells caused by free radicals is believed to play a central role in the ageing process and in disease progression. Withania somnifera is widely used in ayurvedic medicine, and it is one of the ingredients in many formulations to increase energy, improve overall health and longevity and prevent disease. Withania somnifera possesses antioxidative properties. The antioxidant activity of Withania somnifera consisting of an equimolar concentration of active principles of sitoindoside VII-X and withaferin A. The antioxidant effect of Withania somnifera extract was investigated on lipid peroxidation (LPO), superoxide dismutase (SOD) and catalase (CAT) activity in mice. Aim: To study the antioxidant activity of an extract of Withania somnifera leaf against a mice model of chronic stress. Healthy swiss albino mice (3-4 months old) selected from an inbred colony were divided in to 6 groups. Biochemical estimation revealed that stress induced a significant change in SOD, LPO, CAT AND GPX. These stress induced perturbations were attenuated Withania somnifera (50 and 100 mg/kg BW). Result: Withania somnifera tended to normalize the augmented SOD and LPO activities and enhanced the activities of CAT and GPX. The result indicates that treatment with an alcoholic extract of Withania somnifera produced a significant decrease in LPO ,and an increase in both SOD and CAT in brain mice. This indicates that Withania somnifera extract possesses free radical scavenging activity .

Keywords : Withania somnifera, antioxidant, lipid peroxidation, brain

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