

**P-95****Comparative Antioxidant Activities of Soybean and Tempeh Extract in Rat Brain**

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Soybean and local fermented soybean, *tempeh* have been known for their health benefits and memory enhancement. It has been reported that soybean has potential role in reducing the progression of neurodegenerative disorder. Reactive oxygen species (ROS) play a crucial role in ageing and age-related neurodegenerative changes. The present study highlighted the comparative studies between total isoflavone extract from soybean and *tempeh* on the neuronal antioxidant. The total isoflavone extracts were administered orally for 15 days with three selected doses (10, 20 and 40 mg/kg). Piracetam (400 mg/kg, p.o.) was used as standard drug. The measurement of brain catalase, superoxide dismutase (SOD), glutathione (GSH), glutathione reductase (GR), TBARS and nitric oxide (NO) were extended. Our results showed that soybean and *tempeh* extracts significantly improved antioxidant activities by significantly increased the levels of catalase, SOD, GR and GSH while decreased levels of TBARS and NO level in the rat brain. This suggests that soybean and *tempeh* extract might be useful in the age-related neurodegenerative changes including management and prevention of Alzheimer's disease through its antioxidant activities.

**Keywords:** Reactive oxygen species, isoflavone, antioxidant, neurodegeneration, Alzheimer's disease.

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