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## Cardioprotective role of *Courounpita guianensis* against isoprenaline induced myocardial infarction in mice

Laxman J. Landge\*, A.T. Kalse

Department of Biology, K. J. Somaiya College of Science and Commerce, Vidyavihar, Mumbai, India

**Introduction:** Since the beginning of human civilization, medicinal plants have been used in elimination of various disorders that were caused by infections in past and oxidative stress due to pollution, allopathic medicines, dyes, etc. Isoprenaline (ISO) was one of the allopathic medicine used in research study. It is used to treat bradycardia conditions. The drug has a structural resemblance to epinephrine. It first received for use in the United States in 1947. So an alternative medicinal therapy like use of methanolic extract of *Courounpita guianensis* by its able antioxidant activity.

**Methods:** Mice (50-60 gm wt.) treated with the methanolic extract of *Courounpita guianensis* (250-300 mg/kg wt.) orally for 9 days. ISO was injected subcutaneously at the dose of 85 mg/kg on 8 and 9 days. Then the activities of various cardiac injury markers including total cholesterol (TC), triglycerides (TG), very low density lipoprotein (VLDL), low density lipoprotein (LDL), high density lipoprotein (HDL), superoxide dismutase (SOD), catalase (CAT), total glutathione (GSH) and lipid peroxidase (LPO).

**Results:** It shows that ISO increased the TC, TG, LDL, and VLDL with decreased in HDL level in serum. Whereas SOD, CAT, and GSH values decreased and LPO level increased. However all those values due to heart injury that were significantly attenuated by the methanolic extract of *Courounpita guianensis*.

**Conclusions:** The results suggest that *Courounpita guianensis* could nullify ISO induced heart toxicity due to its ability to overcome over oxidative stress.

**Keywords:** cardiotoxicity, cardioprotection, oxidative stress, phytotherapeutics.

### Biography

Laxman Landge has his expertise in Toxicity, Physiology, Phytotherapeutics, applications of Biological nanoparticles in alternative medicines, agricultural land and crop improvements. He has built this model after years of experience in research, evaluation, teaching in college as well as research institutes