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AQUEOUS EXTRACT OF *MURRAYA KOENIGII* IN COMBINATION WITH MELATONIN PROVIDES BETTER PROTECTION AGAINST LEAD INDUCED ALTERATIONS IN BLOOD CORPUSCLES AND LIPID PROFILE OF MALE WISTAR RATS

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Abstract : *This study was designed to evaluate the effect of aqueous Curry leaf extract (CuLE) against lead induced alterations in the counts of the blood corpuscles and lipid profile of male Wistar rats as well as to investigate the effect of CuLE in combination with melatonin against lead induced alterations in the counts of the blood corpuscles and lipid profile of male Wistar rats.*

Treatment of rats with lead acetate at a dose of 15 mg / kg body weight intraperitoneally (i.p) for a period of seven consecutive days caused alterations in the total count of erythrocyte and leukocyte, hemoglobin content, mean corpuscular hemoglobin content, neutrophil count, small lymphocyte count, eosinophil count, Erythrocyte Sedimentation Rate (ESR), total cholesterol, triglyceride, HDL cholesterol, LDL cholesterol, Total cholesterol: HDL cholesterol and LDL cholesterol :HDL cholesterol. All these changes were ameliorated when the rats were pre-treated with CuLE at a dose of 50 mg / kg (fed orally) for a similar period of time. As the animals were pre-treated with CuLE at a dose of 50 mg / kg (fed orally) in combination with melatonin at a dose of 10 mg / kg (fed orally), for a similar period of time, we observed a better protection against the lead induced changes. The results of the current studies indicate that CuLE has the ability to mitigate heavy metal-induced alterations in blood tissue but CuLE in combination with melatonin provides a better protection in the situation. This is probably brought about through the synergistic activity of the antioxidant phytochemicals of CuLE and Melatonin and may have future therapeutic relevance to occupational and environmental lead exposure induced hemato-pathological state.

Key words: *Curry leaves, Melatonin, blood, lipid profile, antioxidant, lead acetate, Cholesterol*