

**“PHARMACOLOGICAL INVESTIGATION OF *CALOPHYLLUM INOPHYLLUM* LINN.
FOR THE TREATMENT OF CROHN’S DISEASE”**

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ABSTRACT

Objectives: Pharmacological investigation of *Calohpyllum inophyllum linn.* for the treatment of Crohn’s Disase.

Material & Methods: Thirty six wistar rats of either sex were divided into six groups with 6 rats each: Group-1 served as a Normal control (NC) which receive 0.1 ml methyl cellulose(1%) and other group received 0.1 ml iodoacetamide (2%) administered in to small intestine. Group-2 served as a Disease control (DC). Whereas group-3 served as a standard group (STD) which receive prednisolone 2 mg/kg and group-4 and 5 served as a treatment group that receive methanolic extract which treated with the dose of 400 mg/kg (CI 400) and 600 mg/kg (CI 600) respectively. Whereas group-6 received methanolic extract with dose of 600mg/kg after seven days of disease induction (CI 600mg/kg). After the experimental period blood sample was collected for serum parameter (Nitric oxide and C-reactive protein) and small intestine was isolated for biochemical parameters (Superoxide dismutase, Lipid peroxidase and Myeloperoxidase) and histopathological studies.

Results: Iodoacetamide treatment caused inflammation as evidenced by marked elevation in Blood Nitric Oxide and C-reactive protein. Co-administration of methanolic extract decreased rise in blood Nitric Oxide and C-reactive protein. Estimation of biochemical parameters shows decrease in MPO, MDA and increase in SOD. Histopathological changes also showed curative nature of herbal extract against iodoacetamide induced Crohn's disease.

Conclusion: It was observed that methanolic extract of leaves of *Calophyllum inophyllum* has the potential to combat Crohn's disease by acting as an anti-inflammatory and antioxidant agent by histopathological, serum and biochemical observation against iodoacetamide induced Crohn's disease in rats.

Key words: Crohn's disease, Iodoacetamide, Lipid Peroxidation, Nitric Oxide, CRP, Superoxide Dismutase, Myeloperoxidase, Methanolic extract, Anti-inflammatory, Anti-oxidant.