

# SCREENING OF COUMARIN FRACTION OF ECLIPTA ALBA IN ZEBRAFISH AND RODENT MODELS OF EPILEPSY

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The aim of the present study was to screen the coumarin fraction of Eclipta Alba (EA) for its potential antiepileptic activity using different animal models. Coumarins were initially screened in pentylenetetrazole (PTZ)-induced seizures in zebrafish model of epilepsy. The experimental findings suggested potent anticonvulsant activity of coumarin fraction. Further coumarin fraction was evaluated in acute rodent models like Maximal electroshock (MES), Pentylenetetrazole (PTZ) and chronic model of PTZ induced kindling model in mice. Pre-treatment with coumarin fraction at three doses levels (50, 75 and 100 mg/kg) exhibited significant delay in hind limb extension (HLE) compared to control group in acute rodent models. Kindling score, Neuronal damage by staining and oxidative stress parameters such as superoxide dismutase (SOD), reduced glutathione (GSH), catalase (CAT) and lipid peroxidation (MDA) were measured at the end of PTZ induced kindling model in mice. Antiepileptogenic activity in kindling model endorses the potential of coumarin fraction at two dose levels (5 and 10 mg/kg) in suppressing the process of epileptogenesis. Coumarins fraction at 10 mg/kg show significant increase in super oxide dismutase (SOD), glutathione (GSH) and catalase (CAT) levels while significant decrease in MDA level. Coumarin 5 and 10 mg/kg protected the seizure induced neuronal damage. These findings endorse the antiepileptic effect of coumarin extract and its probable inclusion as a drug or drug adjuvant along with available drugs in management of epilepsy after further experimentation.

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