

2nd International Conference on Epilepsy & Treatment

October 20-21, 2016 Rome, Italy

Anti-epileptic evaluation of coumarin extract isolated from *Eclipta alba* in acute zebra fish and rodent models of epilepsy

Suraj Muke and Sadhana Sathaye
Institute of Chemical Technology, India

Epilepsy is a type of brain disorder characterized by seizures. An epileptic seizure is caused by brief, excessive and abnormal discharge of nerve cells in the brain. The ideal treatment for epilepsy should encompass aspects like minimal seizure occurrence and maximum therapeutic efficacy with least side effects. *Eclipta alba* (EA) has been used in traditional system of medicine as well as by traditional healers to treat epilepsy since ancient times. Coumarin extract was isolated from EA leaves. The aim of the present study was to evaluate coumarin extract in acute zebrafish and rodent models of epilepsy for its anticonvulsant activity. Coumarin extract was initially evaluated in pentylenetetrazole (PTZ)-induced seizures in zebrafish model of epilepsy. The experimental findings obtained from the zebra fish model evinced that coumarins had potent anticonvulsant activity. To further ascertain the anticonvulsant activity of coumarins, the extract was evaluated in rodent models. Pretreatment of coumarin extract at three dose levels exhibited significant delay in hind limb extension (HLE) compared to control group in maximal electroshock (MES) induced convulsions in rats. In PTZ model, treatment with coumarin extract produced significant prolongation of onset of myoclonic jerk, clonic seizure, HLE & exhibited a complete protection against mortality. The results demonstrated the anticonvulsant effect of the coumarin extract in zebrafish as well as rodent model of epilepsy. These studies endorse the antiepileptic effect of coumarin extract and its inclusion as a drug or drug adjuvant along with available drugs in management of epilepsy.

Biography

Suraj Muke has completed his MPharmacy from Pune University and is currently pursuing his PhD under the guidance of Dr. Sadhana Sathaye at Institute of Chemical Technology, Mumbai. He is currently working on isolation and purification of herbal products for its antiepileptic activity. Our research group focuses on the two major areas i.e. central nervous system disorders and metabolic disorders mainly diabetes mellitus. He wish to explore the molecular mechanisms leading to epilepsy and other neurodegenerative disorders and exploring herbal drugs in treatment of the above diseases either as drug or as nutraceutical is the goal of his research.

surajmuke1@gmail.com

Notes: