

Evaluation Of Anti-Convulsant Activity Of Aqueous And Ethanolic Extract Of Senna Uniflora In Pentylentetrazole And Electro Shock Induced Epilepsy In Rodent Models

¹V. Sai Preethi, Dr. ²M. Naga Bharathi

¹B. Pharmacy, Vignan Institute of Pharmaceutical Technology (A), India

²M. pharm, Ph.D., Associate professor, Department of pharmacology, Vignan Institute of Pharmaceutical Technology (A), India

Abstract:

Senna uniflora is a plant widely used in ayurvedic medicine. The plant is reported for its activity on cardiovascular and skin diseases, as an analgesic, anticonvulsant, anti-anxiolytic, antioxidant, antidiabetic, anticancer, antibacterial, anti-fungal and as an insecticidal agent.

Materials and Methods: -

AQESU and ALESU are prepared with whole plant Senna uniflora by maceration process and Soxhlet process respectively. LD50 dose for the both extracts were evaluated in mice tested up to a maximum dose level of 2000 mg/kg of each extract. Three different doses like 1/20th, 1/10th 1/5th were selected and considered as low, medium, high, respectively with reference to the LD50 dose of each extract. Anticonvulsant activity was evaluated in PTZ and MES induced convulsion in mice and rats as experimental animals. Diazepam is used as a standard reference. Parameters like latency (onset of clonus), Duration tonic-clonic convulsions, status of animal after 30 min, status of animal after 24 h, percent protection, tonic flexion, tonic extension, clonus convulsions are recorded in these experiments. AQESU and ALESU with medium and high doses (200 and 400 mg/kg) have produced a significant anticonvulsant effect but lower dose (100 mg/kg) has non-significant effect. Preliminary phytochemical investigation of AQESU and ALESU reveals the presence of Carbohydrates, Steroids, triterpenes, and flavonoids where as ALESU is identified with carbohydrates, steroids, triterpenes, oils and fats. Phytoconstituents present in the AQESU and ALESU extracts might be responsible for the anticonvulsant effect.

Introduction:

A seizure in the term for "convulsion" is often used interchangeably with "seizure" which means changing behaviour because of a specific type of pathological electrical activity. In a convulsions a person shake uncontrollably, and their shaking is fast and rhythmic as muscles contractions and relaxes repeatedly. Many seizures can take on a different form. Others show mild shaking2 Signs and symptoms2

During a convulsion, an person may be experience few different symptoms like: blackout for few seconds, vomiting, drooling, loss of bowel or bladder control, shaking all over the body muscle spasm generalized myoclonic myoclonus and absence seizure. The symptoms typically last a few seconds to several minutes but can persist for longer. Convulsions in children do not tend to be confidential and may cause brain damage if sustained. Because a more severe state of seizures may be manifested in this setting, the frequency with which these phenomena occur should not detract from their importance. Symptoms may include.

Biography: Sumnima Ghimire is a Research Associate in the Department of Energy and Climate Change at the Asian Institute of Technology (AIT), based in Thailand. Originally from Nepal, Sumnima completed her master's

degree in Climate Change and Sustainable Development at AIT in May 2025. Her professional experience includes impactful roles, including internships with renowned organizations like the Rockefeller Foundation (ARO-Bangkok). Her interests are centered on conducting technical climate research and policy analysis.

Keywords: Senna uniflora whole plant. Alcoholic and Aqueous extracts, Anticonvulsant (PTZ, MES).

Results:

In the present study AQESU and ALESU extracts were evaluated for identification of various phytoconstituents. AQESU was subjected for preliminary phytochemical test, and was identified with carbohydrates, steroids, Triterpenes, and flavonoids, ALESU was identified with steroids, Triterpenes, oils and fats. Both the extracts AQESU and ALESU were subjected for toxicity studies and were administered upto the maximum dose of 2000 mg/kg body weight in mice following OECD guideline 425. No behavioural abnormality or mortality was observed at the highest dose tested and was considered safe.

Saipreethi.pharma@gmail.com

Abstract received date: **May 10, 2026** | Abstract accepted date: **June 16, 2026** | Abstract published date: **July 20, 2026**

