CONCLUSION

Epilepsy is a chronic neurological disorder characterized by seizures, current estimates between 0.5 – 2% of the global population being affected (Naseer et al., 2009). More than half of the epileptics had some sort of cognitive problems with abnormal behavioural manifestations (Rodin et al., 1977). Current data suggest that inflammation may contribute to epileptogenesis in experimental models as well as in humans (Auvin et al., 2010a; 2010b & Vezzani et al, 2013).

Over 30% of people with epilepsy do not have seizure control even with the best available medications (Kwan et al., 2010). Above all, various antiepileptics have adverse cognitive impact with other side effect. Thus, need for new antiepileptic drugs still remains a challenge.

However, many of the natural components do have antiepileptic action and this fact remains scientifically unexplored. In the traditional Indian medicine (Ayurveda) and folk medicine Marsilea quadrifolia Linn is used for the treatment of behavioural and epileptic disorders from Vedic days.

Any phytochemical/s having antiepileptic and neuro-protective property with minimum or no adverse effect can be useful in the treatment of chronic epilepsy.

Our preliminary results indicate that MQ treatment has a substantial beneficial effect on MES- and PTZ-induced rat models of epilepsy. The higher dose of MQ extract (600 mg kg\(^{-1}\) b.w.) showed a significant effect.

Furthermore, our research is able to explore 1TAC from Marsilea quadrifolia Linn. which has potent antiepileptic and neuroprotective role in various parameters studied. It significantly prolongs the latency for seizure threshold, minimizes the severity of seizure and EEG amplitude and spike and wave discharges.

Production of ROS is known to worsen epileptogenesis. The isolated component 1TAC reduces the reactive oxidative damage and retains the neuronal integrity in the key brain structures; hippocampus and frontal cortex. These cellular changes were behaviorally responded as improved emotional learning and memory, a better spatial navigation and object place configuration in rats.

The current study strongly implicate that 1-Triacontanol cerotate has potent antiepileptic and neuroprotective role.