

21st Annual European Pharma Congress

May 20-22, 2019 | Zurich, Switzerland

Bioactive potential of an ethnomedicinal plant *Clerodendrum thomsoniae* available in Malda district, West Bengal, India

Subhrajyoti Roy

University of Gour Banga, India

Ethnopharmacological approach has provided a way in identifying different biological activities in plant sources, which are thought to be responsible to treat different diseases. *Clerodendrum thomsoniae* Balf.f. (Family: Lamiaceae) is one such potential plant, native to tropical West Africa from Cameroon to Senegal and is introduced in India as an exotic plant, cultivated in the garden. Till date, only a few studies, especially, antiepileptic and anticonvulsive activities have been performed in this plant. Therefore, the aim of the present study is to determine different bioactive potentials of this plant by different *in vitro* assays as well as qualitative and quantitative analysis of different phytochemicals. Methodology: *C. thomsoniae* was investigated for antioxidant and free radical scavenging properties, lipid peroxidation inhibitory activity, reducing power capacity, ability for iron chelation, RBC membrane stabilization property, and acetylcholinesterase- and NADH oxidase inhibitory activities. The routine qualitative- and quantitative tests along with thin-layer chromatographic analysis of different phytochemicals were also carried out for *C. thomsoniae*, to identify the presence of different phytoconstituents. Findings: The results indicated that *C. thomsoniae* possesses important phytochemicals like flavonoids, phenolic compounds, terpenoids and steroids with significantly high amounts of flavonoids and phenolic contents. The methanolic extract exhibited potent antioxidant and free radical scavenging activities specially hydroxyl radical- and superoxide radical scavenging activities. The plant extract also possessed reducing power, lipid peroxidation inhibition ability, capacity to inhibit RBC hemolysis and significant acetylcholinesterase- and NADH oxidase inhibitory activities. Conclusion and significance: *C. thomsoniae* is an important source of natural antioxidants, which might be helpful in protecting various oxidative stress related diseases. Therefore, further studies should be prioritized to isolate different bioactive components from this plant. Additionally, the *in vivo* biological activities of this plant needs to be studied systematically prior to clinical trial and drug production..