Abstract

Lippia citrodora: a review on its phytochemistry and pharmacological activities

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Background and objectives: *Lippia citrodora* commonly known as lemon verbena is a species of flowering plant in the verbena family, native to western South America. With its antioxidant effects, it is mostly used in folk medicine to treat anti-inflammatory diseases, and diseases associated with oxidative stress. This review has presented a summary on *L. citordora*'s phytochemistry and its pharmacological activities. It will also discuss gaps and challenges needed to be solved. **Methods**: Electronic database including Web of Science, PubMed, Science Direct and Google Scholar were searched for articles published between 1973 and 2017 regarding the phytochemistry and biological activities of *L. citodora*. **Results**: Traditional uses of this plant were specially related to coagulation system, digestive system and brain. Phytochemical investigations identified flavonoids, terpenes, iridois, lignins, phenylethanoid, as the main components of the plant. Antimicrobial, neuroprotective, antinociceptive, anti hyperpropulsive, sedative, anticolitis, anxiolytic, anticonvulsant, antihyperalgesic, and anticancer properties were among the pharmacological activities of *L. citriodora*. The plant extract and essential oil had also demonstrated high antioxidant activity. **Conclusion**: Modern pharmacological studies have now validated many traditional uses of *L. citrodora*. The data reviewed here revealed that this plant is a potential source for the treatment of a wide range of diseases specially inflammatory diseases and neurological dysfunctions. Future human studies are needed for further confirmation of the therapeutic activities of *L. citriodora*.

Keywords: lemon verbena, *Lippia citrodora*, pharmacological effect, phytochemistry