Abstract:

Background: Lantana montevidensis (L. montevidensis) is native to Brazil, the tea and infusions of the dried leaves have been used in folk medicine. Previous study of L. montevidensis leaves has resulted in the isolation of ten anti-proliferative flavones. Also, the essential oil of the Brazilian L. montevidensis leaves was investigated for its chemical composition and antimicrobial activity. Furthermore, the ethanolic extracts of the leaves and roots demonstrated anti-bacterial activity. Materials and Methods: The essential oils extracted by hydrodistillation from the Egyptian L. montevidensis leaves and flowers were investigated for their chemical composition. Also, a qualitative phytochemical analysis of 70% aqueous methanolic extract of L. montevidensis leaves was performed for the detection of alkaloids, tannins, triterpenoids, sterols, flavonoids, anthraquinones, saponins, iridoids, carbohydrates and/or glycosides. Furthermore, the extracts from the leaves were assessed for their anti-inflammatory, anti-pyrethic, analgesic, antioxidant and antibacterial activities. Results: The composition of the essential oils included large amount of sesquiterpenes, mainly caryophyllene (33.74%), β-selinene (43.95%), germacrene-D (3.79%) and nerolidol (6.32%) in the oil of the leaves, while caryophyllene (42.38%), γ-terpinene (22.64%), D-germacrene (9.10 %) and nerolidol (7.09%) are major in the oil of the flowers. Phytochemical screening of 70% aqueous methanolic extract of L. montevidensis leaves revealed the presence of carbohydrates and/or glycosides, unsaturated sterols, triterpenoids and flavonoids in addition to traces of saponins and iridoids. Furthermore, the extracts from the leaves exhibited anti-inflammatory, anti-pyrethic, analgesic, antioxidant and antibacterial activities. Conclusion: The obtained results may provide a support to explore the plant for isolation of the active constituents accountable for these activities.

Keywords:

Analgesic, antibacterial, anti-inflammatory, antioxidant, antipyretic, Lantana montevidensis, sesquiterpenes

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