

# REVIEW OF FIVE SELECTED UNDERUTILIZED MEDICINAL PLANTS IN SRI LANKA: TOWARDS SUSTAINABLE UTILIZATION IN HERBAL PRODUCTS

I.S.S.C. Uyangoda\*# and M.L.A.M.S. Munasinghe

Faculty of Applied Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka

\*Correspondence E-mail: isurusakbo@gmail.com, Phone: +94717122145

#Presenting Author

**Abstract:** Sri Lanka boasts an exceptional biodiversity that fosters a wealth of flora with therapeutic properties. However, traditional medical practices and herbal product formulations often restrict their use to a limited number of species, and vast reservoirs of valuable medicinal plants have still been underutilized. The present review focused on evaluating five selected underutilized medicinal plants in Sri Lanka: *Agrotatum conyzoides* (Hulanthala), *Artocarpus gomezianus* (Kosgonna), *Euphorbia hirta* (Kapumkeeriya), *Plectranthus zeylanicus* (Iriweriya), and *Piper sarmentosum* (Gas Thippili). Plant species were selected based on the details of pharmacopoeias and ethnobotanical surveys. Scientific data published on ethnomedicinal uses, phytochemistry, and pharmacological properties of selected plants during the past 20 years were collected from PubMed, ScienceDirect, and Google Scholar. Then, the collected data were reviewed to determine how they could be utilized in the herbal products of Sri Lanka. It was found that these plants contain many valuable phytochemicals, including alkaloids, flavonoids, phenolic compounds, and terpenoids, that are predominantly responsible for their medicinal properties. These phytochemicals have been investigated *in vitro* and *in vivo* for various bioactivities, especially anti-microbial, antioxidant, and anti-inflammatory properties. Most of these bioactivities are in accordance with the ethnobotanical uses of these plants. It was confirmed that these plants had not been utilized mainly due to the lack of ethnobotanical knowledge and have not often been included in the pharmacopoeias. It is also shown that these plants can be utilized in a diverse array of herbal products, including novel cosmeceuticals and pharmaceuticals. Further research is needed to evaluate the clinical efficacy of these plants. In conclusion, the data analyzed in this review will aid researchers in executing more studies on the above-mentioned medicinal plants and improve their utilization. This, in turn, prevents the overexploitation of frequently used medicinal plants and thus improves the sustainable utilization of biodiversity.

**Keywords:** Bioactivities; Biodiversity; Herbal products; Medicinal plants; Phytochemicals; Underutilized