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Review of Utilizing the Phytochemicals of *Ocimum sanctum* and *Plectranthus amboinicus* for Novel Herbal Product Development in Sri Lanka**Uyangoda, I.S.S.C.*, Munasinghe, M.L.A.M.S.***Department of Botany, University of Sri Jayewardenepura, Nugegoda, Sri Lanka***isurusakbo@gmail.com***Abstract**

Ocimum sanctum (OS) and *Plectranthus amboinicus* (PA) are two highly abundant medicinal plants in the Lamiaceae family. Despite their widespread availability and documented ethnomedicinal uses, scientific awareness of their pharmacological potential is restricted in Sri Lanka. Consequently, their utilization in herbal products remains limited. The present review investigates the scientific evidence on phytochemical constituents in those species and their potential in novel herbal product development in Sri Lanka. The review was conducted based on indexed journal articles published in the last 15 years. Based on the available data, OS's main phytochemicals involved in pharmacological activities are eugenol, methyl eugenol, rosmarinic acid and apigenin. Eugenol, the main component in OS essential oil, demonstrated 97% inhibition of the COX-I enzyme responsible for plants' anti-inflammatory properties. It has significant antifungal activity, particularly against *Candida* species. According to several studies, the essential oil of OS prevents morphological changes in *C. albicans*, reduces the secretion of hydrolytic enzymes crucial in the infection's early stage, and downregulates the genes connected with the infection. Rosmarinic acid, the principal constituent in ethanolic extracts of OS, exhibits anti-ageing properties by inhibiting collagenase, elastase, and hyaluronidase. OS could be a renewable source of eugenol and rosmarinic acid with high potential to be utilized in antifungal, anti-inflammatory topical applications and anti-ageing cosmeceuticals in Sri Lanka. PA contains phenolics, volatile compounds, and abietene diterpenoids as its predominant phytochemicals. Its essential oil, rich in volatile compounds like carvacrol and thymol, displays promising activity against bacteria and fungi, with minimum inhibitory concentration (MIC) values around 50 µg/mL in various studies. Furthermore, PA essential oil exhibits anti-inflammatory capabilities comparable to the conventional drug Diclofenac. Additionally, its phytochemicals possess a wide range of biological properties, effective in treating respiratory, cardiovascular, oral, skin, digestive, and urinary diseases. Hence, the phytochemicals of PA present valuable potential as sources for novel anti-inflammatory and antimicrobial herbal products, especially for skin and respiratory disorders. Based on data, phytochemicals in OS and PA have the potential to be used in a variety of novel herbal products. Both plants have higher growth rates and can be easily cultivated. Thus, developing novel herbal products that utilize the phytochemicals of OS and PA could be highly feasible and cost-effective. This review provides valuable insights and stimulates future research to focus on utilizing OS and PA phytochemicals in novel, sustainable herbal product lines, contributing to improved healthcare and well-being in Sri Lanka.

Keywords: *Ocimum sanctum*, *Plectranthus amboinicus*, Phytochemicals, Herbal products, Pharmacological