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Anti-inflammatory and Antimicrobial Potential of Traditional Medicinal Plants in Sri Lanka

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There has been a growing demand for herbal drugs as treatment options f inflammatory and microbial diseases, owing to their safety, efficacy and th cost effectiveness. Inflammation is viewed as one of the major causes for th development of a variety of diseases including cancer, cardiovascula disease, diabetes, obesity and inflammatory bowel disease. Due to sid effects associated with current anti-inflammatory agents and the prevalenc of multi-drug resistant microorganisms, there is a continuous search f herbal aletrnatives. The present study was undertaken to evaluate the ant inflammatory and antimicrobial activities of extracts prepared from som medicinal plants widely employed in Sri Lanka as antiseptics, anti-microbi and anti-inflammatory agents. The plants investigated were *Garcini cambogia*, *Hibiscus furcatus*, *Leucas zeylanica*, *Mollugo cerviana Nyctanthes arbor-tristis*, *Ophiorrhiza mungos* and *Pothos scandens*.

Anti-inflammatory potential was determined by cell-based and cell-free 5 lipoxygenase (5-LO) inhibitory assays and antimicrobial activity evaluate by agar diffusion and broth micro-dilution assays. Significant inhibition of 5 LO with IC_{50} values $\leq$ 10 µg/mL was shown by some extracts of *G cambogia*, *H. furcatus*, *L. zeylanica*, *M. cerviana* and *O. mungos*. Moreove extracts from *G. cambogia* displayed potent inhibition of microsoma prostaglandin E synthase-1 (*mPGES-1*). Furthermore, anti-microbial activit was seen in the lipophilic extracts of *G.cambogia* with minimum inhibitor concentrations (MIC) of 31.3-125 µg/mL against *Staphylococcus aureus*, *S saprophyticus* and four methicillin resistant strains of *S. aureus*.