Investigation of Biochemical Properties of *Oncosperma fasciculatum* and *Areca concinna* Seeds

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Present study was carried out to investigate the biochemical properties of two palm trees, Areca concinnaand Oncospermafasciculatu, endemic to Sri Lanka. Seeds extractions of the two trees were extracted in methanol. Soxhlet method was used to extract the fat content, and fatty acids were converted to fatty acid methyl esters to be analysed using Gas Chromatography. Analyses revealed that the seeds of both palm trees *Areca concinna* and *Oncosperma fasciculatum* possess oleic acid (mono unsaturated fatty acid), linoleic acid (poly unsaturated fatty acid) and stearic acid, palmitic acid, myristic acid, lauric acid, capric acid and caprylic acid (saturated fatty acids). Further, these species contain saponins, tannins and flavonoids as phytochemicals, which are believed to support the immune system against pathogens. Antioxidant activity of these species were tested using 2, 2-diphenyl-1-picrylhydrazy (DPPH) method. Oncosperma fasciculatum species and *Areca concinna* species showed 86.86% and 87.72% inhibition percentages, respectively. Antimicrobial activity was studied using the disc diffusion method and both species have shown considerable antibacterial activity against *Staphylococcus aureus*. Moreover, *Oncosperma fasciculatum* showed antifungal activity against *Candida* sp. Overall this study suggests that the two endemic palm trees *Areca concinna* and *Oncosperma fasciculatum* seeds exhibit antioxidant activity and antimicrobial activity which may be useful for nutritional and medicinal applications and potential antibacterial and antifungal applications. Hence, these species may be useful in future drug development.

Keywords: Areca concinna, Oncosperma fasciculatum, antioxidant activity, phytochemicals, antimicrobial activity