Antibacterial Activity Against Skin Pathogenic Bacteria using Thailand Medicinal Plants

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Abstract:

This study investigated the antibacterial activity of crude extracts from five medicinal plants, including Cassia alata (L.). Roxb. (Ringworm Bush), Curcuma longa L. (Turmeric), Lawsonia inermis L. (Henna), Rhinacanthus nasutus (L.) Kurz. (White Crane Flower), and Sapindus emarginatus Wall. (Soap Nut Tree)—against three skin pathogenic bacteria: Pseudomonas aeruginosa TISTR 1467, Staphylococcus aureus TISTR 118, and Staphylococcus epidermidis TISTR 1845. Two types of crude extracts, namely aqueous and ethanol extracts, were tested. The results revealed that only the aqueous extract of Sapindus emarginatus showed all three bacterial antibacterial activity. However, the other aqueous extracts of the different plants showed no antibacterial activity. In contrast, ethanol extracts exhibited antibacterial effects across all medicinal plants, with the most effective activity observed in the ethanol extracts of Rhinacanthus nasutus and Sapindus emarginatus. These crude extracts can be further developed into phytopharmaceutical products, including shampoos, soaps, or body cleansing agents with antibacterial activity to inhibit bacteria-causing skin infections.

Keywords:

Antibacterial, Extraction, Medicinal plants, Skin pathogenic bacteria.