கேண்டிக்கா கண்வாசார்: கோதுமைத் த்துவிங்கானக் குழிச்சுற்று மற்றும் குழிச்சுற்று இன இடங்களில் இயற்கைப் பூத்தூர்கள் நிறைவு செய்யும் பூத்தூர்கள்.

(ANTIMICROBIAL ACTIVITIES OF SELECTED THAI MEDICINAL PLANTS BEARING QUINONOIDS) என்ற பிரிவுகள் வாசாராயின் முதல் கோட்டு மற்றும் சர். முருகா பல்கலைய பிரிவுகளின் வழக்கில், பிறப்பு 114 நாள்.
Antimicrobial activities of selected Thai medicinal plants bearing quinonoids were studied in vitro. The crude drugs from nine plant species were sequentially extracted by maceration with petroleum ether and ethanol respectively. Thirteen tested pathogenic and nonpathogenic microorganisms included 5 gram positive bacteria, 6 gram negative bacteria and 2 fungi. The assay was performed by agar well diffusion method for determination of inhibition zone and broth microdilution method for minimum inhibitory concentrations (MIC), minimum bactericidal concentration (MBC) or minimum fungicidal concentration (MFC) with two fold dilution. The results showed that the petroleum ether extract from Eleutherine americana bulbs displayed inhibition zone of 32.66±0.58 mm against Staphylococcus epidermidis. The lowest MIC and MBC for Thai medicinal plants bearing anthraquinones were found in the petroleum ether extract from Morinda citrifolia roots that presented MIC and MBC of 125 µg/ml against Bacillus subtilis. Ardisia elliptica presenting plant bearing benzoquinones of which the petroleum ether extract from fruits showed the lowest MIC and MBC of 62.50 µg/ml concentration against Bacillus subtilis. The plant bearing naphthoquinones, Rhinacanthus nasutus roots showed the lowest MIC and MBC of 3.90 and 15.62 µg/ml respectively against Micrococcus luteus. Standard quinone derivatives were investigated as well. Juglone displayed inhibition zone of 28.00±2.00 mm against Candida albicans. Alizarin, an anthraquinone compound showed the lowest MIC of 100 and MFC of 50 µg/ml against Candida albicans. Embelin, a benzoquinone derivative presented the MIC and MBC of 6.25 µg/ml against Bacillus subtilis and Bacillus cereus. Lawsone, a naphthoquinone showed the MIC of 25 and MBC of 100 µg/ml against Bacillus cereus. Most of the extract and the quinone derivative compounds demonstrated a promising inhibitory effect against gram positive bacteria followed by fungi and gram negative bacteria. Eleutherine americana especially petroleum ether extract and Xyris indica especially ethanol extract expressed broadest spectrum of antimicrobial activity. Cassia tora possessed least spectrum of antimicrobial activity as well as least potency. Three species of Morinda showed similar spectrum and potency against tested microorganisms. The extracts from plants bearing naphthoquinones, for example Eleutherine americana and Rhinacanthus nasutus as well as naphthoquinone compounds, for example lawsone and juglune showed prominent range and potency in antimicrobial activity. This study revealed the antimicrobial potentials among selected Thai medicinal plants bearing quinonoid compounds. The results could expand our knowledge in Thai traditional plant usages and discloses Thai traditional wisdom.