

Antibacterial Activity of Selected Seaweed Extracts Against Some Selected Infectious Pathogens

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The antibacterial efficacy of methanolic extracts of marine algae, *Caulerpa racemosa* (Chlorophyta), *Sargassum polycystum* and *Turbinaria ornata* (Phaeophyta) against some selected gram-positive and gram-negative human pathogenic bacteria was studied. Dried and powdered sample (3g) of the seaweeds collected at the Nachchikuda and Keerimalai coastal area in the Northern region of Sri Lanka was diluted with 60 ml 70% methanol. This mixture was homogenized at different duration and then filtered by using whatsmann No 1 filter paper to obtain clear extract. This extract was used to test the antibacterial activity against appropriately diluted Gram-positive bacterial species *Enterococcus faecalis* (ATCC 29212) & *Staphylococcus aureus* (ATCC 29213) and Gram-negative bacterial species *Escherichia coli* (ATCC 25922) & *Pseudomonas aeruginosa* (ATCC 27853) using agar well diffusion method in triplicates. Results showed that significant amount of inhibition zone was obtained against all the tested bacterial species which was comparable with positive control streptomycin and negative control 70% methanol. *Turbinaria ornata* have significantly highest antibacterial activity against all test organisms followed by *Caulerpa racemosa* and *Sargassum polycystum*. The selected seaweeds showed their highest and lowest inhibition zone against *Staphylococcus aureus* (19.06±1.15mm) and *Enterococcus faecalis* (12.32±0.76mm).

Keywords: Antibacterial activity, Methanolic extracts, Pathogens, Seaweeds.