



ANTIBACTERIAL ACTIVITY OF MARINE SEAWEED *Gracilaria edulis* (RHODOPHYCEA) IN SRI LANKA

Umakanthan G.^{1*}, Vinobaba P.² and Radampola K.¹

¹Department Fisheries and Aquaculture, University of Ruhuna, Sri Lanka

²Department of Zoology, Eastern University, Sri Lanka

ghumakanth@gmail.com

ABSTRACT

Seaweeds are important living organisms in the marine environment because they are recognized as a potential source of bioactive natural products. Methanol extract *Gracilaria edulis* seaweeds was prepared to screening its antibacterial activity against four common bacterial pathogens. The tested pathogenic strains were *Escherichia coli*, *ESBL*, *Pseudomonas aeruginosa* and *Staphylococcus aureus*. Disc diffusion method was used to determine the antimicrobial activity of methanol extracts of *G. edulis*. Among antibacterial compounds such are Ceftazidime, Cefotaxime, Augmentin, methanol extract of *G.edulis* and Ampicillin, the inhibition zone of *G.edulis* methanol extract were recorded to selected common pathogenic bacterial strains which were Gram positive *S.aureus* and Gram negative bacteria *E.coli*, *ESBL* bacteria and *P.aeruginosa*. The inhibitory effects of Methanol extract of *G. edulis* was more than Ampicillin lower than followed by Cefotaxime, Ceftazidime and Augmentin to *E.coli* and *ESBL* bacteria. Methanol saturated sterile disc was used as the control and not shown any inhibitory zone to test all of these germs. While consider the inhibition zone diameter, inhibitory activity of Methanol extract of *G. edulis* was maximum against *S.aureus*16(±)0.5mm medium to *E.coli* (12(±)0.8)mm and *ESBL* bacteria (12(±)0.5)mm but relatively minimum effects to *P.aeruginosa* (10(±)0.8)mm. Finally this results revealed methanol extract of *G.edulis* was screened promising antimicrobial activity.

Keywords: *Gracilaria edulis* methanol extracts, Antimicrobial Activity Bacteria