

# **Antibacterial Activity of Marine Source Extracts Against Multidrug Resistance Organisms**

## **Abstrak**

Problem statement: Antimicrobial resistance is the major problem of global dimensions with a significant impact on morbidity, mortality and healthcare-associated costs. The problem has recently been worsened by the steady increase in multiresistant strains and by the restriction of antibiotic discovery and development programs. Methicillin-resistant *Staphylococcus aureus*, pseudomonads and *Escherichia coli* are a major nosocomial and community-acquired pathogens for which few existing antibiotics are efficacious. The current study was conducted to investigate antibacterial activity of natural seaweed sources. Approach: *Gracilaria changii* *Euchema denticulatum* and sea cucumbers extracts against Methicillin-resistant *Staphylococcus aureus*, *Escherichia coli*, *Streptococcus pyogenes*, *Vibrio cholerae*, *Pseudomonas aeruginosa* and *Klebsiella pneumoniae*. Results: The Minimal Inhibitory Concentration (MIC) values and Minimal Bactericidal Concentration (MBC) values of methanol extract were used against all assayed bacteria. Results indicated that *G. changii*, *E. denticulatum* and sea cucumbers extracts must possess major antibacterial components against infectious microorganisms. Conclusion: The results obtained indicate that *Gracilaria changii* and *Euchema denticulatum* could be a source of natural products with antibiotic modifying activity to be used against multidrug resistant bacteria.