

Pytochemical characterization and antimicrobial effect of *Kappaphycus alvarezii* (sea weed) against chosen isolates

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ABSTRACT

The search for plants with antimicrobial activity has gained increases importance in recent time, due to growing worldwide concern about the alarming increase in the rate of infection by antibiotic- resistant microorganisms. The defence mechanism against antibiotics is widely present in bacteria and become a world health problem. In order to compact these important health challenges, discovery of the new medical agents with novel modes of activity is imperative. In recent year, seaweeds also known as marine algae, a part of the marine plant kingdom have attracted a lot of attention from the scientific community. Sea weeds are potentially good sources of protein, polysaccharides and fibre and metabolically active components, having important functional activities such as antioxidant, anticoagulant, antimitogen and antitumor activity. *Kappaphycus alvarezii*, one of the largest tropical red algae subjected to the present study collected from the Gulf of Mannar coast. The preliminary phytochemical screening of the crude extract from ethanol and chloroform of *Kappaphycus alvarezii* revealed the presence of significant metabolically active compounds with antimicrobial property. The antimicrobial activity of the crude extracts of the *Kappaphycus alvarezii* against Gram positive and Gram negative clinical isolates such as *staphylococcus*, *E.coli*, *salmonella*, *vibrio* showed significant effect, based upon the concentration while compared with commercial antibiotics discs. To overcome the impact of antibiotic resistant strategy of microorganisms, the seaweed may implement as effective therapeutic agent to combat against the clinical isolates.