Short Communication

iMedPub Journals
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Reports in Endocrine Disorders

2022
Vol 6. No. 3

Study of bioactive metabolites produced by actinomycetes from Mangrove sediment

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Abstract

Background: Mangroves are the world's productive ecosystem. They are adapted to high salinity, wide range of temperature and pressure with enormous microbial diversity that are exploited for the production of novel bioactive compounds. Among the other microbial activity. Actinomycetes play a high prominent role in producing bioactive components since the conditions of halophillic environment are extremely varied compared to terrestrial environment that retards the growth of life threatening multi drug resistant pathogens and their antibacterial agents are highly sourceful to many biomedical properties acts as antitumor agents, anticancer agents, immunosuppressive agents, antioxidants and enzyme inhibitors.

Materials and Methods: Actinomycetes are heterogenous group of Gram positive bacteria with excellent G+C contents in their DNA. The present study was aimed to isolate the Actinomycetes from different regions of mangrove sediments of selected media. Isolated organisms were further screened based on diversified nature morphologically, preliminary characterization and their antagonistic activity was enhanced by bioactive metabolites obtained from Phosphate buffered intracellular extraction.

Results and Conclusion: Isolated actinomycetes strains are extensively different and are grouped based on their colony morphology, Physiological, Biochemical and Cultural characterization. Majorty of the strains sustained to the growth of high pH and temperature they also shown positive response to Biochemical analysis. Based on preliminary and secondary screening selected results were notified that the potent actinomycetes strains shown significant inhibition against Multidrug resistant ATCC Pathogenic bacterial cells, hence the Purpose of this study are relevant to many Biomedical applications which can be applicable to pharmaceuticals, Industries and Agro based Research.

Received: June 10, 2022; **Accepted:** June 17, 2022; **Published:** June 24, 2022

Biography

Akshatha S J is a research scholar. She is currently pursuing her Ph.D. from Mangalore University.

She has done many researches in the field of diabetes and endocrinology.

