CHARACTRIZATION OF BIOACTIVE COMPOUNDS FROM MARINE ACTINOMYCETES ANTAGONISTIC TO URINARY TRACT BACTERIAL PATHOGENS

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Abstract

The development of multi drug resistant uropathogens is a big threat to human race. Infections with multidrug-resistant bacteria are hard to treat. The present study Characterization of bioactive compounds from marine actinomycetes antagonistic to urinary tract bacterial pathogens is aims to prove marine actinomycetes have some bioactive compounds which are antagonistic to multi drug resistant uropathogens. In this study they were14 different urine samples were collected from UTI suspected patients and isolated five uropathogens from it. 37 marine actinomycetes were isolated from various marine samples collected from different stations of Kovalam coastal region, part of Arabian Sea on the western coast of India. The isolated colonies were studied on their morphological characteristics. These diverse colonies were observed and indicated that the potential diversity of the actinomycetes isolated from various sources. The antagonistic activity studies showed that among the 37 marine actinomycetes isolates 10 isolates showed significant antagonism against all the five test organisms *Escherichia coli, Klebsiella sp., Pseudomonas sp., Enterococcus sp., Proteus sp.* in primary screening. The isolate KVSD9 showed maximum inhibitory activity against *Escherichia coli* (18mm). The result was consistent on both well diffusion and disc diffusion methods. Similarly KVSD4 showed maximum activity against *Klebsiella sp.* KVSD35 showed maximum activity against *Pseudomonas sp.* in well diffusion assay. But in disc diffusion method KVSD2 is the most potent strain against *Pseudomonas sp.* Against *Enterococcus* sp. KVSD9 showed the highest antagonistic activity in both the secondary assays followed by KVSD2. KVSD4 is the most potent isolate against *Proteus sp.* in both disc and well diffusion methods.

Recent Publications

P.Deepa Mathew and K.Sukesh. Marine Actinomycetes as a sustainable remedy to emerging drug resistance in clinical scenario,Journal of basic and applied research international 2021,27(2),p17-35

K. Sukesh,, Sarath kumar, C. S and **Deepa Mathew,P**.Antagonistic activity of marine actinomycetes against dental pathogen *Streptococcus mutans. International Journal of Research and Analytical Reviews 2018* 5 (4),p 436-440



Biography (150 word limit)

I have completed my postgraduation at the age of 22 years from Bharathiar university and bachelors degree from Mahatma Gandhi university,Kottayam. I have published 3 papers in reputed journals. Now I am doing Phd in microbiology from Manonmaniam sundaranar university,Tirunelveli.

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Notes/Comments: