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Bioprospecting of secondary metabolites from marine actinomycetes for combating the multidrug resistance among uropathogens

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 the present study, the uropathogens were collected from urine samples of patients with their consent. Marine actinomycetes were isolated from marine sediments collected from different stations of Poovar coastal region, part of Arabian Sea on the western coast of India using standard microbiological techniques. The isolated strains were subjected to downstream characterization and those showed significant antagonistic activity common uropathogens were subjected to further studies. The isolate PVR9 showed maximum inhibitory activity against *Escherichia coli* (19mm). Similarly PVR4 showed maximum activity against *Klebsiella sp.* PVR35 showed maximum activity against *Pseudomonas sp.* in well diffusion assay. But in disc diffusion method PVR2 is the most potent strain against *Pseudomonas sp.* Against *Acinetobacter sp.* PVR9 showed the highest antagonistic activity in both the secondary assays followed by PVR2. PVR4 is the most potent isolate against *Klebsiella sp.* in both disc and well diffusion methods. These observations showed lime light

on the fact that the marine actinomycetes of the tropical area are a good resource of potential bioactive molecules. Further studies on these isolates will help to combat the multi-drug resistance in clinical scenario.



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Biography

Deepa Mathew has completed her postgraduation at the age of 22 years from Bharathiar University and bachelor's degree from Mahatma Gandhi University, Kottayam. She has published 4 papers in reputed journals. Now she is doing Ph.D in microbiology from Manonmaniam sundaranar university, Tirunelveli, Tamilnadu, India .

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