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Antagonistic interactions and phylogenetic diversity of antimicrobial agents producing marine bacteria in Suez Bay

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Estimation of the total viable bacterial counts and some physicochemical parameters in different sites selected along the Suez Bay was carried out. The highest bacterial density is positively correlated with pollution strength and is localized at the end of the Suez Bay on the one hand of Suez Gulf. It is also function of pollution strength at different examined sites. Antagonistic interactions among the most dominating twenty-two bacterial isolates were assayed. The marine isolate AB12 isolated from sea water of NIOF station displayed the highest antagonistic activity (42.8%). Antagonistic isolates were assigned to phylogenetically 4 different phena which were identified as *Staphylococcus, Micrococcus, Enterococcus* and *Enterobacter* species in addition to 5 single clusters which were identified as *Acinetobacter sp*. and *Pseudomonas sp*. The promising strain was identified at the molecular level as *Pseudoalteromonas* piscicida.

Biography

Sahar Wefky Mostafa Hassana is an Associate Professor of Microbiology at National Institute of Oceanography and Fisheries in the branch of Marine Environment, Division of Microbiology. His research interests concern production, statistical optimization of bioactive metabolites produced by different marine sources such as bacteria, Actinomycetes, algae and characterization and applications of the extracted bioactive compounds. He is interested in production of marine natural products such as exopolysaccharides and investigation of their applications as antitumor, antiviral, antibacterial and antioxidant; in addition to isolation, molecular characterization of different types of bacteriophages and investigation of their potentiality as alternatives to the traditional antibiotics and; production of different enzymes from marine bacteria and Actinomycetes, bioremediation of dyes and removal of heavy metals using marine bacteria and fungi. Application of nanotechnology is also of his interest.

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