OSP-29

Microbial Novel Peptides from Marine Environment Uncovered against Multidrug-Resistant Bacteria with Biomedical Significances

Ramkumar M., L Stanley Abraham*, R. Selvamani, Steffy Joseph, S. Kumaralingam, Thirugnanasambandam R

Centre for Ocean Research, National Facility for Coastal and Marine Research, Sathyabama Institute of Science and Technology, Chennai, India.

The marine organism synthesizes bioactive compounds, proteins, enzymes, and peptides is the key role for microorganisms as normal physiological functions and demonstrate their diverse break through applications. They work towards defensive mechanism and boosting the microbial resistivity onslaught from the extracellular source of marine organisms. They are mainly utilized in a variety of sectors, including such as agriculture, food, pharmaceuticals, nutraceuticals, and therapeutics, These compounds are advantageous, as they possess unique features of biodegradability, low toxicity, antimicrobial, and bio sorption properties. In this present study we isolated marine bacteria and evaluated for its growth and extracted for azoline peptides that are growing in prominence as therapeutic prospects. Finally Our study helps the researchers for characterization using ATR-FTIR, GC-MS and HPLC which confirm the presence of purified compounds. This extract shows potent antimicrobial activity against *Enterococcus faecalis and Staphylococcus aureus* the new bioactive peptides extracted from marine ecosystem possess excellent antibacterial activity against wide range of bacteria of clinical importance.

Keywords: Azoline, Antimicrobial activity, *Enterococcus feacalis*, *Staphylococcus aureus*, Novel peptides

***Correspondence:** L. Stanley Abraham
sabraham.cor@sathyabama.ac.in