

3rd International Conference and Exhibition on

Pharmacognosy, Phytochemistry & Natural Products

October 26-28, 2015 Hyderabad, India

Isolation, purification, characterization of natural products from marine *Pseudomonas* species

Srinu Meesala and Milind G Watve

Indian Institute of Science Education & Research, India

There is a perpetual need for new chemotherapeutants especially novel antibiotics to combat new diseases and drug-resistant pathogens that are becoming a significant threat to public health. In spite of the development of chemi-informatics, molecular modeling and other rational drug discovery tools, Natural Products (NPs) still continue to be a major contributor to new drugs. Over 28% of the new chemical entities and 42% of the anticancer drugs introduced into the market in the last three decades can be traced back to NPs. More than 50,000 Microbial Natural Products (MNPs) have been obtained and have played an important role in drug discovery. However, the rate at which new compounds are being discovered from microbial sources is declining. On the other hand, the emergence of severe resistance to antibiotics in microbial pathogens, such as gram-positive methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant *S. aureus* (VRSA) increases, there is a need to discovery of MNPs with unique scaffolds to meet the urgent demand for new drugs. Phenazines are redox-active nitrogen-containing aromatic compounds produced by a diverse range of bacterial genera. We isolated *Pseudomonas aeruginosa*, Genbank accession no. KJ558373, producing phenazines, showing broad spectrum activity and exhibit strong cytotoxic activity against mouse macrophage (RAW 264), human neuroblastoma (SHSY5Y), human lung cancerous (A549), human liver cancer (HEPG2) cell lines with IC₅₀ value less than 50 ng/ml. Chemical characterization studies like UV, IR, HRESIMS, 1D and 2D NMR revealed are known phenazines and is a novel phenazine derivative.

Biography

Srinu Meesala has completed his PhD from Andhra University and currently pursuing Postdoctoral studies at IISER, Pune.

srinu.meesala@iiserpune.ac.in

Notes: