

Secondary Metabolites Identified from a *Pseudoalteromonas rubra* Bacterial Strain Isolated from a Fijian Marine Alga

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Abstract : The marine environment has continuously demonstrated to be a rich source of secondary metabolites and bioactive compounds that can address the many pharmaceutical problems facing mankind. The emergence of multidrug resistant pathogens has caused scientists to explore contemporary ways of combating these super bugs. A red-pigmented bacterial strain isolated from a marine alga collected in Fiji was identified to be *Pseudoalteromonas rubra* from 16s rRNA sequencing. This bacterial strain was cultured using a yeast-peptone media and incubated for five days. The ethyl acetate extract of this bacterium was subjected to chromatographic separation techniques such as vacuum liquid chromatography, flash chromatography, size exclusion chromatography and high-pressure liquid chromatography to yield the pure compound and a number of semi-pure fractions. The crude extract and subsequent purified fractions were analyzed by ultraviolet/visible spectroscopy and mass spectroscopy and was found to contain the compounds ivermectin, stenothricin, cyclo-L-pro-L-val, prodigiosin, mycophenolic acid, phenazine-1-carboxylic acid, eplerenone, staurosporine and pseudoalteromone A. The structure of the pure compound, pseudoalteromone A, was elucidated using NMR ¹H, ¹³C, ¹H-¹H COSY, HSQC and HMBC spectroscopic data.

Keywords : *Pseudoalteromonas rubra*, Pseudoalteromone A, secondary metabolites, structure elucidation

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