Novel Tyrosin-lipid Derivatives, Vitroprocines, from Marine Bacteria, *Vibrio proteolyticus*, Exhibited Significant Anti-microbial Activity against Opportunistic Pathogen, *Acinetobacter baumannii*

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Keywords: Vitroprocines, *Vibrio proteolyticus*, *Acinetobacter baumannii*

Abstract

Acinetobacter baumannii, an opportunistic human pathogen which shows resistant to many clinic antibiotics, is one of the major causes of intrahospital infections. For searching novel antibiotics to resolve the problem, one anti-microbial marine bacterium (Strain QWI06) was isolated from the sediment of Da-Peng-Wan National Scenic Area and was identified as *Vibrio proteolyticus* according to the 16S rRNA analysis. The extract of the marine *Vibrio* exhibited significantly inhibitory effect against six bacterial indicators (*Staphylococcus aureus*, *Bacillus cereus*, *Klebsiella pneumoniae*, *Escherichia coli*, *Acinetobacter baumannii*, *Candida albicans*). By bioactivity-guided fractionation isolation, 11 tyrosine-lipid derivatives, named vitroprocines, together with eight known compounds, including three dicyclicpeptides, three nucleosides, an indole, and a benzyl derivative were found. Furthermore, the proposed biosysthesis pathway of these novel tyrosine-lipid derivatives was confirmed based on culturing in MR (marine agar) medium with the additional *L*-tyrosine.