

P-091: BIOCATALYTIC STUDY OF BIOACTIVE MARINE NATURAL PRODUCTS: TRITERPENOID SIPHOLANES

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Cancer is the second most common cause of the death in the US, accounting for 1 of every 4 deaths. In 2006, about 564,830 Americans are expected to die of cancer, more than 1,500 people a day. Marine natural products are enormous resource of unique and highly bioactive compounds. The Red Sea sponge *Siphonochalina siphonella* is a rich source of sipholane triterpenoids. The objective of this study was to isolate and to optimize the major *S. siphonella* sipholanes, sipholenol A and sipholenone A, so as to generate new derivatives with enhanced anticancer activity using biocatalysis. Adequate amounts of sipholenol A and sipholenone A were isolated. Several new metabolites of sipholenol A and sipholenone A were generated using four fungal species. For the first time, sipholenone A and other sipholanes are reported to possess potent anticancer activity. In conclusion, sipholane triterpenoids could be potential anticancer leads.