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**Chemical Evidences of *Schizoporella errata* for High Perseverance in Marine Environment: Cytotoxicity and Volatile Compound Analysis****Weerasinghe R.L.<sup>1</sup>, Ranatunga R.R.M.K.P.<sup>1\*</sup>, Chinthaka S.D.M.<sup>2</sup>**<sup>1</sup>*Department of Zoology, University of Sri Jayewardenepura, Nugegoda, Sri Lanka*<sup>2</sup>*Department of Chemistry, University of Sri Jayewardenepura, Nugegoda, Sri Lanka**\*ranatunga@sci.sjp.ac.lk***Abstract**

*Schizoporella errata* is a marine bryozoan native to Mediterranean ocean and known to be highly invasive to many countries throughout the world. *S. errata* in Sri Lanka was recorded in Colombo port and the species can be seen extensively distributed over the port environment. Discovery of the relationship of cytotoxicity and secondary metabolites of *S. errata*, with their high tenacity to establish in a new environment, is the main objective of the study. Fresh samples of *S. errata* collected from Colombo port were extracted with ethanol to determine the presence of phytochemicals including volatile compounds and cytotoxicity. Crude ethanolic extract was subjected to qualitative assessment of the presence of alkaloids, sterols and triterpenes, saponins, flavonoid and phenols. Ethanol was evaporated and dry product was fractionated with 2.5% H<sub>2</sub>SO<sub>4</sub>-ethyl acetate system. Basified aqueous layer again fractionated with ethyl acetate and both organic fractions were evaporated to dryness. Dried products were re-dissolved in dichloromethane to conduct GC/MS analysis. Dry ethanolic extract dissolved in 5% DMSO-seawater was applied in cytotoxicity bioassay against freshly hatched *Artemia* at different concentrations (0.25, 0.5, 0.75, 1, 1.25, 1.5, 1.75 mg/ml). Larval mortality was recorded and analyzed using probit analysis. Swimming changes and lethargy of *Artemia* larvae were observed at all concentrations and the 24 h LC<sub>50</sub> value (95% confidence limit) estimated at 0.794 mg/ml for crude *S. errata* extraction. Alkaloids, sterols and triterpenes were detected in phytochemical screening. GC/MS analysis confirmed the presence of a range of phthalate derivatives, which are suggested to damage reproductive organs and nervous system of animals. Therefore, the impact of secondary metabolites can be considered as one of the reasons for the successful establishment of *S. errata* into new environments.

**Keywords:** *Schizoporella errata*, Cytotoxicity, Phthalate derivatives, Secondary metabolite