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Title: In vitro Toxicity Evaluation of Sterol Isolate from Echinoderm Stellaster equestris against Human Peripheral Blood.

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Abstract: Background: Ocean acts as a wealthy resource of biological diversity producing prospective novel metabolites from the organisms present in the environment. Novel bioactive compounds from Echinoderms mainly from sea stars have been extensively studied procuring rich diverse compounds which exhibits in vitro cytotoxicity comparable to or better than those of the potent anticancer drug. These sea stars which reside in the benthic region serves as their habitat and they are therefore predators and persistently being attacked by various organisms subsequently they acclimatize the survival approach to defend themselves from the external pathogens. Since these metabolites are obscured as a metabolic product during their endurance an initial evaluation of these compounds is necessary to assess human risk. Objectives: The present study focuses in vitro toxicity evaluation of isolated sterol like isolate from echinoderm sea star Stellaster equestris by incorporating hemolytic, chromosomal aberration assay and the cell viability tryphan blue exclusion assay against human peripheral blood. Methods: The in vitro toxicity evaluation was studied against the human peripheral blood collected from the healthy donors with the defined concentration of the sterol like compound from the sea star Stellaster equestris. The hemolytic, cell viability trypan blue exclusion method and chromosomal aberration assay were performed to check the hemolytic, mutagenic and genotoxic effect against the lymphocytes and the red blood cells. Results and Discussion: The result suggested that the

hemolytic assay and the cell viability assay even in a dose dependent manner were non-hemolytic and percentage of the viability was not affected due to the exposure of the compound. The absence of genotoxicity was evident for the chromosomal aberration assay indicated that the isolated compound from the sea star Stellaster equestris might be considered as effective novel compound. [ABSTRACT FROM AUTHOR]

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