

In-Vitro Cytotoxic Activity of Methanolic Extract of *Hemidesmus Indicus* R. Br.

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Natural products represent a reservoir of diverse templates and are being tapped to outsource novel anticancer agents. *Hemidesmus indicus* R.Br. (Fam: Asclepidaceae) has been reported to be useful for the treatment of inflammation, cuts, wounds, burns, snake bite, skin and blood diseases, ulcers, immunological disorders. In the present study, the methanolic extract of the roots of *Hemidesmus indicus*, was investigated against human colon cancer cell line (HT29) to explore its anticancer potential. The effect of *Hemidesmus indicus* methanolic extract (HIME) on proliferation of HT29 cancer cell line was determined by microculture tetrazolium assay (MTT). The cells were exposed to different concentrations (100, 50, 25, 12.5, 6.25, 3.125 and 1.5 µg/ml) of HIME or vehicle for 48 h. Cisplatin (5, 2.5 and 1.25 µg/ml) acted as positive control and vehicle (DMSO) as negative control. Following treatment, the cells were exposed to Tetrazolium dye (5mg/ml) for 4 h. The formation of the purple coloured formazan complex was dissolved by adding DMSO (100 µl) and read at 490 nm using ELISA microtiter plate reader to determine the inhibitory concentration, IC₅₀. About 40% increment in cell killing was seen when the dose of HIME was increased from 1.5-25 µg/ml. At concentration of 100 µg/ml, 49.81%, cytotoxicity was recorded. The IC₅₀ value of HIME was 1.8964 µg/ml after 48 h of incubation. In this study, it was observed that HIME induces a concentration dependent inhibition of HT29 cells, with an IC₅₀ value of 1.8964 µg/ml after 48 h of incubation.

Biography

Mrs. Saumya Das is Pursuing her Ph.D from Birla Institute of Technology, Ranchi, Mesra, India. She is a faculty of Pharmacology in Noida Institute of Engineering and Technology, Greater Noida, India. She has published more than 12 papers in reputed International and National journals and serving as an editorial board member and reviewer of repute. She is life member of Indian Pharmacological Society and Indian Pharmacy Graduate Association. Her area of interest is Phytopharmacology, Toxicology and Anticancerous agents.