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Evaluation of *in vitro* anticancer activity of *Tinospora cordifolia* (stem) Miers. against human breast cancer cells

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Breast cancer is one of the leading cause of death among women in India and also around the world. Plants are being used as indigenous cure in myths or traditional system of medicine for treatment of diverse kinds of illness including cancer. *Tinospora cordifolia*, also known as Giloy, Guduchi or Amrita, is used in the treatment of various diseases in the traditional medicinal system in India. It is a significant medicinal plant cultivated throughout the Indian subcontinent. The plant is recognized for its antispasmodic, antipyretic, antineoplastic, hypolipidemic, and hypoglycemic properties. It is moreover used in general weakness, digestive disturbances, loss of appetite and fever in children, dysentery, urinary diseases, viral hepatitis, and anemia. In the present investigation, the methanolic extract of stem of *T. cordifolia* was evaluated for inhibition of cell proliferation and migration of human breast cancer cell line MDA-MB-231. MTT- based cytotoxicity assay was used to assess the effect of methanolic extract of stem of *T. cordifolia* against proliferation of human breast cancer cell line. Wound healing migration assay was used to assess the effects on the migration ability of human breast cancer cells. Methanolic extract of *T. cordifolia* showed significant anticancer activity against MDA-MB-231 human breast cancer cell line. Furthermore the extract was evaluated for their antioxidant activity using 2,2-diphenyl-1-picryl hydrazine (DPPH), OH, and superoxide anion radicals. Extract demonstrated considerable reducing power. The reductive capability of the plant extract was compared with standard antioxidant ascorbic acid.

Biography

Sonali Kamble has completed her post-graduation in Biotechnology from Maharashtra, India in 2012. After completion of post-graduation she qualified GATE exam in biotechnology, conducted by IIT Mumbai in 2013. Then she completed M.Phil (Biotechnology) from SRTM University (MH), India. Currently she is a Ph.D student at the same university. Her main area of research is Angiogenesis, Cancer, and Antioxidants

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