

RESEARCH ARTICLE

Exploring *in vitro* anti-proliferative efficacy of Jammu botanicals

■ VIKAS SHARMA

SUMMARY

Cancer is becoming a big load on families and economies. Cancer cases related deaths on rise in J&K during past four years with the total of 11,815 cancer cases and 5,198 mortality cases have been reported in the state during the current year. Cancer research has, therefore, become a major area of scientific research supporting the foundations of modern biology to a great extent. Chemotherapy is a major treatment modality for cancer, but most of the drugs used in cancer chemotherapy exhibit cell toxicity and can induce genotoxic, carcinogenic and teratogenic effects in non tumor cells. Therefore, the research for alternative drugs of natural origin, which are less toxic, endowed with fewer side effects and more potent in their mechanism of action, is an important research line. In the present investigation, methanolic and aqueous extracts from two medicinal plants (*Allium sativum* and *Holarrhena antidysenterica*) selected from Jammu region were evaluated against eight human cancer cell lines from six different origins, viz., A-549 (lung), NCI-H322 (lung), HCT-116 (colon), COLO-205 (colon), MCF-7 (breast), PC-3 (prostate), THP-1 (leukemia) and U-87-MG (glioblastoma) at the concentration of 100 µg/ml using sulphorhodamine blue (SRB) assay. Results revealed that methanolic extract from the stem-leaves of *H. antidysenterica* displayed *in vitro* cytotoxic effect against leukemia and colon cancer cells.

Key Words : Cancer cells, *Allium sativum*, *Holarrhena antidysenterica*, SRB assay

How to cite this article : Sharma, Vikas (2016). Exploring *in vitro* anti-proliferative efficacy of Jammu botanicals. *Internat. J. Plant Sci.*, 11 (1): 60-64.

Article chronicle : Received : 06.11.2015; Revised : 17.11.2015; Accepted : 29.11.2015

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