

## **Influence of *Rhinacanthus nasutus* leaf extract on etoposide induced apoptotic events in peripheral blood lymphocytes**

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Cancer is the most progressive and devastating disease in the world. Anticancer drugs used in chemotherapy for tumors and leukemia generally inhibit cell proliferation and induce cell death in malignant cells. In addition to the therapeutic effect on malignant cells, chemotherapy also leads to severe toxicity in normal tissue. Chemoprevention is now recognized as an essential approach to control cancer, and is defined as the use of natural products to prevent, interrupt or reverse the carcinogenic process or to reduce the chance of cancer recurrence. Plants have been a prime source of effective conventional drugs for the treatment of many forms of cancer. They have many phytochemicals with various bioactivities, including antioxidant, anti-inflammatory and anti cancer properties. The purpose of this research activity was to characterize the antioxidant efficiency of *Rhinacanthus nasutus* leaf extract, and its protective effect on oxidant induced damage and to determine the apoptotic effect of the plant in human peripheral blood lymphocytes treated with etoposide. A major advantage of lymphocyte culture systems is that it allows the analysis of in vivo cytogenetic damage with minimal injury to the animal under study. The anticancer activity of the extracts were tested by methods like MTT, SRB, Giemsa, PI, DAPI, EtBr and LDH assay for cell viability, morphological analysis and cytotoxicity. The results revealed that the leaves of *Rhinacanthus nasutus* offered significant protection against cell death in the oxidatively stressed peripheral blood lymphocytes.

### **Biography**

Nirmaladevi has completed her Ph.D at the age of 32 years from Avinashilingam University, Coimbatore, India. She is serving in the same University as Assistant Professor in Biochemistry. She has published 12 papers in reputed journals and undertook research training from reputed Institutes in India like National Institute of Immunology, Indian Institute of Science, Bangalore and recently attended a workshop on Animal Tissue Culture at Pune, India. Her research interest lies in the area of cell culture and guiding M.Sc, M.Phil and Doctoral research scholars in the same area. She has presented research papers in many conferences organized at National and International levels. Any opportunity given to attend this conference would be highly beneficial to enrich her career in this area of research.

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