

Executive Summary

An executive summary of the final report of work done on the Minor Research Project of Dr.Madhu LN, entitled “**In vivo Antiangiogenesis and Tumor Suppressive Property of Thiazole Acetamide Derivatives**”, sanctioned by UGC, vide sanction letter No. MRP(S)-0117/12-13/KAMA002/UGC-SWRO dated 23-09-13

Executive summary of the Report

Thiazole is a heterocyclic compound featuring both a nitrogen atom and sulphur atom as part of the aromatic five membered ring. Thiazoles are reported to possess a wide spectrum of biological activities such as antibacterial, anti-inflammatory, antifungal, antitubercular, antitumor, antioxidant, antiparkinsonism, antiviral and analgesic activities. The present study focuses on the anticancer and antiangiogenesis property of thiazole acetamide derivatives. Two thiazole acetamide compounds were synthesized and its anticancer property was studied in EAC and HeLa cells. To evaluate the anticancer property the assays such as MTT assay, Trypan blue dye exclusion assay, DNA diffusion assay for apoptosis, LDH leakage assay were carried out. All the parameters showed a good anticancer property of the synthesized derivatives. The cell culture media was used to assess the secreted VEGF level. The results showed the reduction in the VEGF level in thiazole acetamide treated groups. The docking studies showed moderate binding of study compounds to VEGF protein. These results conclude the anticancer and antiangiogenesis property of the synthesized thiazole acetamide derivatives.