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Antitumor effect of scorpion venom peptides *in vivo* of male rabbit and *in vitro* of DU145 cells of prostate cancer model

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The modern approach used to characterize various compounds from animal venoms, using advanced proteomic and genomic tools, has been denominated "venomics". Venoms from various scorpions have been reported to prevent propagation of different cell lines such as prostate cancer (DU-145), human leukemia and neuroblastoma. In the present study, antitumor effect of scorpion venom was detected *in vivo* of male rabbits and *in vitro* of PC-3 cell line using cell cycle profiling analysis, DNA fragmentation assay, and genetic and epigenetic variations by ELISA kits. The results showed that apoptosis was maximum at pre-G1, and cell growth arrest at G1 phase in group IV. Venom differentially up regulated gene expression of P53, BAX, BCL-2. DNA showed greater and distinct fragmentation *in vivo* and *in vitro* of prostate cancer (PC) than venom treated groups. From the previous result we have concluded that *L. quinquestriatus*' scorpion venom induced apoptosis and differentially modulated the expression of tumour suppressor genes and concomitantly repressing the expression of oncogenes *in vivo* of induced male rabbits with PC and *in vitro* of PC-3cell line.

Keywords: antitumor, apoptosis, cell cycle, DNA fragmentation, prostate cancer, scorpion venom, tumor suppressor gene.

Biography

Nadia S Mahrous is currently an assistant lecturer at Molecular genetics' Lab, Faculty of Science, (Qena) South Valley University, Egypt. She has MSc in Parasitology (2012), Faculty of Science, Egypt. She has got an experience in teaching practical section of veterinary genetic and genetic engineering in college of Veterinary Medicine (2013-2018), Sohag University. She participated in different molecular biology and cytogenetics' techniques. She is a member of the Egyptian Syndicate of Scientific professions.

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