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## *Androctonus bicolor* scorpion venom inhibits 7,12-Dimethylbenz[a]anthracene initiated and croton oil promoted skin carcinogenesis in mice

Meshref Ali Al Amri, Abdulrahman K Al Asmari, Abdul Quaiyoom Khan and Rajamohamed Abbasmanthiri  
Prince Sultan Military Medical City, KSA

Scorpion venom is a complex mixture of biologically active moieties with promising therapeutic values such as tools for drug development. Present study was designed to elucidate the anti-cancer potential of the crude venom extracted from the medically important scorpion *Androctonus bicolor* against two-stage mouse skin cancer model. Animals were divided into five groups (I-V) of 10 animals each. Animals of group first were given vehicle (acetone) only. 7,12-Dimethylbenz[a]anthracene (DMBA, 400 nmol/mouse) was applied to the animals of the groups (II-V) to initiate the process of carcinogenesis. One week after DMBA application promoting agent croton oil (1%) was applied to the animals of the groups (II-V). *A. bicolor* venom at different concentrations (12.5, 25, 37.5 µg/animal) was given to the animals of group III-V half an hour prior to the croton oil application. All the treatment was given topically. Results of the current study revealed that *A. bicolor* venom inhibits DMBA initiated and croton oil promoted skin tumorigenesis in terms of tumor incidence and tumor multiplicity. Expression level of TNF-α and MPO was also suppressed by venom treatment. Furthermore, cutaneous expression of Ki-67 and NF-κB and histological changes were also attenuated by *A. bicolor* venom. In conclusion, findings of the current study demonstrate the anti-tumorigenic potential *A. bicolor* venom which may provide a novel and effective template for the development of anti-cancer moieties.

### Biography

Meshref Ali Al-Amri has completed his Master's degree in Drugs and Toxicology Science from King Saud University and his Bachelor's degree in Pharmaceutical Sciences from the same university. He is the Assistant Director General of Academic Affairs in Medical Services Directorate of Armed Forces, Ministry of Defense, Riyadh, Saudi Arabia. He has published number of papers in reputed journals. He is associated with several ongoing projects on skin cancer study in *in vivo* as well as *in vitro*.

abdulrahman.alasmari@gmail.com

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