

ABSTRACT The present study aims to investigate the tumor-suppressive inflammatory tendency of *Echis coloratus* snake venom against colon cancer. For this purpose, venom induced up/down-regulation effects in response to forty types of colon-cancer related pro and anti-tumorigenic inflammatory cells (11 pro-tumorigenic cytokines, 12 anti-tumorigenic cytokines, 9 pro-tumorigenic chemokines, 1 anti-tumorigenic chemokine and 7 pro-tumorigenic growth factors) were measured, in LoVo, HT-29 and HCT-116 colon cancer cells. As a result, the tumor-suppressive inflammatory effects of venom were screened by its capability to significantly up-regulate four anti-tumorigenic cytokines (IL-1RA, IL-7, IL-9 and IL-15) and to down-regulate one pro-tumorigenic cytokine (IL-1b), three pro-tumorigenic chemokines (MCP-1, MCP-3 and RANTES) and two pro-tumorigenic growth factors (G-CSF and PDGF-AA). Moreover, the venom showed significant colon-tumor promoting potential for fifteen inflammatory cells (IFN- γ , IL-1a, IL-13, TNF- α , EOTAXIN, MIP-1b, GRO, MDC, IL-8, FGF2, GM-CSF, VEGF, PDGF-AB/BB, FRACTALKIN and TGF- α). The tendency of *E. coloratus* venom to exhibit tumor-suppressive inflammatory effects can be effectively used to reduce the growing phase of colon cancer.