

Hemolytic Activity of the Cone Gastropoda Venom Duct Conotoxin from the Persian Gulf: *Conus coronatus* and *Conus frigidus*

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Abstract

Conotoxins, are exocrine toxic peptides from the epithelial cells of the cone gastropod venom duct which, for hunting and defense are synthesized. Conotoxins, are neurotoxins or cytotoxin. Neurotoxins, are agents of the pain reliever in animal models and cytotoxin usually introduced as factors of the anti-tumor. Hemolytic activity of the conotoxins extractions of two species *Conus coronatus* and *Conus frigidus* tested. Sampling was done in Zeiton Park, Qeshm Island. The venom ducts were isolated and then homogenized. The mixture centrifuged at $10000 \times g$ for 5 min. Supernatant was considered as extracted venom. Peptides up and down 10 kDa, were isolated by the filter Falcon MWCO 10000 Millipore. Serial concentrations of crude conotoxin extracts, essences top and bottom 10 kDa were used to examine the hemolytic activity in 96-well plates on human and fish red blood cells. Hemolytic activity of crude and essences up and down 10 kDa were different and only on human blood, hemolytical effects were observed. Crude extracts, in low concentrations, have no hemolytic activity and at a concentration of 1,000 micrograms per milliliter, the percentage of hemolytic on human blood, was the species 62% and 38% on *C. coronatus* and *C. frigidus*, respectively. The extracts top 10 kDa has more hemolytic effects than the extracts less than 10 kDa. The effects of hemolytic of conotoxin extracts is different according to blood type and cytotoxin activities of the extracts were in high concentrations, so cause the presence of peptide neurotoxins pain in these species, they can use in drugs since are not led to damage on red blood cells.

Keywords: Conotoxin, Cone Gastropoda, Hemolytic, *Conus*