

**COMPARATIVE STUDIES OF NATIVE AND IRRADIATED CROTOXIN:
PHYSIOLOGICAL AND MORPHOLOGICAL ASPECTS**

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Ionizing radiation is able to detoxify several venoms, including snake venoms, without affecting significantly their antigenic and immunogenic properties. In order to elucidate this phenomena, we conceived a comparative physiological and morphological study between native and irradiated crotoxin, main toxin of *Crotalus durissus terrificus* (South America rattlesnake). Mice were injected with labeled crotoxin and native and irradiated crotoxin distribution occurred with a similar general pattern, with renal elimination. On the other hand, in contrast to the native crotoxin, irradiated one presents no retention in kidneys. A latter concentration (2-3h.) occurs in phagocytic mononuclear cells rich organs (liver and spleen) and neural junctions rich organs (muscle and brain). Tissue studies showed that binding of native crotoxin at neuromuscular junction is time-dependent and that after irradiation process, crotoxin does not bind any more at these junctions.

The behavior presented by irradiated crotoxin, in this work, could explain, in part, why it is less toxic than non-irradiated crotoxin.

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