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THE ROLE OF FREE RADICALS IN STRUCTURAL, TOXICS AND ENZYMATICS PROPERTIES ALTERATIONS OF ^{60}Co SOURCE IRRADIATED CROTOXIN.

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Gamma radiation seems to be one of the most efficient methods associating high levels of toxicity attenuation and immunogenicity maintenance of ophidics venoms. In this study, we tried to elucidate the action mechanism of gamma radiation on proteins by irradiation the crotoxin, main toxin of C.d.terrificus venom, with 2.000 Gy dose in presence of scavengers that exclude selectively either electron aq quoso (eaq) or hidroxil radical, considered the responsible for dele terious effects during proteins radiation. We analysed toxic (LD_{50}) and enzymatic (PLA_2) activities, as well as conformational changes by using high pressure liquid chromatography. Our results showed that eaq acts in the proteic structure and does not promote any chan ge on toxic and enzymatic activities that remain in the same condi- tions that the one irradiated without any scavenger. On what refers to hidroxil radical, it does not play influence over proteic struc - ture, but is determinant on enzymatic activity maintenance. On the other hand, toxic activity is not different of that one presented by irradiated protein without any scavenger. Our results also sugest that a 3rd free radical from indirect effects of irradiation acts on toxic site of venom.

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