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ATTENUATION OF *Apis mellifera* VENOM TOXICITY BY IONIZING RADIATIONN. Nascimento¹, M.M. Azevedo-Marques², A.A. Fujii², P.B. Clissa¹ and J.R. Rogero¹¹Coordenadoria de Bioengenharia, IPEN-CNEN, SP, P.O.Box 11049, 05508, São Paulo, Brazil²Departamento de Clínica Médica da Faculdade Medicina de Ribeirão Preto

Envenomation resulting from stings by Africanized Brazilian bees is a clinically relevant problem in this country and the production of specific antiserum is hampered by the high toxicity of the venom from these insects. The availability of venom with reduced lethal activity would greatly assist in the preparation of adequate antisera. As we have previously shown that ionizing irradiation diminishes the lethality of snake venom, we have applied the same procedure to bee venom in order to obtain a less toxic product which may be useful in immunization schedules.

Venom was collected by manual extraction directly into 0.15 M saline and the solution was adjusted to a concentration of 1 mg protein/ml prior to irradiation using a ⁶⁰Co γ -radiation source. Groups of five mice were inoculated (i.p.) with different concentrations of either irradiated or non-irradiated venom and observed for the subsequent 48 hours.

The LD₅₀ of native and irradiated venom calculated by the Spearman-Kärber method was 0.38 mg/kg and 0.68 mg/kg respectively, thus demonstrating a reduction in lethality following irradiation. The SDS-PAGE profile of irradiated venom showed the presence of low molecular weight bands which were absent in the native venom.

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