DEVELOPMENT OF THE VENOM GLANDS ALONG THE LIFE CYCLE OF THE ARMED SPIDER, *PHONEUTRIA NIGRIVENTER* (KEYSERLING, 1891)

Schaffert, P.P.[1,2], Silva, L.M.[1,3,4], Estevão-Costa. M.I.[1,5], Pimenta, P.F.P.[3], Diniz, M.R.V.[1], Fortes-Dias, C.L.[1]

[1]Lab. Biologia Molecular e Celular, Diretoria de Pesquisa e Desenvolvimento, FUNED, [2]PUC-Minas (undergraduated student), [3]Lab. Entomologia Médica, CPqRR/FIOCRUZ, [4]Dep. Morfologia, UFMG, [5]Dep. Bioquímica e Imunologia, UFMG; Belo Hte, MG, Brasil.

The venom of *Phoneutria nigriventer* spiders is composed of a variety of biologically active molecules and it is a rich source of candidates for biotechnological applications. Although a number of components have been isolated, neither the development of *Phoneutria* venom glands nor the secretion pathways are clearly understood. In the present study, we investigated the development of the venom apparatus at different stages of the life cycle of *Phoneutria*. Interestingly, the venom glands are already present at very early stages. This finding could imply a precaution to avoid possible deleterious effect of venom toxins on the spiders themselves, since some of these toxins are known to be active on the physiological systems of invertebrates. Therefore, we investigated the start up point of expression of venom toxins at the same developmental stages, taking a major neurotoxin of *Phoneutria* venom (PhTx1) as a reference. The expression of PhTx1 was also found to begin early in the lyfe cycle of *Phoneutria*. Immunochemical and ultrastructural studies are in progress attempting to locate the expressed toxins of *Phoneutria* venom inside the venom gland.

KEY WORDS: *Phoneutria nigriventer*, armed spider, venom gland, RT-PCR, SEM.

FINANCIAL SUPPORT: CNPq and FAPEMIG.