PURIFICATION AND CHARACTERIZATION OF PHOSPHOLIPASE A_2 OF SRI LANKAN RUSSELL'S VIPER *(Vipere russelli russelli)*

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Snakebite is an important health problem in Sri Lanka, particularly in rural and farming areas. Russell's viper is responsible for 60% of snake bites and characterizes the highest incidence of fatal bites. The present study was designed to identify toxic proteins of venom of Russell viper with a long term plan of development of antivenom for Sri Lankan Russell viper (*Vipera russelli russelli*). Russell's viper venom (RVV) has been characterized as fellows. Total protein concentration of RVV is 240.56 ± 4.21 mg/ml. Molecular mass were determined using 15% SDS PAGE. Nine RVV proteins were identified and their molecular weights were in the range 98 kDa – 10 kDa. Major toxic protein, Phospholipase A_2 was purified by gel filtration on Shephacryl S 200 followed by DEAE 52 Ion exchange column chromatography. Molecular weight of PLA_2 was calculated using 15% SDS PAGE. (15000Da – 16000Da).

The Lethality (LD_{50}) of crude venom sample is 0.7 mg/kg (subcutaneous) body weight of mice and 1.5 mg/kg (subcutaneous) body weight of rats. The LD_{50} of PLA_2 is 3.4 mg/kg (subcutaneous) body weight of mice.

In conclusion, LD_{50} value of rats is two times greater than mice. This toxin contributed 20.5% of the total PLA_2 activity of the crude venom in mice