

Conotoxins are highly toxic to mammals and have lethal doses of approximately 10 micrograms per kilogram of body weight. This is due to the small size of the conotoxin peptides that allows for faster diffusion and transport through tissue than snake neurotoxins, resulting in faster toxic action.

Numerous peptide analogues of conotoxin GI have been prepared by solid-phase synthesis, and many have been tested in assays for their abilities to inhibit muscle contractions. It was found that tests of such modifications indicated decreased toxicity.

Another important finding that resulted from the research on the snail venom was the isolation of a peptide homologous to the mammalian bioregulator vasopressin.

3.2 Sarafotoxin-Endothelin

There is a growing number of peptide toxins which are similar or identical in structure to naturally occurring bioregulators or "hormone-like" compounds. This points to the important role that bioregulators will have in the identification of novel toxic compounds. For example, sarafotoxin isolated from snake venom is identical in structure to the bioregulator endothelin. Sarafotoxins are a group of 21-residue cardiotoxic peptides isolated from snake venom. They induce coronary vasoconstriction. They show high-affinity binding to rat atrial and brain membranes. Neither