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|  | **Components** | **Mechanism of toxicity** | **Pathophysiological effect** |
| Inorganic cations | Zinc | Enhance anti-cholinesterase activity [3] |  |
| Calcium | Activates Phospholipase A2 [3] |  |
| Enzymatic components | Phospholipase A2 | Bind to target protein only (due to reciprocity in hydrophilicity, charge and van der Waal’s forces) 🡪 Calcium dependent hydrolysis of membrane phospholipids and glycerophospholipids producing fatty acid + lysophospholipids [2,3,9] | * Neurotoxicity   -Presynaptic (block the release of Acetylcholine from axon terminus)  -Postsynaptic   * Myotoxicity * Cardiotoxicity * Hemolysis: Anticoagulant and antiplatelet activity * Hypotension * Edema |
| Hyaluronidase | Decrease connective tissue’s viscosity by hydrolyzing hyaluronan into oligosaccharides + N-acetylglucosamine [3,4] | * Facilitate the spread of the venom in victim’s tissue [4] |
| Proteolytic enzymes (Serine protease and metalloproteases) | * Breakdown structural proteins/peptides [3] * Activate prothrombin, clotting factors and protein C [2] * Thrombin like activities * Release bradykinin [1] | * Hypotension * Bleeding   [1,10] |
| Cholinesterase | Hydrolyze Acetylcholine producing choline + acetate at the neuromuscular junction [3] | * Myotoxicity |
| L-Amino acid oxidase (LAAO) | Oxidative deamidation of L- amino acids and hydroxy acids [3,11] | * Platelet dysfunction (by blocking the ADP-dependent platelet aggregation) * Hemorrhage * Edema * Induce apoptosis * Cytotoxicity   [11] |
| 5′-nucleotidases | Hydrolysis of phosphate at position 5′ of the sugar of DNA or RNA [12] | * Platelet dysfunction |
| Non-enzymatic components | Disintegrins (DIS) | Block platelet fibrinogen receptor  Inhibit integrin aIIbb3 [13] | * Platelet dysfunction * Antiangiogenic activity |
| Cysteine-rich secretory proteins (CRISP) | Block CNG and Calcium channels [14] | * Cytotoxicity |
| C-type lectins | Bind to GPIb, GPVI or integrin a2b1 [15] | * Platelet dysfunction |