

NOVEL SERUM AMMODYTOXIN-BINDING PROTEINS

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Multiple secreted phospholipases A₂ (sPLA₂) are present in various tissues where they participate in several physiological and pathological processes. The molecular basis of one such process, presynaptic neurotoxicity of certain snake venom sPLA₂s, is not known in detail yet, but it is obvious that beside their enzymatic action, these sPLA₂s must bind to specific receptors in the nerve ending. Identification of these targets is therefore of crucial importance for the understanding of this process. Ammodytoxin (Atx), a sPLA₂ from the venom of the long-nosed viper (*Vipera ammodytes ammodytes*), is a potent neurotoxin. Used as a molecular tool, it lead to invaluable discoveries of several targets in the nerve tissues. In our efforts to understand the molecular basics of its neurotoxic mechanism better, we have looked into one of the sites of these toxins' first contact with the prey's organism – the blood. In the porcine serum, several potential Atx-binding proteins were detected, and two of them were successfully structurally characterized. These findings and their potential role in the process of sPLA₂ neurotoxicity and regulation will be presented.