World Academy of Science, Engineering and Technology
International Journal of Biotechnology and Bioengineering
Vol:8, No:12, 2014

Remarkable Difference in Neurotoxicity Between Two Phospholipases from Russell's Viper Venom: Insight Through Molecular Approach

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Abstract : Snake bite causes fatal injuries in multi-organs and even many deaths due to several adverse physiological effects of various phospholipases (PLA2s) present in snake venom. Though these PLA2s bear highly homologues sequences and also structure but exhibit a different extent of those pharmacological effects. In this study, we have explored the difference in the neurotoxicity of two PLA2 namely PLA2-V, PLA2-VIIIa present in the venom from Vipera russellii. Bioinformatics studies on sequences of these two proteins along with detailed structural comparison enable us to explore the differences unambiguously. The identification of the residues involved in neurotoxicity will further lead towards proper designing of inhibitors against such killing effects of the venom.

Keywords : electrostatic potential, homology modeling, hydrophobicity, neurotoxicity, Phospholipase A2
Conference Title : ICBBBCB 2014 : International Conference on Bioinformatics, Biomedicine, Biotechnology and Computational Biology
Conference Location : London, United Kingdom
Conference Dates : December 22-23, 2014