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Abstract

Epilepsy is a common chronic central nervous system disorder characterized by repeated

malicious seizures. Current medications acceptable by medical practitioners till date mostly suppresses the seizures and has symptomatic relief, but no effect on epileptogenesis. In the present work, we have attempted to provide the scientific base to use the bee venom therapy (Apitherapy) which was practiced throughout ancient Egyptian, Greek and Chinese civilization to treat epilepsy. Our computational studies and molecular dynamics simulation results indicate that interaction between S100B (calcium binding protein) and melittin (a venom peptide from bee), resulted in the structural distortion and inaccessibility of calcium binding domain of S100B protein, which is required to maintain ionic imbalance due to over expressed S100B in disease conditions.

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Index Terms

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Keywords

Epilepsy Melittin S100b Protein-protein Interaction Ca²⁺ -binding Domains