

TITLE OF THE PAPER TO BE PRESENTED (ORAL)

- * **“ A Novel Delivery Mechanism of Topiramate_PFC drug for Lennox-Gas taut type of seizures through the growth of nano crystal “.**

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Abstract:

Lennox-Gas taut (L-G) type of seizures that affects the Central Nervous System (CNS), are facing drug administration problems. This is because of three basic reasons viz., a) the non soluble nature of almost all anti-epileptic drugs b) these drugs generally are not properly targeted towards the affected area of CNS c) generally it affects children. In this paper, a novel attempt has been made to solve the second one. Topiramate (TPM) is one of the most commonly prescribed medicine for L-G type of seizures. But still it is not that much adequate to serve the purpose of proper delivery to the affected seizures. To overcome this, TPM is homogenized with certain PERFLUOROCARBONS (PFC) using ultrasound of 3-12 MHz on aqueous medium. Nano crystal is grown with the support of the ultrasound frequency. X-ray, solubility and SEM are made to analyze the structure of the crystal.

The attachment of the PFC, which has got a very high oxygen carrying capacity to the CNS, to TPM reveals its capacity to detach and deliver TPM to the affected seizures in the CNS. That way TPM is made more effective on the affected seizures. Carbamazepine(CBZ), which is the best prescribed drug for such diseases do not get reacted with any kind of PFCs. Their attachment reveal that TPM is more effectively delivered than CBZ because of its mode of attachment along with PFC. Extensive study is also made on Lamotrigine which is also effective for Lennox-Gas taut type of seizures.

- **PROJECT FINANCIALLY ASSISTED BY DEFENCE RESEARCH DEVELOPOMENT ORGANISATION – INDIA.**