



## Synthesis, characterization and biological behavior of some Schiff's and Mannich base derivatives of Lamotrigine

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### Abstract:

A series of various Schiff's and Mannich base derivatives (N1-2 & ND1-6) of Lamotrigine with isatin and substituted isatin were synthesized to get more potent anticonvulsant agents. The starting material for the synthesis of various new Schiff's and Mannich base derivatives was isatin (1H-indole-2,3-dione) which in turn was prepared from substituted isonitrosoacetanilide using aniline. Lamotrigine reacts with isatin & substituted isatin gave Schiff's bases (N1-2) which on reaction with various secondary amines (dimethylamine, diethylamine, and morpholine) produced Mannich bases (ND1-6). The structures of newly synthesized compounds were characterized by using TLC, UV, FT-IR, <sup>1</sup>HNMR and studied for their anticonvulsant activity. Anticonvulsant activity of all the derivatives was evaluated by MES method using phenobarbitone sodium & Lamotrigine as standard drugs and % reduction of time spent by animals in extension, flexion, clonus, and stupor phase were noted. Compounds ND4 and ND6 showed significant anticonvulsant activity when compared with that of standard drugs. The remaining all compounds show moderate activity. Biological activity data of the synthesized derivatives revealed that the synthesized derivatives are good anticonvulsant agents as compared to Lamotrigine.

### Biography:

Dr. Amol A. Kulkarni has completed my Ph.D. at the age



of 30 years I am the Director/Principal of the Dattakala Shikshan Sanstha's at the Institute of Pharmaceutical Sciences and Research, Swami Chincholi Tal-Daund, Dist-Pune, Maharashtra, India. I have published more than 40 papers in international peer reviewed journals and have been serving as an editorial board member of the reputed journal as well.

### Recent Publications:

1. Amol A. Kulkarni, et al Med Chem Res, 2020
2. Amol A. Kulkarni, et al Beilstein J Org Chem, 2018
3. Amol A. Kulkarni, et al Bioorg Med Chem, 2018
4. Amol A. Kulkarni, et al Beilstein J Org Chem, 2018
5. Amol A. Kulkarni, et al Langmuir, 2017
6. Amol A. Kulkarni, et al Antiviral Res, 2017

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