

Synthesis, molecular docking, and pharmacological evaluation of some new triphenyl imidazole derivatives as anxiolytic agents

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In the present investigation, the docking of triphenyl imidazole derivatives have been done following which synthesis of the compounds have been carried out and the compounds have been characterized by TLC, IR, and $^1\text{H NMR}$. The compounds have been assessed *in vivo* for antianxiety activity by two different methods. Other parameters have also been assessed including similarity index and Log P values which is found to be in the range which indicate that drug penetration to CNS is good. Among the synthesized derivatives, the compounds NS-3 and NS-4 give remarkable anxiolytic activity. The studies of molecular docking studies display that the compounds appropriately docked into binding pocket of the GABA_A receptor and bioavailability/drug-likeness has also been predicted to be satisfactory warranting forthcoming exploration. The further prospect is to optimize the synthesized derivatives to engender new moieties for treatment of anxiety.

Keywords: Triphenyl imidazole derivatives, Benzil, Benzaldehyde, Antianxiety activity, CNS agents, Docking score

Imidazole $((\text{CH})_3\text{N})$ is a versatile