

## N-(1-BENZOYL-1H-INDOL-5-yl)PYRIDINE-2-CARBOXAMIDES, THE FIRST-IN-CLASS mGluR8 PAM-AGONISTS EXHIBIT ANTIPSYCHOTIC LIKE ACTIVITY

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Metabotropic glutamate receptors (mGluRs) are important modulators of excitatory transmission, and have been implicated in anxiety and stress-related behaviors. Group III mGluR agonists could depress excitatory synaptic transmission in the bed nucleus of the stria terminalis (BNST), an integral component of the anxiety circuitry<sup>1</sup>. The N-(1-benzoyl-1H-indol-5-yl)pyridine-2-carboxamides act as potent and moderately selective mGluR8 Positive Allosteric Modulators with agonistic component. The administration of the representative compounds from the series reduces the number of head twitches induced by DOI and reverse the social interaction impairment caused by preadministration of MK-801 in mice. The compounds reverse the MK-801 induced cognitive deficits in the Novel Object Recognition task in mice. The results suggest antipsychotic activity of the title compounds. The development of the PAM-agonists of group III mGluR's may yield novel CNS drugs which would establish a milestone in the therapy of cognitive disorders.

### References

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