NEU/PP-82
Melanocortin 4 Receptors Modulate Nicotine Induced Brain Stimulation Reward in Rats

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Objective: To investigate the involvement of melanocortin (MC) 4 receptors in the nicotine induced brain stimulation reward.

Materials and Methods: Rats implanted with the stimulating electrode at medial forebrain bundle and guide cannula at lateral ventricle were conditioned for lever pressing to obtain stimulus for reward in an operant chamber. Results: While intraperitoneal injection of nicotine (0.1-0.5 mg/kg) and intracerebroventricular administration (icv) of α-melanocyte stimulating hormone (α-MSH; 0.1-1 μg/rat) and NDP-MSH (0.05-0.2 μg/rat) increased the number of lever pressings and shifted the rate frequency curve to left, selective MC4 R antagonist, HS014 (0.025-0.1 μg/rat), produced opposite effects. With a view to check the modulation of nicotine induced reward, combination study was carried out. Prior treatment of α-MSH and NDP-MSH potentiated and HS014 attenuated the nicotine induced reward. α-MSH-immunoreactive content was increased in the operant conditioned rats in the nucleus accumbens shell, arcuate and paraventricular nuclei, and lateral part of bed nucleus of stria terminalis which was further augmented following nicotine treatment. However, neither operant conditioning nor nicotine treatment produced any change in the immunoreactive content in central nucleus of amygdala. Conclusion: Thus study suggests the role of endogenous MC system, perhaps acting via its abuse liability.

NEU/PP-83
Anxiolytic and Antidepressant-Like Effects of Noni (Morinda Citrifolia L.) Fruit in Mice

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Objective: The present study was designed to investigate anxiolytic and antidepressant effects of methanolic extract of Morinda citrifolia fruit (MMC) in mice models. In addition, rutin a bioactive principle of noni fruit has also been studied for its involvement in anxiolytic and antidepressant effects of noni. Materials and Methods: The elevated plus maze, light/dark transition (EPM, LDT for anxiolytic effect) and tail suspension test (TST for antidepressant effect) were used in this study. Swiss albino mice were treated orally with 1%w/v carboxymethyl cellulose (vehicle, 10 ml/kg), MMC (0.25, 0.50, 0.75, 1 and 3 g/kg) and rutin (0.1, 0.5, 1, 3 and 5 mg/kg). Behavioural evaluations were done 1 h post-treatment. The reference anxiolytic drug, diazepam (1 mg/kg, i.p) and antidepressant drug, desipramine (30 mg/kg, i.p) were administered 30 min prior to behavioural studies. Results: In anxiolytic studies, the acute treatment of MMC at the doses of 0.5 and 1 g/kg, p.o significantly increased the percentage of time spent and number of entries in the open arms of the EPM and increased the time spent in the light compartment of the LDT in the antidepressant studies. MMC at the doses of 0.5 and 0.75 g/kg, p.o significantly reduced the immobility time in TST. However, rutin at all doses (0.1, 0.5, 1, 3 and 5 mg/kg, p.o) could not show any significant difference in both anxiety and depression behavioural models. Conclusion: In conclusion, these findings indicate that noni fruits exhibit anxiolytic and antidepressant-like effects in mice and its bioactive principle, rutin might not be responsible for the observed behavioural effects.

NEU/PP-84
Effect of Losartan, Atorvastatin and Their Combination on Pentylentetrazole Induced Seizures in Rats

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Objective: To study the effect of losartan, atorvastatin and their combination on pentylentetrazole induced seizures in wistar rats. Materials and Methods: Animals were divided into five groups (n = 6). Losartan (50 mg/kg), atorvastatin (10 mg/kg), their combined dose in addition to standard (sodium valproate 200 mg/kg) and control (gum acacia 2%) were administered orally to wistar rats one hour prior to induction of seizures with pentylentetrazole (60 mg/kg ip). Animals were observed for 30 mins after administration of PTZ placed in individual cage. The onset of seizure, duration and mortality were observed. Data was analyzed using one way ANOVA followed by Tukey's post hoc test (p significant). Results: As compared to control group, losartan and sodium valproate significantly increased the duration of seizure and increased the latency with no mortality whereas atorvastatin increased only the latency for the onset of seizure with 50% mortality. The drug combination did not show any additive effect. Conclusion: The present study demonstrates the anticonvulsant activity of losartan and atorvastatin whereas losartan was more effective than atorvastatin. Significant effect of losartan indicates that there is involvement of renin-angiotensin system in epilepsy. Even, insignificant effect of atorvastatin can have beneficial effect on chronic use. The lack of additive effects of these drugs in combination could be related to the pharmacokinetic drug interaction.

NEU/PP-85
To Investigate the Role of Agmatine in Antipsychotic-Like Effect Ofclozapine

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Objective: Clozapine is an atypical antipsychotic drug commonly used in the treatment of schizophrenia. However, the exact mechanism of its action is still not clear. The present study was planned to examine the role of agmatine in antipsychotic like effect of clozapine. Materials and Methods: Sprague-Dawley rats weighing 220-250 gm were cannulated for intracerebroventricular (icv) drug administration and injected with artificial cerebrospinal fluid at the rate of 1.0 μl/min for 5 min with the neonatal rats (n = 80). Agmatine (2 mg/kg, i.c.v) and risperidone (0.6 mg/kg, i.p) were administered either separately or in combination. Results: The antipsychotic like effect of clozapine was observed in rats treated with agmatine and risperidone. Conclusion: The present study showed that agmatine reduces the antipsychotic activity of clozapine. Agmatine could play a role in the mechanism of action of antipsychotics.