Abstract 2313

New augmentation strategy in depression: Galanin (1-15) enhances the behavioral effects of Fluoxetine in the olfactory bulbectomy rat.

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Abstract Body

Major depression is the largest contributor to global disability by years lived with disability. Selective serotonergic reuptake inhibitors, including fluoxetine (FLX), are the most commonly used antidepressant for the treatment of major depression. However, they are effective for remission in only 30% of patients. Recently, we observed that the N-terminal fragment of Galanin [GAL(1-15)] enhanced the antidepressant effects of FLX in naïve animals.

In this work, we have analyzed in an animal model of depression, the olfactory bulbectomy (OBX) rats, the effect of GAL(1-15) on FLX-mediated responses in the forced swimming test (FST) and the sucrose preference test (SPT), tests related with despair and anhedonic behaviours. We have also studied the corticosterone levels in OBX rats after the coadministration of GAL(1-15)+FLX.

Groups of rats received a subchronic pattern of FLX(10mg/Kg) alone or in combination with GAL(1-15)(1nmol) 15min before the tests. Blood samples for corticosterone assay were collected 1h after the treatments. One-way ANOVA followed by Fisher ś least significant difference test was used.

Our results show that GAL(1-15) decreases the immobility time by 50% ($p<0.05$) and increases the swimming time by 30% ($p<0.01$) compared with FLX in the FST, and in the SPT reversed the effects of the OBX procedure increasing the sucrose intake ($p<0.05$) and preference ($p<0.05$). The coadministration of GAL(1-15) (1nmol)+FLX(10mg/kg) also reduced the OBX-increased corticosterone levels by approximately 50% ($p<0.05$).

In conclusion, these novelty results suggest using GAL(1-15) in combination with FLX as a novel strategy for treating depression.

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