

## **GALANIN (1-15) INCREASED THE NEUROPEPTIDE-Y Y1 RECEPTOR BINDING IN THE AMYGDALA OF THE RATS**

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Galanin (GAL) and N-terminal Galanin fragment (1-15) [GAL(1-15)] interact at membrane level with Neuropeptide Y receptors. In the nucleus of the solitary tract GAL modified the cardiovascular action of the NPYY1 and GAL(1-15) facilitated the NPYY2 agonist effect. Recently, we observed that in the amygdala, GAL increased the anxiolytic effect and the binding of the NPYY1 agonist. The aim of this work was to study if GAL(1-15) interacts as well with NPYY1 receptors in the amygdala. We analyzed the binding of the NPYY1 agonist [125I]-Leu31-Pro34-PPY (25pM) in the presence of GAL(1-15) at different doses. The GAL antagonist M40 was also used. In behavioural experiments, groups of rats (n=8-10) received intracerebroventricular GAL(1- 15)(1nM) and Leu31-Pro34-NPY (0.1nM or 3nM) alone or in combination fifteen minutes before starting 5-minute session in the open field (OF) and in the elevated plus maze (EPM). We analyzed the number of entries and time in the central square of OF and the percentages of entries and time in the open arms of EPM. GAL(1-15) at 1nM increased the NPYY1 agonist binding by 10% ( $p<0.01$ ) in amygdala, M40 blocked this effect. In the behavioral tests, GAL(1-15) did not change the effect of NPYY1 in the OF or EPM. These results indicate that in the amygdala, GAL(1-15) interacts with NPYY1 receptor at membrane level but not in the unconditioned anxiety-like tests. These results may be of relevance for GAL(1-15) mediated actions in the central nervous system. This work has been supported by the Junta de Andalucía CVI6476.