

## **GALANIN N-TERMINAL FRAGMENT (1-15) INDUCES AN ANXIETY- AND DEPRESSIVE-LIKE BEHAVIOURS IN THE LIGHT/DARK AND TAIL SUSPENSION TESTS.**

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Galanin N-terminal fragment (1-15) [Gal(1-15)] is involved in mood regulation. We have shown that intracerebroventricular (icv) administration of Gal(1-15) produces a depressive-like behaviour in the forced swim test (FST) and an anxiety-like behaviour in the open field test (OF) in rats. In this work we analyze the effect of Gal(1-15) in two more behavioural tests, the tail suspension test (TLT) and the light/dark test.

In light/dark test we studied during 5 min the latency time for entering the dark box, time spent in the light compartment, and the latency time for re-entering the light box as parameters indicators of anxiety-like behaviour. In TLT total immobility time was analyzed during 6 min test as parameter indicator of depressive-like behaviour.

Groups of rats (n=5-8) were injected icv with Gal(1-15) 3nmol, a dose effective in FST and OF, or artificial cerebrospinal fluid 15 minutes before the test. Behavioural assessment were conducted with at least one week between tests. Student's *t*-test was used for comparison between experimental groups.

In the light/dark test Gal(1-15) 3nmol significantly reduced the time spent in the light compartment by 52% ( $p<0.05$ ) and the latency time for entering the dark box by 65% ( $p<0.05$ ). An increased in the latency time for re-entering the light box was also observed ( $p<0.05$ ). This pattern of results reflects an anxiogenic-like effects of Gal(1-15) in this test.

In the TST, the administration of Gal(1-15) 3nmol significantly increased rat immobility by 16% ( $p<0.05$ ) indicating a depressive-like effect.

These results confirm the depressive- and anxiety-like effects of Gal(1-15) in rats. Future therapeutic strategies based on these results could be developed for depression and anxiety disorders.

This work has been supported by the Junta de Andalucía CVI6476 and Spanish Ministry of Economy and Competitiveness (PSI2013-44901-P to L.J.S)

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