

## **GALANIN N-TERMINAL FRAGMENT (1-15) DECREASES THE VOLUNTARY ALCOHOL INTAKE IN RATS.**

C. Millón<sup>1</sup>, A. Flores-Burgess<sup>1</sup>, E. Castilla-Ortega<sup>3</sup>, B. Gago<sup>1</sup>, A. Serrano<sup>3</sup>, A. Sturla<sup>1</sup>, L. García-Durán<sup>1</sup>, JA. Narváez<sup>1</sup>, K. Fuxe<sup>2</sup>, L. Santín<sup>3</sup>, Z. Díaz-Cabiale<sup>1</sup>.

<sup>1</sup>. Faculty of Medicine, University of Málaga, Málaga

<sup>2</sup>. Department of Neuroscience, Karolinska Institute, Stockholm

<sup>3</sup>. Faculty of Psychology, University of Málaga, Málaga

Galanin (GAL) is involved in drug abuse and addiction including alcohol intake. In this work, we have analysed the role of the N-terminal GAL fragment (1-15) [GAL(1-15)] in voluntary ethanol consumption in rats using the two-bottle choice paradigm as well as compare the effects of GAL(1-15) with GAL.

The two-bottle choice test was used to determine the voluntary ethanol consumption of rats (Castilla-Ortega *et al.*, 2016). Three sets of experiments were conducted. In the first set of experiments, a dose-response curve of GAL(1-15) was performed. Groups of rats (n=7-9) received i.c.v. GAL(1-15) 1 nmol, 3 nmol or vehicle 2, 14 and 24 hours before the measures. In the second set of experiments, the effects in two-bottle choice test of GAL 3 nmol, and GAL(1-15) 3 nmol were compared. In the last set of experiments rats received i.c.v. GAL(1-15) 3nmol combined with GALR2 antagonist M871 3 nmol 2 hours before the measures.

GAL(1-15) 3nmol significantly decreased the alcohol intake 2 (p<0.05), 14 (p<0.05) and 24 (p<0.05) hours after its administration. Moreover, 2 hours after i.c.v. GAL(1-15) 3nmol a significantly decreased by 90% in preference was observed (p<0.05). This effect was maintained 24hours. GAL(1-15) also significantly reduced the alcohol intake (p<0.05) and preference (p<0.05) compared with GAL. GALR2 antagonist M871 significantly blocked the decreased in the ethanol intake (p<0.05) and preference (p<0.05) induced by GAL(1-15) 2 hours after its administration.

These results indicates that GAL(1-15) induces a strong reduction in preference and alcohol consumption in rat, showing a differential role than GAL. These results may give basis for the development of novel therapeutic strategies using GAL(1-15) for treatment of alcohol addiction.

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