

# Copper suppresses hippocampus LTP in the rat, but does not alter learning or memory in the morris water maze

Leiva, J.

Palestini, M.

Infante, C.

Goldschmidt, A.

Motles, E.

The objective of our study was to determinate the effect of copper on long-term potentiation (LTP) in hippocampus slices and a learning test in the Morris Water Maze (MWM). A group of adult Wistar rats received intraperitoneal (ip) injections of 1 mg/kg of CuSO<sub>4</sub> dissolved in saline for 30 consecutive days (Cu.R). A group of control rats (Sal.R), received saline by the same routes and duration. After this period, every individual of both groups was submitted to learning in MWM. Once the learning was completed, the LTP was studied in slices of hippocampus of both groups. The statistical assessment shows that the rats in both groups did not show significant differences in their progressive learning, notwithstanding that group Cu.R had 14.2 times more copper in their hippocampus and 16.7 times more in the visual cortices than in those of group Sal.R. On the other hand, the neurons of CA1 in hippocampus slices of Sal.R showed a significant development of LTP, but this was not observed in gr