

Temporal aspects of cyclic messenger signaling in object recognition memory: a pharmacological approach

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Statements belonging to the PhD thesis

TEMPORAL ASPECTS OF CYCLIC MESSENGER SIGNALING IN OBJECT RECOGNITION MEMORY

A PHARMACOLOGICAL APPROACH

1. Phosphodiesterase 5-inhibitors exert their memory enhancing effects through a central mechanism of action. (This thesis)
2. Acquisition processes mediated by cholinergic neurotransmission extend for a few minutes beyond the end of a learning trial and overlap for a short window of time with early consolidation processes. (This thesis)
3. cGMP and cAMP play sequential roles in the formation of long term memories. Both facilitate the acquisition of new information and cGMP signaling plays a crucial role during the first hour of consolidation, while cAMP signaling is essential from 3 - 5.5 hours into the consolidation phase. (This thesis)
4. The effects of novel cognition enhancing drugs should be tested in animals housed under environmentally enriched conditions before proceeding to clinical phase testing. (This thesis)
5. Long term memory effects of cognition enhancing drugs in Wistar rats should be investigated using inter-trial intervals longer than 10 h. (This thesis)
6. Phosphodiesterase 4 and 5 inhibitors could be a valuable addition to current treatments for dementia.
7. A rat is neither a large mouse nor a small human.
8. The right thing at the wrong time is the wrong thing.
9. Paracelsus (1493 – 1541) once stated; “The dose makes the poison.” The opposite is also true.
10. “All animals are equal, but some animals are more equal than others.” (George Orwell, 1903-1950)
11. “A statistician confidently waded through a river that was 1 m deep on average. He drowned.” (Godfried Bomans, 1913-1971)

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