

Vaz AP, Inati SK, Brunel N, Zaghoul KA (2019) Coupled ripple oscillations between the medial temporal lobe and neocortex retrieve human memory. *Science*. 363:975-978. [PubMed](#)

Memory retrieval occurs at a frequency of oscillating extracellular potentials similar to that was present during learning

Re-interpretation based on the IPL mechanism

A recent study examined the nature of oscillating extracellular potential both during learning and memory retrieval (Vaz et al., 2019). In order to reactivate the same set of IPLs that formed during learning at the time of memory retrieval, it is necessary to have almost similar conditions that were present at the time of learning. Maintaining the same frequency of oscillating extracellular potentials is a major factor in achieving this. Based on the semblance hypothesis, the synaptic transmission in one direction and propagation of potentials in a near-perpendicular direction through the inter-postsynaptic functional LINK (IPL) contribute vector components to the oscillating extracellular potentials, which is essential for binding and integration of units of internal sensations for providing the sensory qualia of memory. The findings of this study show that similar frequency of oscillating extracellular potentials are present both during learning and memory retrieval support the expectations of semblance hypothesis.

References

Vaz AP, Inati SK, Brunel N, Zaghoul KA (2019) Coupled ripple oscillations between the medial temporal lobe and neocortex retrieve human memory. *Science*. 363:975-978. [PubMed](#)