

Is Consciousness Multiscale?

From microtubules to cellular energetics and neural networks

A question for Professor Stuart Hameroff

Orch OR already proposes links across scales. Which experiment would most convincingly distinguish an Orch OR-specific microtubule contribution from conventional intracellular and network explanations?

Three connections to clarify

Microtubules and mitochondrial energetics: what is the proposed coupling, and which variable can be measured?

Microtubules and electrophysiology: what changes first, and how are classical mechanisms controlled?

Neurons and networks: does the endpoint measure conscious content, wakefulness, attention or reportability?

What would change our minds?

Name one quantitative prediction, its conventional comparator and a feasible result that would weaken the preferred mechanism. A diagram of interacting scales is not yet a testable theory.

Evidence boundary

The 2024 epothilone B rat study used loss of righting reflex as a proxy for unconsciousness. It did not directly measure experience or objective reduction. Biological relevance does not by itself establish Orch OR, a universal consciousness field or survival after death. [S3]



Read the evidence map and download the full report
akashicnet.org/akashicomni/multiscale-consciousness
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Sources: [S1] Hameroff & Penrose, 2014, doi:10.1016/j.pprev.2013.08.002; [S3] eNeuro, 2024, doi:10.1523/ENEURO.0291-24.2024; [S4] Picard, 2022, Energy transduction and the mind-mitochondria connection; [S5] Cogitate, 2025, doi:10.1038/s41586-025-08888-1. Full access notes online.