

Microtubules, Orch OR & AkashicOMNI

A bounded comparison proposal for discussion at TSC 2026 | AkashicNET | 30 September 2026

Purpose. AkashicOMNI is proposed here as a comparison and hypothesis-orchestration scaffold: track claims, sources, rival explanations and decisive tests. It supplies **no evidence for Orch OR or an Akashic field**. This independently prepared handout implies no endorsement by Stuart Hameroff, Roger Penrose or TSC.

1 / Evidence levels: keep the inference steps visible

ESTABLISHED BIOLOGY	Microtubules are tubulin-based cytoskeletal structures essential to neuronal architecture and intracellular transport. Those roles do not establish a quantum mechanism of experience. [1]
REPORTED EXPERIMENTS	Babcock et al. report fluorescence-yield enhancement in tubulin architectures, consistent with their UV-superradiance model. Khan et al. (rats, 2024) and Huang et al. (mice, 2026) report delayed isoflurane loss of righting reflex after epothilone B. These are in-vitro optical and animal behavioral findings, respectively; neither directly measures conscious quantum reduction. [2-4]
CONTESTED INTERPRETATION	Orch OR proposes biologically orchestrated microtubule quantum states terminating through gravitational objective reduction, with events linked to experience. Quantum-state feasibility, relevant timescales and that experiential link remain disputed. Decoherence estimates depend on the modeled state and environment; competing calculations are not direct in-vivo measurements. [5,6]
SPECULATION	A universal memory or Akashic field is an additional claim requiring its own operational definition and distinctive evidence. Microtubule quantum effects, even if replicated, would not establish it. BQ002 remains UNRESOLVED. [8]

2 / Falsifiable bridge questions: proposed tests, not approved protocols

Quantum state to neuronal function: Which specified state, observable and minimum lifetime does a chosen Orch OR variant require? Measure them under physiological conditions with matched classical optical models and artifact controls. Failure to meet the prespecified lifetime or state signature would challenge that variant. UV fluorescence alone is insufficient. [2,5-7]

Microtubule perturbation to conscious state: Does a selective perturbation predict state transitions beyond ion-channel, synaptic, pharmacokinetic and motor explanations? Combine blinded replication, drug-exposure controls and independent neural/behavioral endpoints. Righting reflex is a proxy; a purely motor or exposure-mediated effect would undermine the proposed consciousness bridge. [3,4]

Quantum dynamics to objective reduction: Can a specified mass-distribution model predict a discriminating timescale (Orch OR proposes $\tau \sim \hbar \alpha / E_G$) and distinguish reduction from ordinary decoherence? A reproducible departure from the prespecified scaling would challenge that implementation; matching alone would not establish subjective experience. [5,6]

3 / What AkashicOMNI would contribute

Maintain one record per claim: operational definition, evidence level, source/version, assumptions, alternatives, predicted result, failure criterion and replication status. Compare microtubule proposals with neural-network accounts using shared endpoints. Community discourse generates questions, not population-level evidence; inclusion in the scaffold is not validation. Existing AkashicNET mapping includes quantum-consciousness themes; the fresh repository search reported for this briefing found no Hameroff- or microtubule-specific record. [8]

Compact sources | selected primary reports, theory and repository boundaries

[1] Kapitein & Hoogenraad (2015). Building the neuronal microtubule cytoskeleton. *Neuron* (background review). doi:10.1016/j.neuron.2015.05.046.

[2] Babcock et al. (2024). Ultraviolet Superradiance from Mega-Networks of Tryptophan in Biological Architectures. *J Phys Chem B* 128:4035-4046. doi:10.1021/acs.jpcc.3c07936.

[3] Khan et al. (2024). Microtubule-Stabilizer Epothilone B Delays Anesthetic-Induced Unconsciousness in Rats. *eNeuro*. doi:10.1523/ENEURO.0291-24.2024.

[4] Huang et al. (2026). Corresponding mouse study. *Neuropharmacology* 287:110834. doi:10.1016/j.neuropharm.2026.110834.

[5] Hameroff & Penrose (2014). Consciousness in the universe: a review of the Orch OR theory. *Phys Life Rev* 11:39-78. doi:10.1016/j.plrev.2013.08.002 (theory review).

[6] Tegmark (2000), doi:10.1103/PhysRevE.61.4194; Hagan, Hameroff & Tuszyński (2002), doi:10.1103/PhysRevE.65.061901 (competing theoretical decoherence analyses).

[7] Gassab & Craddock (2026). Engineering quantum optical responses of microtubules. arXiv:2604.18604v1 (preprint, not peer reviewed). In-vitro spectroscopy/modeling, not a consciousness test.

[8] github.com/tws9stmcbf-web/AkashicNET: research/r-neurons-to-nirvana-consciousness-discourse-2026.md; website/app/big-questions/bq002/page.tsx (read 30 Sep 2026). Quantum-mind proposals are distinct and do not establish universal memory.