

Seba's short-tailed fruit bat: a model organism for aging studies

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Rena Orman's research interest has been to develop Seba's short-tailed fruit bat, *Carollia perspicillata*, as a model organism for studies of neurobiology and aging, specifically focusing on claustrum, endopiriform nucleus, amygdala, and limbic cortices. She has demonstrated foundational anatomical features in bat claustrum and unique functional excitatory connectivity in rat claustrum. She demonstrated specific biomarkers for hippocampal formation and limbic cortical structures and for hypothalamus. Given the long lifespan of bats and neuroanatomical, endocrine, and reproductive parallels to humans, she is developing neurobiological and neurourological collaborative lines of research. An NIH study section viewed her research direction with *Carollia* as a strength: "Strengths include consideration of a new model for brain aging research ..."

Relevant references:

Stewart M, Morello T, Kollmar R, **Orman R**. *Carollia perspicillata*: A Small Bat with Tremendous Translational Potential for Studies of Brain Aging and Neurodegeneration. *Biomedicines*. 2021 Oct 13;9(10):1454. doi: 10.3390/biomedicines9101454. PMID: 34680571; PMCID: PMC8533637.

Morello T, Kollmar R, Ramzaoui A, Stewart M, **Orman R**. Differential distribution of inhibitory neuron types in subregions of claustrum and dorsal endopiriform nucleus of the short-tailed fruit bat. *Brain Struct Funct*. 2022 Feb 21. doi: 10.1007/s00429-022-02459-0. Epub ahead of print. PMID: 35188589.