The mission of the CNPRC is to improve human health and quality of life through support of exceptional nonhuman primate research programs.

JOHN H. MORRISON, PhD
CNPRC Director

Neurobiology of Aging

Dr. Morrison’s research program focuses primarily on the neurobiology of aging and neurodegenerative disorders, particularly as they relate to cellular and synaptic organization of the cerebral cortex. His lab is developing a comprehensive model of synaptic health in the cerebral cortex and how molecular and structural deviations from this profile induced by age and endocrine disruption impact cognitive performance. Dr. Morrison is also investigating the degree to which age-related alterations in structural and molecular attributes of the synapse that lead to cognitive decline leave the brain vulnerable to Alzheimer’s Disease.

Our overall goal is to develop interventions that promote cognitive health and prevent Alzheimer’s disease through sustaining synaptic health.

The ageing cortical synapse: hallmarks and implications for cognitive decline
Morrison JH and Baxter MG
Nat Rev Neurosci 2012, 13(4): 240-50
PMCID: PMC3592200

Estrogen effects on cognitive and synaptic health over the lifecourse
Hara Y, Waters EM, McEwen BS, Morrison JH
Physiol. Rev. 2015, 95:785-807
PMCID: PMC4491541

This is a visualization of a pyramidal cell in the prefrontal cortex of the rhesus monkey that is critically important to cognitive performance, vulnerable to aging, and protected by estrogen.