

IACUC-approved exception to 9CFR3.81 (14-R-0017)**Justification for Single Housing of Non-human Primates (Rhesus Macaque, n=28):
Laboratory for Cognitive Neurobiology**

NEURAL SUBSTRATES OF COGNITIVE DECLINE IN AGING MONKEYS and NON-HUMAN PRIMATE MODEL FOR ASSESSING MOTOR RECOVERY AFTER STROKE: **Importance of Protecting Thumb and Fingers of Both Hands:** The stroke study is currently designed to reduce the number of subjects required by comparing the performance of the unaffected thumb and index finger to the performance of the ischemic stroke impaired thumb and index finger. Similarly, the aging study tests visumotor functions in individual animals across their lifespan. If nonhuman primates were housed in living conditions that increased the likelihood of an animal being injured, then injury to thumb and index fingers is also more possible. Should this occur, the evaluation of the study subject would terminate prematurely possible resulting in a non-analyzable end point for that individual animal. Nonhuman primates in these studies are required to perform a fine motor test that consists of retrieving a small food reward from wells of various depths and diameters using their thumb and index finger of each hand. In fact one of the requirements that we have in the screening process for the purchase of the monkeys for the stroke study is that they need to have intact thumbs and index fingers (on both hands since one hand serves as the control for the other hand). Individual housing protects against the loss or damage of the index finger or thumb due to some injuries that could occur in paired housing. Impairment of even one index finger or thumb of either hand or even a minor injury that interrupted daily testing would disrupt the temporal assessment of rate of recovery and require the animal to be terminated from the study and replaced.

The monkeys continued to be housed in the manner in which they have been to date (semi-social housing) with visual, auditory, and olfactory contact with compatible monkeys provided.

IN VIVO STUDIES OF PREFRONTAL - HIPPOCAMPAL INTERACTIONS : For the two monkeys currently active on this protocol it is vital that they continue to be housed in the manner in which they have been to date (semi-social housing) so as not to set the study back by months as they acclimate to a different living situation. It is anticipated that any future monkeys entering this protocol would be housed according to the standard housing practices in place (i.e., social housing) at the time they are added to the protocol.