

Attachment 2 to APHIS Form 7023

Protocol #	Name of Study	# Animals Used
YER2000674	Comparative Neuropsychology of Episodic Memory: Unmasking Elements of Hippocampal Function	12 rhesus macaques
YER2001089	Functional Imaging of Medial Temporal Lobe Activity in Awake Primates; Inactivation, Memory and Emotion	1 rhesus macaques
YER2001095	Neuronal Synchronization in the Medial Temporal Lobe and Memory Formation	5 rhesus macaques
YER2001189	Memory Monitoring and Declarative Memory in Monkeys: Behavior and Brain	18 rhesus macaques
YER2001321	Development of Medial Temporal Lobe Functions	22 rhesus macaques
YER2002036	Laboratory Studies of the Neurocognitive Bases of Social Cognition, Transitive Inference and Memory	12 rhesus macaques

**Summary of Studies (Animal) Listed in Column E**

**Voles**

With respect to all protocols listed below, treatment to relieve stress was withheld in these animals as the administration of a tranquilizer would modify if not eliminate the desired behavior response. The IACUC reviewed and approved those Class E procedures.

In protocol YER2000821 and YER2000897, a total of 32 vole pups were used to test alloparental behavior. Replacement of pups by objects or anesthetized pups would not trigger the appropriate maternal responses from the adult subjects. The animals were under continuous observation during the tests.

Under protocol YER2000614, 161 Adult voles were used in an experiment involving mild stressors, after which they are put back with their partners and their behavior is observed. The aim is to develop a vole model of consolation to investigate the brain mechanisms involved in that behavior as well as social behaviors relevant to autism.

Protocol #	Name of Study	# Animals Reported
YER2000821	Oxytocin and Social Attachment	25 Voles
YER2000897	Central Vasopressin Receptors and Affiliation	7 Voles
YER2000614	Neurobiology of Consolation	161 Voles

**Non-human Primates**

The IACUC also reviewed and approved these NHP protocols for Class E procedures. Animals were retrospectively placed in Class E in protocols YER2001813, YER2001645 and YER2000558 during previous reporting periods. Animals assigned to protocol YER2000765 were assigned at the initiation of the project.

In protocol YER2001813 (formerly YER2001268), that involved the use of MPTP, one animal initially reported in Class D took longer than anticipated to stabilize, despite treatment for Parkinsonism. Due to the occurrence of inappetence and progressive weight loss beyond the

Attachment 2 to APHIS Form 7023

general IACUC approved endpoints, a special exemption was approved for this animal. It was clinically determined that the animal should retrospectively be placed in Category E. The animal subsequently regained its weight and general condition and has continued to remain stable.

In protocol YER2001645, which involved the use of MPTP, one animal initially reported in Class D was transferred to Class E. The animal was inappetent, despite treatment for Parkinsonism, leading to progressive weight loss beyond the general IACUC approved endpoints. A special exemption was approved for this animal. The animal is being managed by the veterinary department, has gained weight and has continued to remain stable.

In protocol YER2000558, a single rhesus monkey on a transplant study was retrospectively transferred to Class E. Although analgesics are included in the protocol the treatments appeared ineffective for this animal. This was likely associated with irradiation or graft versus host disease. The animal has been euthanized.

In protocol YER2000765 a rhesus monkey underwent procedures to develop a model for ischemic stroke and was allowed to recover from anesthesia. Because of post operative complications associated with the stroke model that cannot be relieved with the use of analgesics and anesthetics, it was retroactively placed in Category E during a previous reporting period. All animals undergoing anesthetic recovery on this protocol are placed in Class E moving forward.

Protocol #	Name of Study	# Animals Reported
YER2000558	Creating a Nonhuman Primate Model of Graft vs Host Disease	1 Rhesus Macaque
YER2000765	Monkey (Rhesus) Stroke Model	1 Rhesus Macaque
YER2001645	Regulation of Motor Function in Parkinson's Disease	1 Rhesus Macaque
YER2001813 (formerly YER2001268)	SK Channel Inhibitor Treatment of Parkinsonism	1 Rhesus Macaque

The IACUC also reviewed and approved the protocol below for class E procedures. In this protocol, pain relieving drugs, except during and immediately following surgery, could not be used because of the potential confounding effects upon the neurological effects of cytokine IFN-alpha. Chronic immune activation induced by treatment with the cytokine causes a self-limiting, depression-like behavioral syndrome. Treatment with analgesic or other pharmacologic agents, particularly those that may have effects upon wakefulness or immune function, may confound interpretation of the effects of the cytokine.

Protocol #	Name of Study	# Animals Reported
2001669 (Formerly 066-2009Y)	Dopaminergic Mechanisms of Cytokine-Induced Behavioral Change	7 Rhesus Macaque

**Guinea Pigs**

The goals of this study were to characterize the pathogenic mechanisms by which virulent arenaviruses, such as Pichinde virus, cause hemorrhagic fever diseases in the infected host, identify and characterize the virulence factors of arenaviruses in the host, and to characterize the immune

NOV 30 2012

Attachment 2 to APHIS Form 7023

response of the host to the virus. The use of either opioid or nonsteroidal anti-inflammatory drug (NSAID) pain-relieving agents in the experimental subjects would have confounded the studies. The IACUC reviewed and approved the withholding of these pain-relieving agents for this study.

<b>Protocol #</b>	<b>Name of Study</b>	<b># Animals Reported</b>
218-2009	Pichinde virus infection of guinea pigs and mice as animal model for Lassa fever	30 Guinea Pigs

Attachment 2 to APHIS Form 7023

### Exceptions to Regulations and Standards

**Use of Restraint Devices:** Animals will be restrained for reasons of safety and scientific need. The type and length of restraint that is required for the research has been scientifically justified and then reviewed and approved by the Emory IACUC.

The IACUC reviewed and approved the use of restraint for the following protocols.

Protocol #	Name of Study	# Animals Used
073-2010Y5	Regulation of Striatal Function in Parkinson's Disease	7 Cynomolgus
109-2009Y	Behavioral, Neural and Endocrine Covariates of Differential Rearing History in Juvenile Macaca Mulatta	9 rhesus macaques
YER2000468	Cognitive and Socioemotional Development After Postnatal Anesthesia	19 rhesus macaques
YER2000561	Cortical Spine Plasticity and Parkinson's Disease	4 rhesus macaques
YER2000666	Oxytocin and Nonhuman Primate Social Behavior	4 rhesus macaques
YER2000710	Pet Neuroimaging and Cocaine Neuropharmacology in Monkeys	29 rhesus macaques
YER2000927	Local Field Potential in the Basal Ganglia	2 rhesus macaques
YER2000957	Thalamic Activity in Parkinsonism	6 rhesus macaques
YER2001089	Functional Imaging of Medial Temporal Lobe Activity in Awake Primates: Inactivation, Memory and Emotion	1 rhesus macaque
YER2001095	Neuronal Synchronization in the Medial Temporal Lobe and Memory Formation	5 rhesus macaques
YER2001123	Glutamate Receptors: Novel Targets for Parkinson's Disease Therapy	8 rhesus macaques
YER2001171	Hippocampal Control of Working Memory: Inactivation and PET in Monkeys	5 rhesus macaques
YER2001193	Antiparkinsonian Effects of T-Type Calcium Channels	6 rhesus macaques
YER2001206	Evolution of Aging and Dementia in Female Primates: Cores A-D and Projects 1-3	24 rhesus macaques
YER2001216	Neuropsychology of Primate Social Cognition	10 rhesus macaques
YER2001249	Pharmacological Profiling of a Novel PDE10A Inhibitor in Non-human Primates	4 rhesus macaques
YER2001321	Development of Medial Temporal Lobe Functions	22 rhesus macaques
YER2001407	Thalamostriatal System in Parkinsonism	4 rhesus macaques
YER2001410	GABA-B Receptors and Parkinson's Disease	1 rhesus macaques
YER2001440	Amygdala: Sex Differences in Behavior, Cognition, and Neuroendocrine Development	65 rhesus macaques
YER2001455	Developing a Nonhuman Primate Model of Alzheimer's Disease	2 rhesus macaques
YER2001488	Cocaine Use and Monoamine Function in Nonhuman Primates; Monoamine Transporters and Nonhuman Primate Cocaine Use	28 squirrel monkeys
YER2001615	Safety signal learning in monkeys: cortical regulation and its development	18 rhesus macaques
YER2001645	Regulation of Motor Function in Parkinson's Disease	4 rhesus macaques
YER2001692	Establishment of a Transgenic Monkey Model of Huntington's Disease	7 rhesus macaques

Attachment 2 to APHIS Form 7023

YER2001812	Pharmacological Profiling of a Novel PDE10A Inhibitor in Non-Human Primates	4 rhesus macaques
YER2001837	Manipulation of Gene Expression in Parkinson's Disease	9 cynomolgus
YER2000614	Neurobiology of Consolation	8 voles

**Social Enrichment:** Animals are exempted from normal social enrichment for various periods of time as needed to conduct the experiments. The reasons for the exemptions from social enrichment and the length of time that animals are exempted have been scientifically justified and then reviewed and approved by the Emory IACUC.

The IACUC granted exemptions from social housing to allow singly housed animals for the following protocols:

Protocol #	Name of Study	# Animals Used
073-2010Y5	Regulation of Striatal Function in Parkinson's Disease	7 cynomolgus
086-2010Y1	Therapeutic DNA/MVA Vaccines for HIV	6 rhesus macaques
235-2009Y	Extrastriatal Functions of Dopamine	3 rhesus macaques
YER2000277	GM-CSF Adjuvanted Clade C DNA/MVA and MVA/MVA Vaccines	51 rhesus macaques
YER2000332	PD-1 Blockade as a Therapy for SIV/AIDS	16 rhesus macaques
YER2000420	Modulating HIV Immunity with Dendritic Cells	15 rhesus macaques
YER2000536	Memory and Regulatory T Cells Following T Cell Depletion in Transplantation	24 rhesus macaques
YER2000558	Creating a non-human primate model of graft-versus host disease: Determining mechanism and assessing novel therapeutics	53 rhesus macaques
YER2000561	Cortical Spine Plasticity and Parkinson's Disease	4 rhesus macaques
YER2000598	Costimulation Blockade-Based Strategies to Promote Acceptance of Transplanted Organs	33 rhesus macaques
YER2000603	Immune Activation and AIDS Pathogenesis in SIV-Infected Non-Human Primates	19 rhesus macaques
YER2000618	Cross-Clade Passive Immunization with Human mAbs in Rhesus Monkey Infants	52 rhesus macaques
YER2000640	Neural Substrates of Cognitive Decline in Aging Monkeys	4 rhesus macaques
YER2000765	Monkey (Rhesus) Stroke Model	1 rhesus macaques
YER2000833	Pre-Clinical Non-human Primate Islet Allograft Transplantation Model for Tolerance Induction Testing with CTLA-4-Ig (Abatacept), LFA-3-Ig (Alefcept), and Sirolimus; Improving the Efficacy of Costimulation Blockade by Targeting T-Cell Memory	2 rhesus macaques
YER2000885	Novel VLP Vaccines for HIV/SIV	6 rhesus macaques
YER2000927	Local Field Potentials in Basal Ganglia	2 rhesus macaques
YER2000957	Thalamic Activity in Parkinsonism	6 rhesus macaques
YER2000984	Targeting mTOR and CD40 Pathways for Adjuvanting HIV Vaccines	107 rhesus macaques

Attachment 2 to APHIS Form 7023

YER2001011	Orbitofrontal Limbic Ontogeny and Early Dysfunction	1 rhesus macaques
YER2001012	Development of the Prefrontal and Limbic Circuit through the Basal Ganglia	7 rhesus macaques
YER2001036	Mucosal T Cell Responses and Protection from Simian AIDS	36 rhesus macaques
YER2001123	Glutamate Receptors: Novel Targets for Parkinson's Disease Therapy	8 rhesus macaques
YER2001171	Hippocampal Control of Working Memory: Inactivation and PET in Monkeys	5 rhesus macaques
YER2001193	Antiparkinsonian Effects of T-Type Calcium Channels	6 rhesus macaques
YER2001232	Mechanisms of SIV Suppression by CD8 + Lymphocytes	20 rhesus macaques
YER2001234	DNA Vaccines for Induction of the Mucosal Immunity	15 rhesus macaques
YER2001813 (Formerly YER2001268)	SK Channel Inhibitor Treatment of Parkinsonism	3 rhesus macaques
YER2001316 YER2001318 YER2001319 YER2000597	Transplant Tolerance in Nonhuman Primates	123 rhesus macaques
YER2001321	Development of Medial Temporal Lobe Functions	22 rhesus macaques
YER2001401	Vaccination Against Mucosal HIV Clade C Transmission	58 rhesus macaques
YER2001407	Thalamostriatal System in Parkinsonism	4 rhesus macaques
YER2001410	GABA-B Receptors and Parkinson's Disease	1 rhesus macaques
YER2001456	Memory and Regulatory T Cells Depletion in Transplantation	18 rhesus macaques
YER2001524	Infant Immunoprophylaxis Against a Primate Lentivirus	4 pigtail macaques 4 rhesus macaques
YER2001548	Methamphetamine and AIDS in a non-human Primate Model	4 rhesus macaques
YER2001615	Safety Signal Learning in Monkey: Cortical Regulation and its Development	18 rhesus macaques
YER2001645	Regulation of Motor Function in Parkinson's Disease	4 rhesus macaques
YER2001701	Developing Tolerance Approaches to Overcome oral Immunity	16 rhesus macaques
YER2001837	Manipulation of Gene Expression in Parkinson's Disease	9 cynomolgus
YER2001917	Targeting mTOR and CD40 Pathways for adjuvanting HIV Vaccine	16 rhesus macaques

**Food/Water Restriction:** The following protocols had some type of food or water restriction. Food and/or water would be withheld because of the scientific needs of the research being conducted. The food and/or water restriction have been scientifically justified in the IACUC protocol and then reviewed and approved by the Emory IACUC.

The IACUC grants exceptions for food/water restriction. However, only food restricted protocols were granted approval during this reporting period and are listed in the table below.