Main Campus IACUC Meeting Minutes for Thursday, August 16, 2018

Meeting Place – [redacted]

Meeting time – 12:10 pm-1:21 pm

Members Present

Attending Veterinarian
Castetter Hall ARF Rep (NV)
EOHS Representative (NV)
Environmental Health Manager (NV)
IACUC Administrator (NV)
IACUC Chair
Logan Hall ARF Rep (NV)
Member #10, Vice-Chair
Member #14
Member #16
Member #21
Member #22
Member #23
Member #24
Member #25
OACC Operations Manager (NV)
Radiation Safety Representative (NV)

Members Absent

BHC Representative (NV)
Chemical Safety Representative (NV)
Member #26

NV= non-voting members, consultant or staff
Per the request of the Chair, the Recording Secretary noted a quorum was present.

Total voting members for the quorum = 10 (member #21 joined the meeting at 12:15)

Item # 1: Approval of Agenda:

A motion to approve the agenda was made and carried. Item c. "IPRA", item d. "Committee constitution", and item e. "4% Parafomaldehyde disposal" were all added to general business. The agenda was approved as amended.
Decision: Approved: Yes=9 No=0 Abstained=0 Recused=0

Item # 2: Approval of Minutes

A motion to approve the minutes from July 19, 2018 meeting was made and carried. The minutes were approved as presented.
Decision: Approved: Yes=9 No=0 Abstained=0 Recused=0

Item # 3: Old Business:

200540 Major DMR - "A Rat Model of Memory Impairment in Prenatal Ethanol Exposure."
Reviewers: *21, 16, AV*
Summary: In this protocol amendment, we request additional animal numbers (n = 128), and a change in procedures which would allow us to assess changes in neuroanatomical connectivity that corresponds to memory impairment in the rat model of prenatal ethanol exposure.
The procedural changes are two-fold:
First, we wish to add microinjection surgical procedures involving the infusion of microliter quantities of a neuroanatomical tracer. The microinjections, under anesthesia surgery, would target hippocampal and limbic system brain regions allowing a histological assessment (following euthanasia) of connectivity between brain regions.
Second, for this aim we have amended our euthanasia procedures and now include a sequence of rapid isoflurane anesthesia followed by a rapid decapitation. This method allows for quick tissue collection which is necessary given that histological markers of neuroanatomical connectivity (i.e., immediate early genes) have a narrow time course of maximal expression following behavioral testing (typically 5 or 20min after behavioral testing).
Approved as a DMR by Sub-committee on 7/23/2018.

200552 with Minor DMR - "Resource partitioning among small mammal communities at the Sevilleta Long-Term Ecological Research site in the northern Chihuahua desert."
Reviewers: *Chair*
Summary: Add/remove staff
Recommended for approval as a DMR by Chair on 7/6/18 but pending completion of medical clearance for staff.

Item # 4 New Protocols:

200732 Tissue - "Mesoporous silica nanoparticle optimization for targeted drug delivery and imaging in Chick Embryo Model."
Reviewers: *Chair, AV*
Summary: Successfully systemic treatment of cancer is often limited due to high non-specific toxicity and the resulting side effects that accompany most currently available systemic therapies. Targeted drug nanocarriers have the potential to improve cancer treatment outcome while simultaneously decreasing toxicity by sequestering therapeutic cargo until internalized specifically by target cells (ie. cancer cells). Targeted drug delivery is also important in infectious disease and the use of nanocarriers could improve treatment outcomes. However, a better understanding of how nanoparticles behave in a complex in vivo environment is required to engineer nanoparticle to interact specifically with cancer cells or bacteria. Here we propose use of an ex ovo chick embryo model in order to image, characterize and optimize organ and tumor distribution of mesoporous silica nanoparticles for cancer and infectious agent treatment.
Goals and aims: Mesoporous silica nanoparticles can be modified to control size, shape, pore and surface chemistry (including targeting ligands) and therapeutic and/or imaging cargo. The goal

of the proposed research is to determine how modification of these individual components affects nanoparticle biodistribution, interaction between bacteria and nanoparticles, tumor cell binding, nanoparticle internalization and efficacy.
Approved per IACUC Chair and Attending Vet Review 8/2/2018.

200735 3-yr RW Tissue - "Biodemography of Aging in Wild Chimpanzee (Tissue Protocol)."
Reviewers: *Chair, AV*
Summary: This is a tissue protocol supplement to the main protocol. It covers the analysis of blood specimens collected from chimpanzees in African sanctuaries:
As the closest extant relatives of humans, chimpanzees are of particular interest for understanding how human life history has changed during the course of our species' evolution. Although chimpanzees are among the longest-living mammalian species, one of the fundamental changes that occurred during human evolution was a marked increase in longevity. It is not yet clear how this remarkable change occurred, because very little information exists about how the aging process differs between humans and chimpanzees, in large part because comprehensive data on aging in great apes is unavailable. Our overall aim is to study the interaction of aging and social and ecological processes in wild chimpanzees, with supplementary data from provisioned, free-ranging individuals in African sanctuaries. Our study will compile data on reproductive health, physiological and energetic stress, oxidative stress, physical condition and locomotor proficiency, immune health and infection, cardiac health, kidney health, liver health, and gastrointestinal health using minimally invasive methods. Our aims are to (a) assess sex differences in the pace and pattern of aging, (b) investigate the role of energy limitation on aging, (c) examine the influence of social relationships and social status on aging, and (d) compare chimpanzee data with available data on humans. Our data will bear on prominent hypotheses in the aging literature. For instance, it is hypothesized that caloric restriction extends longevity. While we will not manipulate chimpanzee caloric intake, we will compare two chimpanzee groups that live in habitats of differing energy availability. Our study will collect more comprehensive health information than has previously been collected from any free-living chimpanzee population, and thus has important conservation applications. The majority of the project will be conducted in Kibale National Park, where two long-term field studies maintain long-term projects. Additional data will be collected from three African chimpanzee sanctuaries. These sanctuaries raise chimpanzees confiscated from the pet, entertainment, and bushmeat trades. Sanctuary guidelines recommend annual veterinary knockdowns performed by trained veterinary staff. We will obtain blood, serum, urine, and fecal samples collected by the veterinarians and conduct measurements of limb proportions and musculature on anesthetized chimpanzees.
Approved per IACUC Chair and Attending Vet on 8/2/2018.

200736 3-Yr RW Tissue - "Comparative Human and Primate Physiology Center (Tissue Protocol)."
Reviewers: *Chair, AV*
Summary: The Hominoid Reproductive Ecology Laboratory, in the Department of Anthropology at UNM, specializes in developing and applying minimally-invasive methods for studying the health of primates. This includes immunoassay and similar procedures in urine, saliva, feces, and hair. In addition to conducting in-house work related to the research of the two principal investigators, we operate as a UNM Internal Service Center, providing low-cost assay

services for scholars at UNM and other institutions. The work in this laboratory investigates the relationships between ecology, behavior, and health in primates. These studies have three important outcomes/benefits: (1) better understanding the behavioral ecology and life history of each primate species, using hormones or other biomarkers to reinforce or refine observational data; (2) generation of comparative data from model species for the examining the evolution of the human organism; (3) generation of data on physical and reproductive health that can have important conservation implications for these species in nature.
Approved by IACUC Chair and Attending Vet on 7/24/2018.

200739 3-Yr RW - "Biodemography of Aging in Wild Chimpanzees."
Reviewers: *23, 25, AV*
A motion for approval was made and carried.
Summary: The proposed research is a continuation of long-term non-invasive field studies of the physiology and behavioral ecology of wild chimpanzees in the Kibale National Park, Uganda [see also Protocol 14-101117-MC]. The current emphasis of the study is the aging process. As the closest extant relatives of humans, chimpanzees are of particular interest for understanding how human life history has changed during the course of our species' evolution. Although chimpanzees are among the longest-living mammalian species, one of the fundamental changes that occurred during human evolution was a marked increase in longevity. It is not yet clear how this remarkable change occurred, because very little information exists about how the aging process differs between humans and chimpanzees, in large part because comprehensive data on aging in great apes is unavailable. Our overall aim is to study the interaction of aging and social and ecological processes in wild chimpanzees, with supplementary data from provisioned, free-ranging individuals in African sanctuaries. Our study will compile data on reproductive health, physiological and energetic stress, oxidative stress, physical condition and locomotor proficiency, immune health and infection, cardiac health, kidney health, liver health, and gastrointestinal health using minimally invasive methods. Our aims are to (a) assess sex differences in the pace and pattern of aging, (b) investigate the role of energy limitation on aging, (c) examine the influence of social relationships and social status on aging, and (d) compare chimpanzee data with available data on humans. Our data will bear on prominent hypotheses in the aging literature. For instance, it is hypothesized that caloric restriction extends longevity. While we will not manipulate chimpanzee caloric intake, we will compare two chimpanzee groups that live in habitats of differing energy availability. Our study will collect more comprehensive health information than has previously been collected from any free-living chimpanzee population, and thus has important conservation applications.
Recommended for approval on 8/3/2018.

Discussion during the meeting: The primary reviewer, the Chair, and a PI gave a summary of the protocol. This is a continuation of a long term project and was very well written. There was a question about importing animal tissues that had been resolved. There were no other issues and the protocol was recommended for approval.
Decision: Approved: Yes=9 No=0 Abstained=0 Recused=1

200741 3-Yr RW - "Utilizing rabbits to generate polyclonal antibodies for defining the function of novel genes involved in heart disease."
Reviewers: *10, 24, AV*
A motion for approval was made and carried.

Summary: More people die from cardiovascular disease than any other cause worldwide. It is well established that certain external factors such as high cholesterol intake, smoking and diabetes among others can increase a person's chance for developing heart disease. However, there remains significant variability in individuals who may or may not have any of these risk factors and those who develop disease. Specific heart diseases have been shown to run in families suggesting our genetic makeup is a contributor and in fact, many genes have been linked to diseases of the heart. While the human genome has been fully sequenced and studies have identified the genes that are involved in disease, we still do not yet know what all of their functions are or how they might contribute to disease. It is difficult to determine the function of unknown genes in a vertebrate system because higher organisms have duplicated their genes and they tend to have overlapping function. The fruit fly *Drosophila* is a good model for studying function because it has highly similar genes with significantly less duplication.
Our goal is to investigate the function of genes that have been identified to play a role in vertebrate heart disease by studying highly similar genes in the fruit fly. First, we will do this by utilizing rabbits to generate antibodies against Drosophila heart genes. We will inject the rabbits with Drosophila proteins, and then collect antibodies that the rabbit generates against them, with small blood collections. These antibodies will be detected fluorescently and will adhere to proteins located in specific structures of the heart so that we can visualize it. Second, we will carry out experiments to eliminate or over express genes that have been identified to play a role in heart disease and then observe their effect on the heart with our rabbit generated antibodies. This will enable us to observe any effects these experiments have on the heart and help us to understand their function by observing what happens when they are mis-expressed. The results of this study will contribute to understanding how disease develops and potentially lead to the development of therapies to prevent or reverse it.
Recommended for approval on 8/15/18.

Discussion during the meeting: The primary reviewer gave a summary of the protocol. This is a continuation of a previous straight forward project and was very well written. The PI should repeat their alternative searches using the suggested search terms from the Library Rep. There was another question about the diet for the rabbits that was clarified by the Castetter Hall ARF Supervisor. The animals are adopted out at the end of each study so we should ensure that the proper legal paperwork for that is in order. There were no other issues and the protocol was recommended for approval.
Decision: Approved: Yes=10 No=0 Abstained=0 Recused=0

Item # 5 Major Amendments:

none

Item # 6 Minor Amendments:

none

Item # 7 Annual Renewals:

200421 Closure - "Using mice to investigate the effect of praziquantel on the biology of the parasite *Schistosoma mansoni*."

Reviewers: *Chair*
Summary: The major projects in the lab over the past several have been to examine the effect of the drug praziquantel on the parasite Schistosoma mansoni. We have used mice as the host to grow Schistosomes and tested the effect of different PZQ enantiomers on the worms. We have also used the infected mice for in vivo experiments to generate schistosomes resistant to the drug. These mouse experiments have allowed us to develop interesting hypotheses on the ligand of praziquantel, its mechanism of action and mechanisms of resistance to the drug. Using mice has allowed us to produce large number of schistosomes in a consistent manner which has proved valuable for larger scale transcriptomic analyses. This has resulted in a number of published papers with another two to come out in the near future. This as yet unpublished work will also form the cornerstone of the PhD thesis of the graduate student who has been on the protocol for the past 8 years.
The graduate student has completed her lab work and will complete her PhD studies in mid October. I will leave UNM at the end of October and so have no need to maintain the protocol.
Approved administratively per IACUC Chair on 8/8/2018.

200487 DMR - "Fetal-ethanol effects on neural physiology and spatial behavior."
Reviewer: *10 (VC)*
Sent for DMR by Vice Chair Review 1 on 8/13/2018.

200490 DMR - "Spatial learning and memory in the rat."
Reviewer: *10 (VC)*
Sent for DMR by Vice Chair Review 1 on 8/13/2018.

200648 DMR - "Animal Procedures and Techniques Training – Main Campus."
Reviewers: *Chair*
Approved as a DMR per IACUC Chair on 8/2/2018.

General Business:

1. IACUC Concerns –
    a. Semi-annual inspections on Wednesday, August 29 @ 9 AM.
    b. Facilities update – the AV announced approval of the budget for the zebrafish facility. Money is still needed for new cage wash and autoclave equipment for Castetter and Logan Halls.
    c. IPRA request – as an FYI, the Chair announced that we received an IPRA request for Main Campus USDA annual and inspection reports dating back to 2008.
    d. Committee constitution – The chair requested that we add something to our IACUC committee SOP stating that members who are out on sabbatical don't count against the quorum for voting purposes. Perhaps we should also have a letter from the IO stating that the PI who is on sabbatical does not count against the quorum. Conversely an alternate member could stand in for the member who is on sabbatical. A non-scientific voting member recently resigned from the committee so we will try to replace that member with another non-scientific voting member. We have a new SRS representative so introductions were made all around.

e. Four percent Paraformaldehyde disposal – carcasses that have been perfused with PFA cannot be disposed in the UNM crematorium. Instead they must be picked up by the UNM waste contractor for disposal. The ARF will update all signage to include PFA carcasses on the list of items that cannot be disposed in the UNM crematorium. Liquid PFA must also be picked up by SRS for disposal instead of discharging into the municipal sewage.

Meeting adjourned at 1:21 PM
Respectfully submitted by [redacted]

Main Campus IACUC Meeting Minutes for Thursday, January 17, 2019

Meeting Place – [redacted]

Meeting time – 12:11 pm-1:42 pm

Members Present

Attending Veterinarian
Castetter Hall ARF Rep (NV)
Chemical Safety Representative (NV)
EOHS Representative (NV)
IACUC Administrator (NV)
IACUC Chair
Logan Hall ARF Rep (NV)
Member #10, Vice-Chair
Member #14
Member #22
Member #23
Member #24
Member #25
OACC Operations Manager (NV)
Radiation Safety Representative (NV)

Members Absent

BHC Representative (NV)
Member #16
Member #21
Member #26
SRS Representative (NV)

NV= non-voting members, consultant or staff
Per the request of the Chair, the Recording Secretary noted a quorum was present.

Total voting members for the quorum = 8

Item # 1: Approval of Agenda:

A motion to approve the agenda was made and carried. The agenda was approved as presented.
Decision: Approved: Yes=8 No=0 Abstained=0 Recused=0

Item # 2: Approval of Minutes

A motion to approve the minutes from September 20, 2018 meeting was made and carried. One reviewer name was removed from the minutes. The minutes were approved as amended.
Decision: Approved: Yes=8 No=0 Abstained=0 Recused=0

Item # 3: Old Business:

200526 with Minor DMR - "Building Scientific Infrastructure for Mammalian Studies at UNM."
Reviewer: *VC*
Summary: Add/remove staff.
Approved by Vice Chair on 10/19/2018.

Item # 4 New Protocols:

200770 3-yr RW - "Habitat Use by Pinyon Jays: Radio Telemetry and Banding."
Reviewers: *23, 24, AV*
Summary: The primary purpose of this study is to contribute to the understanding of the causes of Pinyon Jay decline. Goals of the project are to find nesting colonies, document home ranges, and assess habitat use by Pinyon Jays at Santa Fe County open space properties.
Approved as a DMR by Sub-Committee on 11/5/2018.

200796 3-yr RW DMR - "Small Mammal Studies Associated with the Sevilleta Long-Term Ecological Research Project."
Reviewers: *14, 24, AV*
Summary: The Sevilleta Long Term Ecological Research (LTER) Program is part of the National Science Foundation-supported LTER network of 26 sites throughout the United States. LTER science aims to understand ecological processes over long periods, usually on a scale of years-to-decades. Specifically, LTER research focuses on understanding the effects of climate, biogeochemistry, and water on ecosystems, including shifts in plant production and consumer populations. Monitoring small mammal communities enables us to describe long-term consumer dynamics and relate them to extensive data sets on plant productivity and climate. We can then answer questions about how animal populations are connected to food resources over space and time. Not all species respond in the same manner and on the Sevilleta National Wildlife Refuge we work to quantify the disparate fluctuations in desert- and grassland-dwelling rodent populations. Animals for these monitoring studies are live trapped. Non-invasive measurements are taken and the animals are released at the point of capture.
Approved as a DMR by Sub-Committee on 11/26/2018.

200801 DMR - "Examining the function of gut microbial communities with amino acid stable isotope analysis of Peromyscus"
Reviewers: *10, 16, AV*
Summary: Research in the field of microbial ecology over the last decade has discovered the gut of every organism with a structured digestive system, from a termite to a human, plays host to a large diversity of microbes and bacteria (gut microflora). Although some gut microflora are pathogens and potentially harmful, most have a mutualistic relationship with the host organism, functioning to further digest food, synthesize nutrients the body can use, prevent pathogenic bacteria such as *E. coli* from overwhelming the body, and potentially many other yet unknown benefits. This creates a complicated system; an entire ecosystem is living inside of our bodies. The exact functionality and physiology of how this system works is largely unknown and difficult to study. However, recent research focusing on the mammalian gut system has greatly increased, providing insights into human growth and development, immunology, nutrition, and

overall health and physiology. This study hopes to further expand research in these fields, specifically looking into how diet and nutrition affect bodily tissue development and the bacterial community of the gut. We anticipate that the results of this study will (1) advance the use of stable isotope analysis in animal ecology and eco-physiology, and (2) determine the contribution of microbially synthesized amino acids used by the host to synthesize its structural tissues.
Approved as a DMR by Sub-Committee on 1/15/2019.

200804 3-yr RW DMR - "MSB Bird Division Specimen Collection and Specimen-Based Research and Teaching and Curation."
Reviewers: *10, 16, AV*
Summary: The Museum of Southwestern Biology Bird Division salvages, collects, prepares, and curates bird specimens for the enhancement of research and teaching at the University of New Mexico. Research in the Bird Division is oriented around biodiversity. This work begins at the most basic level -- documenting bird diversity of the southwestern North America, the Neotropics, and the South Pacific region. We carry out basic survey work to discover what birds occur where, and what their characteristics are. We sample birds through observation, audio recording, photography, and specimen collection. We investigate processes that generate and maintain diversity. Generally, this work involves measurements and analysis of preserved specimens and collection of DNA sequences to discover relationships (i.e. the bird family tree). All our work is based on wild-caught specimens which are humanely killed at the site of collection using humane methods. The specimens form the basis of the bird collection at the MSB. Data garnered from these specimens is incorporated into publically available databases. The specimen materials and the data are intended to benefit biodiversity research by the Bird Division and scientists around the world for as long as they last. They also serve as a boon to students who conduct thesis projects on birds or seek to obtain curatorial or ornithological experience as part of their education.
Approved as a DMR by Sub-Committee on 1/4/2019.

200807 3-yr RW - "Neuroinflammation: Role in FASD Cognitive Deficits."
Reviewers: *10, 25, AV*
A motion for approval was made and carried.
Summary: Exposure to alcohol during prenatal brain development can result in a set of profound alterations in the structure of the body (including brain) and the functions of the brain. An estimated 2%-5% of children born each year in the United States meet criteria for a diagnosis of Fetal Alcohol Spectrum Disorder (FASD). FASD is associated with persistent deficits in learning, cognition, behavior, and brain function that have tremendous monetary costs and dramatically decrease quality of life. At present, there are no effective treatments for the persistent consequences of prenatal alcohol exposure. This is not for lack of effort, but in large part because the required basic understanding of how fetal ethanol exposure alters brain function is not sufficient to allow for targeted, rational development of treatments for specific deficits. The goal of the proposed work is to understand putative mechanisms of damage to the developing fetal brain in FASD and prevent or treat the brain damage with medications. We have identified brain inflammation in a mouse model of development ethanol exposure, which may underlie the effects of ethanol on brain function and behavior. This suggests anti-inflammatory treatment strategies may prevent or at least ameliorate consequences associated with FASD in humans. In this mouse study, we will investigate whether either of two anti-inflammatory

medications has the potential to prevent or ameliorate against long-term ethanol-related alterations in synaptic plasticity function and learning and memory cognition.
Recommended for approval on 1/7/2019.

Discussion during the meeting: The PI gave a summary of the protocol. The AV pointed out that data for general anesthesia was also added under the analgesia section and a request for administrative change was recommended during the pre-review. In addition, the AV pointed out the recent addition of new protocol form questions relating to analgesia and local anesthesia with emphasis on pre-emptive pain management as a means to minimize post-operative pain.The Library Rep asked that search phrases be enclosed in parentheses during alternative searches. A few other minor items had been resolved by the PI during the pre-review. There were no other pending issues and the protocol was recommended for approval.
Decision: Approved: Yes=7 No=0 Abstained=0 Recused=1

200813 3-yr RW - "Etiology and epidemiology of cercarial dermatitis, and, systematics of avian schistosomes."
Reviewers: *21, 24, AV*
A motion for approval was made and carried.
Summary: Cercarial dermatitis, known as “swimmer’s itch”, an ailment caused by the penetration of human skin by the cercariae of non-human schistosome parasites, is a common, recurrent phenomenon in both shallow freshwater and marine habitats worldwide, including the U.S. Most cases of dermatitis originate from schistosome species of waterfowl, although a few are from mammals. This protocol will focus on the bird schistosomes. The adult worms live in the blood vessels of the intestine of a bird hosts and release eggs into the environment where the newly hatched larvae find and penetrate a snail. In the snail, the worm undergoes many clonal generations until swimming larva are released into the environment (cercariae). These cercariae will complete the life cycle by penetrating the foot/legs of a bird or mammal but develop into adults only in birds. It is this swimming stage, the cercariae, which has been the cause of swimmer's itch in people. There is no true disease in people, but there are about 1-2 weeks of intense itching, much like chiggers. In addition to their medical impact, dermatitis outbreaks can have significant economic repercussions (tourism, real estate, aquaculture) for affected communities. The avian schistosomes responsible for dermatitis outbreaks are poorly characterized, such that even in the U.S. we lack reliable information on the number of species involved, their natural hosts, predilection to cause pathology, geographic distributions, and basic epidemiology. Our extensive reference collection of schistosomes create exciting new opportunities to advance our understanding of this under-appreciated yet widespread public health problem. It is important to establish a baseline of understanding so we can better grasp how human-imposed ecological changes might alter the epidemiology of cercarial dermatitis. From the studies outlined in our proposal, we will gain a far more definitive view of the most common agents responsible for causing swimmer's itch, their geographic distributions, and critical aspects of the timing of their life cycles that directly influence the epidemiology of this poorly-known ailment.
Recommended for approval on 1/8/2019.

Discussion during the meeting: The PI gave a summary of the protocol. The PI clarified the four species of lab birds that will be used. There was a question about the roles and number of people listed on the personnel roster. Some edits were needed for the alternative search for duplication of research. Authorized amounts were entered for Lab Birds using the total from the attached animal numbers table. The AV asked if the birds normally show sequellae after parasite

infection. The PI said they do not. The PI should clarify under post-procedural monitoring on which day post-infection SID observations will begin on mice by PI lab members. All animals housed in the ARF are observed by animal facility staff daily. The EOHS Rep asked if there was any chance of anaphylactic shock from exposure to the Schistosomes. Sensitivity to exposure does increase over time. The EOHS Rep offered an EPI Pen if needed. The Chair requested that the PI describe in detail any adverse events that result from collecting in the field during the annual renewal. A statement was added to the alternative search narrative to reflect that some carcasses are gathered from hunting stands or other sources where the animals have already been collected in the field. This is a great way to reduce the number of animals that need to be collected live in the field for the purpose of this study. There were no other pending issues and the protocol was recommended for approval.
Decision: Approved: Yes=7 No=0 Abstained=0 Recused=1

Item # 5 Major Amendments:

200596 DMR - "Tracking migratory birds to determine seasonal movements."
Reviewers: *23, 25, AV*
Summary: We are seeking a major amendment to add two additional graduate students, one undergraduate student, three additional tracking techniques, two additional bird species, and additional numbers of individuals; the central goal of all work under this protocol remains to track birds through key stages of their annual cycle to understand their ecology, physiology, and genetic adaptation to the environment. Tracking will be extended to three additional marker types, two additional bird species, and the addition of a core-body-temperature logger device. All of this work, as with all of our research, will be contingent on all appropriate permits from the management authorities (New Mexico: NMDGF, USFWS, and USGS; Chile: SAG).
Approved as a DMR by Sub-Committee on 1/15/2019.

Item # 6 Minor Amendments:

200437 - "Climate change effects on body condition, metabolism, and water loss in populations of desert reptiles."
Reviewer: *VC, AV*
Summary: We request to add 3 additional species to the protocol described for the chuckwalla (*Sauromalus ater*) dehydration experiment. After depriving chuckwallas of food and water and observing their body mass decrease, the animals were scanned in the QMR to determine overall body composition. We found that much of the overall body mass lost was in the form of fat, and though total body water mass had decreased, overall body water percentage had stayed stable, indicating fat was being metabolized to maintain water balance. Furthermore, thermoregulatory performance under heat stress did not appear to be affected. We would like to extend this protocol to three additional species to observe if the change in body composition, and thermoregulatory capacity is variable among species with different life histories. We would like to sample species that have different life histories than chuckwallas, which are large-bodied, thermophilic, sedentary lizards. We request to include crevice spiny lizards (*Sceloporus poinsetti*), collared lizards (*Crotaphytus collaris*), and whiptail lizards (*Aspidoscelis exsanguis*) in our studies on dehydration. Each of these species has a different body form, and physiological capacity to tolerate heat, and therefore serve as ideal representatives of their respective families. We will have 8-10 specimens of each species that will be dehydrated via food depravation and

elevated metabolism, which falls within the currently approved species numbers. Animals will be held temporarily in an environmental chamber at warm temperatures that promote elevated metabolism and water loss, but do not exceed their panting threshold. Additionally, although we are approved to perform orbital bleeds to determine isotope content and hydration state of the lizards, we request to draw blood from the subcaudal vein of the tail, which is a less invasive and more widely used alternative method to orbital bleeding. These requested modifications will allow us to make comparisons of the effects of dehydration across species, and do not increase pain or distress outside of the purview of the existing approved protocol.
Approved by Vice Chair and Attending Vet on 10/26/2018.

200472 - "Mouse model of immunity to *Toxoplasma gondii*."
Reviewers: *VC*
Summary: Add/remove staff.
Administratively approved per Vice Chair on 11/28/2018.

200540 - "A Rat Model of Memory Impairment in Prenatal Ethanol Exposure."
Reviewers: *VC, AV*
Summary: We have made a modification to Aim 5 in which a different chemical is used to lesion the anterior thalamus (muscimol). The current protocol calls for animals to receive NMDA lesions of the anterior thalamus, but we have now updated the aim to reflect that a subset of the approved number of lesion rats will instead receive infusions of muscimol (a drug that non-selectively inhibits neural activity) into the anterior thalamus (16 control, 8 neurotoxic NMDA lesion rats, and 8 muscimol rats).
Approved by Vice Chair and Attending Vet on 12/7/2018.

200731 - "A Rat Model of Spatial Disorientation and Dementia."
Reviewers: *VC, AV*
Summary: We have made a change to our euthanasia procedures. We now add procedures that allow for rapid extraction of brain tissue which allows for analysis of immediate early gene and protein expression.
- Animals will be anesthetized with isoflurane in a tightly-sealed chamber (4% isoflurane/oxygen for 45-60sec) and then rapidly decapitated with a guillotine. After decapitation, the brain is extracted.
Approved by Vice Chair and Attending Vet on 12/5/2018.

200739 - "Biodemography of Aging in Wild Chimpanzees."
Reviewer: *VC*
Summary: Add/remove staff.
Administratively approved per Vice Chair on 11/27/2018.

Item # 7 Annual Renewals:

200361 Closure - "Ecology and niche separation of desert cottontails and black-tailed jackrabbits in the Chihuahuan Desert as determined by radiotelemetry, pellet collection, and automatic cameras
Reviewers: *VC*

Summary: Field work and animal handling was completed in 2017. Altogether 32 cottontails (14 males, 18 females) and 11 jackrabbits (2 males and 9 females) were captured over the course of the project. Of these, 20 cottontails and 6 jackrabbits were radiocollared. Three manuscripts were submitted to journals, including one to Southwestern Naturalist and two to Western North American Naturalist.
Closed administratively per Vice-Chair on 11/2/2018.

200418 DMR - "Field physiological performance assays for the comparative study of high-altitude adaptation in birds."
Reviewers: *VC*
Approved as a DMR by Vice-Chair on 12/20/2018.

200596 DMR - "Tracking migratory birds to determine seasonal movements".
Reviewer: *VC*
Approved as a DMR by Vice-Chair on 11/8/18.

200692 DMR - "Characterization of the microbiome of different animal phenotypes."
Reviewer: *VC*
Approved as a DMR by Vice-Chair on 11/19/2018.

General Business:

1. IACUC Concerns –
    a. Spring 2019 Semi-annual inspections will take place on February 27, 2019
    b. Facilities update – The AV updated the committee on plans for the new Zebrafish facility
    c. 2019 IACUC timeline – the OACC Operations Manager updated the committee on some important dates coming up in 2019 and 2020 such as our Main Campus OLAW Assurance Renewal.
    d. Update on how to handle voting member sabbaticals – an alternate can be appointed for voting members while they are out on sabbatical if needed so that the voting member's absence does not affect the quorum.

Meeting adjourned at 1:42 PM
Respectfully submitted by [redacted]_____