



*hosts the*

**AALAS**  
**District IV**  
**Meeting**

*“Honoring the  
Past While  
Embracing the  
Future”*

*June 6th-7th, 2019*

*NC State University*

*McKimmon Center*

*1101 Gorman St, Raleigh, NC 27606*

# **2019 District IV Meeting Overview**

## **Thursday, June 6th**

9:00am – 10:00am	Keynote Speaker: Holly Hayes (NAIA)
10:15am – 12:15pm	Breakout Sessions
12:15pm – 2:00pm	Lunch & Vendor Fair
2:00pm – 4:00pm	Wet Lab (NCSU-CVM)*
2:00pm – 4:00pm	Breakout Sessions
6:00pm – until	Evening Social in Downtown Raleigh

## **Friday, June 7th**

9:00am – 10:00am	Keynote Speaker: Ann Turner (AALAS)
10:00am – 10:30am	Break Time
10:30am – 12:30pm	Breakout Sessions
10:30am – 2:00pm	AALAS Mini-Leadership Academy*
1:00pm – 3:00pm	Dry Lab with Lunch (McKimmon Center)*

\*Pre-registration required (space is limited)



## **Thursday, June 6th**

### **Keynote Speaker: Holly Hayes (National Animal Interest Alliance)**

#### **Advancing the Work of the Research Community and Collaborating to Rehome Canine Heroes**

National Animal Interest Alliance (NAIA) recognizes the many advances in human and animal health that have resulted from necessary research with animals, e.g., psychological, medical, behavioral, physiological, and nutritional, when conducted according to the Animal Welfare Act regulations and the guidelines of the National Institutes of Health and AAALAC, Intl. NAIA respects the high-quality care and compassion provided by laboratory animal science professionals and urges the continued development of research alternatives that effectively reduce, and ultimately replace, animals whenever such alternatives support reliable biomedical progress. In 2016, NAIA launched the Homes for Animal Heroes program, a product of the research community's desire to find loving homes for their animals, as well as the need to educate the public on the real facts about our animal heroes, how they are cared for, and how they improve human and animal lives. It is the goal of NAIA to continue to expand our program, while serving as a model and resource for other organizations. We are also dedicated to advancing legislation through our sister organization, the NAIA Trust, to protect the rights of responsible animal owners and animal professionals.

### **★ Recruiting and Career Panel**

Speakers: North Carolina State University Temporary Service, EDI Integrated Business Solutions, Aerotek, and FEFA Animal Care and Consulting Services

This panel is comprised of a variety of professional recruiters from the area who know what institutions look for in their applicants, resumes, interviewing, and are familiar with the hiring processes. After a brief introduction of the panel participants, meeting attendees will have the opportunity to ask questions about resumes, interviewing, networking, selecting jobs, career building, and other related topics. Some questions will be collected in advance, and we will also have an open mic setting for impromptu questions during this 2-hour session.

### **☆ The Scientific 3Rs of Relevance, Robustness, and Reproducibility: Nurturing the Health and Welfare of Experiments in Animal Research**

Speaker: Jeff Everitt

Animal models have provided an important tool to help make the decision to take potential therapies from preclinical studies to humans. The strong reliance of the pharmaceutical discovery and development process on the use of animal models has come under increasing scrutiny for ethical and scientific reasons. There have been several reports of limited concordance of animal experiments with subsequent human clinical trials. Recent assessments of the quality of animal studies have suggested that this translational failure may be due in part to shortcomings in the planning, conduct and reporting of in vivo studies. This talk will emphasize methods to assure best practice rigor in animal study methods and reporting. It will introduce the so-called "Scientific 3Rs" of Relevance, Robustness, and Reproducibility to the in vivo study approach.

### **▲ Regulatory T Cells Affect the Pace of Resolution Following Experimental Influenza Acute Lung Injury**

Speaker: Jason R. Mock

Recovery from acute lung injury (ALI) is an active process. Foxp3<sup>+</sup> regulatory T cells (Tregs), a subset of CD4<sup>+</sup> lymphocytes, contribute to lung repair through enhancing epithelial proliferation and modulating immune responses. Tregs are detected in the bronchoalveolar lavage (BAL) of patients with Acute Respiratory Distress Syndrome (ARDS) including those with influenza. There are many unanswered questions regarding ARDS resolution and the role Tregs play in these processes. This led us to examine ALI resolution in the presence or absence of Tregs in an experimental influenza model of ALI. Compared to controls, Treg-depleted mice had slower weight recovery and greater morbidity. Resolution, as documented by protein in the BAL fluid and numbers of cells in the BAL, is impaired when Tregs are depleted. Our studies provide insight into the immune-signaling mechanisms affecting acute lung injury resolution and demonstrate the importance of Tregs in lung repair.

### **★ Disaster Preparedness: Are You Ready?**

Speaker: Gregg Langham

Preparing and responding to disasters is a cycle that requires reflecting on the past and incorporating information into future planning. The southern and southeastern United States experiences many different types of events each year. These can range from a seemingly insignificant inconvenience lasting a few hours to a catastrophe that may take decades of recovery. To embrace the future, this presentation explores what drives the need for a disaster plan, the components of a disaster plan and focuses on critical thinking of a plan.

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★ Facility Design, Management, and Operation

▲ Biomedical Research, Medicine, and Methodology

### **▲ Mouse Diseases: Past, Present, and Future**

Speaker: Ilana Galex

*Purpose-bred mice (*Mus musculus*) are a cornerstone of modern biomedical research. Biosecurity measures have been developed to protect mouse colonies from pathogens that can affect animal welfare and study outcomes. As biosecurity and technology advancements emerge, we no longer see many of the same diseases that have affected research vivaria in the past. However, new diseases are continuously being discovered. This presentation will focus on historical, current and emerging murine pathogens and briefly describe some of the biosecurity measures that have been implemented to prevent such diseases.*

### **▲ The Curious and the Common Facts about Guinea Pigs in Research**

Speaker: Karen Froberg-Fejko

*How did guinea pigs become the symbol of science? The quote, "I am not going to be a guinea pig" denotes a laboratory insult which arose from a famous researcher's Faux Pas (social blunder) using guinea pigs. We will discuss the historical and traditional use of guinea pigs in in-vivo research and conclude by reviewing anatomy, physiology, husbandry, housing and enrichment needs.*

### **★ Dynamics in the Workplace - Reducing Workplace Stress by Creating and Maintaining a Good Relationship with Your Supervisor**

Speaker: Lisa Secrest

*Do you have differences of opinion and style with your supervisor? You can learn to accept these differences. Consider this, all jobs and professions have at least one thing in common – their purpose is to solve problems. Yet, amazingly, many routinely gripe and complain about tasks they think are beneath them. They never stop to think that if such tasks did not need to be resolved, they would be out of a job! If everyone kept this in mind, they would appreciate why they were hired in the first place and the workplace would be a more pleasant environment.*

### **▲ Looking Towards the Future by Examining the Past: Tales of Emerging Infectious Diseases**

Speaker: Tori Baxter

*The next worldwide pandemic will almost certainly not be caused by a scourge that has ravaged human populations for eons, but instead be caused by a disease that is brand new, at least to humans. As people encroach on previously untouched wildlife habitats through population spread, deforestation, and agricultural expansion, novel interactions between species provide an opportunity for the exchange of zoonotic diseases. Dr. Baxter will take the audience on a journey recounting several emerging infectious diseases that have crashed onto the worldwide scene in the last 25 years and share her experiences as a veterinarian-scientist at the forefront of this exciting field studying Zika virus and chikungunya virus. By understanding the zoonotic diseases that have emerged over the last few decades and spilled over into human populations, scientists can take and apply these lessons and experiences to predict and prepare for the next great pandemic.*

### **☆ Finding Forever Homes for Our Research Heroes**

Speaker: Sara Lundy

*This presentation will diagram NCSU LAR's adoption program, with emphasis on past issues and their resolutions. It will also detail upcoming innovations to the program and how these ideas may help foster a more successful program overall. There will also be copious pictures of adopted heroes in their retirement homes!*

### **▲ Reproducibility in Zebrafish Research**

Speaker: Michelle Altemara

*Zebrafish (*Danio rerio*) are an increasingly popular animal model used in a variety of research areas. As with all animal models that have been used in the past, husbandry conditions, including environmental parameters, nutrition, and exposure to pathogens can affect research results. However, zebrafish are tolerant of a wide range of environmental parameters, which has led to wide variation in husbandry practices across facilities around the world. The lack of standard conditions across zebrafish laboratories may play a role in irreproducible experiments. Therefore, summaries of these conditions for the years 2017 and 2018 have been compiled for the Zebrafish Aquaculture Core (ZAC) facility at the University of North Carolina (UNC) Chapel Hill with the aim to have this data included in research articles published using our fish. The items necessary to improve efficiency of data collection and analysis is also presented. As more institutions publish husbandry protocols, standard husbandry practices should emerge.*

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## ▲ **What is a Pharmacokinetic Study? All You Wanted to Know & More, with a Focus on Dog Models!**

Speaker: Kristen Messenger

*This seminar will present the basics of pharmacokinetic (PK) studies – what they are, why we do them, and most importantly, how to do them correctly. General topics will be covered, including types of PK studies (GLP and non-GLP, robust vs sparse study designs, crossover studies), different routes of drug administration and different goals for each route (oral versus parenteral administrations), sampling strategies, and what happens to those samples after they leave your hands or freezer. The presenter will be using a dog model as an example in the presentation, but other species may be discussed to illustrate different study types. During the lecture, the presenter will touch on when and why things go wrong, and how to handle these situations. We will also discuss the 3 R's and how we can minimize stress during PK studies with animals. After the presentation, the attendee should have a better understanding of the what, when, why's and how's of a PK study, as well as how to execute a basic PK study in animals.*

## ☆ **Training Evolution – One Institution's Journey**

Speakers: Ken Muller, Lena Perdue, Ernestine Torain, and Justin Cromwell

*Training needs in animal care programs are ever changing, and each institution must find their own way to adapt. The Division of Comparative Medicine at UNC-Chapel Hill is no different in that we have seen tremendous growth over the years in terms of animal and staff numbers, as well as changes in staffing requirements, creating a need for a greater evaluation of our training program. Through the implementation of new processes, added team members, as well as refining old practices, we have been able to face training-related challenges in our Division head-on. In this presentation, attendees will get a snapshot of how UNC's training program has evolved in order to respond to areas such as rapid growth, incomplete documentation, inconsistent training, procedural drift, and new staff development requirements.*

## ☆ **Developing a Goal Based Enrichment Program Using S.P.I.D.E.R**

Speaker: Sarah Van de Berg

*Enrichment programs based upon novel objects (environmental enrichment) rely upon what we as animal caretakers can add to the captive environment to simulate what animals would encounter in the wild. Alternatively, goal-based enrichment (behavioral enrichment) is about asking, "what does this animal do as a normal part of its day and how can we give it the opportunity to express those behaviors in a captive environment?" The difference may appear subtle on paper but in action, an enrichment program that is goal based rather than novel object based is created through a different process. S.P.I.D.E.R. is a framework that can aid in identifying specific behavioral goals and developing a program to meet them.*

## ✱ **Honoring the Past While Embracing the Future**

Speaker: Craig Fletcher

*Dr. Craig Fletcher is Associate Vice Chancellor of Research, the Director of the Division of Comparative Medicine (DCM), and Professor in the Department of Pathology and Laboratory Medicine at the University of North Carolina at Chapel Hill (UNC). The DCM plays a significant role in UNC being top-10 overall in the United States in terms of Research & Development dollars. Dr. Fletcher completed his B.S. degree in Laboratory Animal Science from North Carolina Agriculture & Technical State University (A&T), a Doctorate of Veterinary Medicine from the University of Florida and a Ph.D. from Johns Hopkins University. After completing post-doctoral fellowship positions at Johns Hopkins University, he joined the distinguished faculty in the Department of Molecular and Comparative Pathobiology before coming to UNC. Dr. Fletcher's career track is inspirational and he also frequently lectures on research infrastructure, laboratory animal science, and career management for scientists.*

*Dr. Alfreda Johnson Webb, the first black woman that earned a veterinary degree in 1949 mentored Dr. Fletcher while attending A&T. In shedding light on her history, he gives his audience the tools to recognize their life calling while embracing the future. In his talk, Dr. Fletcher will discuss sacrifice, career development, and embracing success for the future.*

**"Life can only be understood backwards; but it must be lived forwards." (Soren Kierkegaard)**

## ✱ **Vivarium Renovations: From the Architect, Contractor, and End User Perspective**

Speakers: Adam Bakowski, Lindsey Morgan, Shawn Sowers, and Rob Brisley

*Within large and small laboratory animal programs it eventually becomes necessary to plan for vivarium renovations in order to have continued success for the research program. Why? Equipment ages, programs grow (or in some cases shrink), research needs change, better technology becomes available and ways to do things are always evolving. Coordinated, cohesive relationships between all the stakeholders is essential, but not always the reality. This panel of main stakeholders will walk through the key processes and some challenges of a vivarium renovation.*

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## **▲ Gnotobiotics and Us: How Gnotobiotic Mice Can Help Us Discover the Relationship between Our Selves and Our Microbiota**

Speaker: Allison Rogala

Our “microbiota” is the name given to the millions of bacteria that live in and on our bodies. But, these microbiota do more than just sit there. In fact, they play a role in how we absorb nutrients, respond to allergens, and possibly even impact our mental well-being. As such, scientists want to know more about how these microbes interact with our bodies to allow them to develop better therapeutics. One of the best methods to discern this relationship is to use gnotobiotic mouse models. In this seminar, attendees will gain a better understanding of microbiome studies, become familiar with how gnotobiotic facilities operate, and discover some of the fascinating things we have learned from gnotobiotic studies.

## **▲ Yerkes National Primate Research Center: An Exciting History, a Hopeful Tomorrow**

Speaker: Mark Sharpless

This presentation will provide historical information about and scientific contributions of the Yerkes National Primate Research Center. The discussion will begin in the 1930s with the center's start as part of Yale University and its time in Orange Park, Florida. From there, we'll move into the 1950s with the sale of operations to Emory University and the mid 1960's relocation to two sites in Atlanta and Lawrenceville, Georgia. We'll also cover the NIH decision to create a network of then regional and now national primate research centers responsible for scientific contributions to human health. Also included in this presentation will be information regarding current and projected use of nonhuman primates in biomedical research as well as information about available resources, including the National Primate Research Centers collective website, NPRC.org.

## **★ Emotional Intelligence & Customer Service within the Laboratory Animal Field**

Speakers: Charlene Santos and Courtney Nesline

Emotional Intelligence (EI) has recently started gaining a lot more traction in the workplace. In the past, people were often promoted based solely on technical or analytical expertise, but research has now strongly correlated successful job performance directly to higher levels of EI. This concept has an unusually important impact on managerial practices, particularly within Laboratory Animal Science. Organizations should practice a culture of customer service excellence. We will discuss intricacies of EI and how they translate to this culture.

## **☆ Neonatal Pain: What We Thought Then, Know Now, and Where We Are Headed**

Speaker: Morika Williams

Pain management in the neonate has been a highly debated topic over the last 40 years. Our understanding of the subject has evolved over time as a result of investigative studies of the neurophysiology and neurobiology of the neonatal nervous system. It was once thought that neonates did not feel pain, therefore the use of anesthetics and/or analgesics were not worth the risk of potential side effects and/or overdose. Scientific advancements and knowledge have disabused us of this notion by providing strong evidence that neonates do experience pain – possibly more so than adults. With this knowledge, the scientific community has directed the efforts in developing translational animal models to enable investigation of mechanisms responsible for these changes, establishing therapeutic protocols and guidelines, evaluating pharmacological and non-pharmacological interventions, and minimizing neonatal injury. Ultimately, untreated neonatal pain can have significant long-term consequences into adulthood and therefore should be addressed. The challenge now is to integrate the advancements in assessment, diagnosis, and treatment with ongoing adaptation of clinical practices as dictated by research in the field.

## **▲ Husbandry of Wild-Caught Arctic Ground Squirrels (*Spermophilus parryii*)**

Speaker: Donna Lemay

Arctic ground squirrels (*Spermophilus parryii*) possess unique hibernation physiology that lends itself to biomedical research, but are not available from a vendor for study in the laboratory setting. We were presented with the unique challenge of developing a husbandry plan for this unconventional species in our research facility. We based our husbandry plan on contributions from the researchers, animal care staff, leadership, and collaborative information from another institution that housed these animals in the past. Modification of a rabbit rack was necessary for adequate housing without escape. A high-fat rodent diet was chosen as the main nutrition source. Enrichment provided included crinkle paper bedding, a hide tube, toys, and fresh produce and treats on a daily basis. Each animal was housed individually and pan liners were initially changed twice per week. Racks were sanitized every 2 weeks. Animals were transferred during rack change by covering both ends of the hide tube while wearing leather gauntlets. To simulate the natural decline in daylight hours wild Arctic ground squirrels experience as summer ends, the light:dark cycle was initially 12:12 hours, and then each day the lights were turned off 8 minutes earlier than the day before. Laboratory-housed Arctic ground squirrels spent a majority of their time in nests and hide tubes. Preferred enrichment items included carrots, sweet potatoes, and the lock clip and ID tag on their cage. The animals adapted readily to water bottles and a lixit watering system. During the 4 month study, none of the animals entered into hibernation. No staff members were bitten, scratched, or injured, and no animals escaped from their caging. While at our research facility, the Arctic ground squirrels thrived, gained weight, and appeared well-adjusted to life in the laboratory setting.

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## **Friday, June 7th**

### **Keynote Speaker: Ann Turner (National AALAS & AALAS Foundation)**

#### **AALAS: The Journey**

*AALAS is assigned one of the most complicated and consequential dual roles in society—that of educating and training the professionals who work in a challenging field and creating public awareness of the criticality of the work those professionals do. Using a multimedia format, Dr. Turner guides the audience on the journey of AALAS from its beginnings in the 1950s to the global reach of the association today. Leaders from the past as well as current members will be featured giving their stories which inspire greater pride in the laboratory animal science profession and commitment to excellence.*

#### **▲ The African Clawed Frog – Health and Husbandry**

Speaker: Kenneth Salleng

*The African Clawed Frog (*Xenopus laevis*) has been used in research since the 1950s. *Xenopus* lay large numbers of eggs year-round and originally served as a source for pregnancy testing in the past. However, various research uses have been developed including teratogenesis assays and developmental research. A brief discussion of the historic uses of *Xenopus* will be provided. However, the talk will mainly focus on diseases noted of the African Clawed Frog. Important husbandry aspects will be discussed as they pertain to the potential for health concerns.*

#### **★ Strategies for Managing a Multigenerational Workforce**

Speaker: Chandra Williams

*The workforce of today is truly multigenerational. At least 5 generations currently work side by side in today's industries, and with that comes challenges in communication, styles of working and expectations in compensation, benefits as well as advancement. Get tips on how to engage workers of all ages as well as learn some practical information for real world issues and solution.*

#### **▲ The Primate Cancer Initiative: A New Approach to Studying Spontaneous Cancers in Nonhuman Primates**

Speaker: J. Mark Cline

*Rhesus monkeys (*Macaca mulatta*), like human beings, develop cancer spontaneously. In particular, colon, breast, and cervical cancer are common. Studies of cancers in rhesus and other nonhuman primates (NHP) have high value for the development of targeted cancer therapies and imaging, because NHP are genetically and physiologically similar to human beings.*

*We are exploring new ways to study and treat NHPs with spontaneous cancers, in order to conduct mechanistic, genetic, imaging and immune studies of cancer progression and treatment. We use an “screen, adopt and treat” approach, which creates an opportunity for bridging the gap between rodent studies and human clinical trials, while providing a treatment benefit for our NHP cancer patients.*

*For example:*

- *Colon cancers are the most prevalent naturally-occurring cancer in rhesus monkeys, and they are readily detected by clinical examination and fecal occult blood tests.*
- *Breast Cancer occurs at roughly a 1 out of 7 lifetime incidence in macaques, and usually can be palpated. Most of these tumors are estrogen receptor positive, as in women, but we have described triple negative and HER2 over-expressing types as well.*
- *Cervical cancer in female NHP is caused by papillomavirus infection, as in women. Cancers can be detected using “Pap smear” screening.*

*This talk will address the success stories and lessons learned, as we have developed this strategy to study spontaneous cancers in NHP. We have developed methods for clinical and CT/PET imaging to stage tumors, and have contributed to the development of new immunotherapies for cancer treatment. Our most important lesson learned is that we must work cooperatively across departments and institutions to screen, diagnose and treat these uniquely valuable animals.*

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## ▲ **All WASHed up: From Humans to Mice to Molecules**

Speaker: Jamie Courtland

*Emerging evidence suggests abnormal trafficking of proteins within neurons may underlie cognitive and movement disorders. One complex thought to regulate protein trafficking in neurons is the WASH complex. WASH proteins act on endosomes (trafficking vesicles) to help sort and ship proteins to certain areas of the cell. Interestingly, mutations within WASH complex components (Strumpellin and SWIP) are associated with movement and cognitive disorders such as Parkinson's disease, hereditary spastic paraplegia, and intellectual disability. However, how these mutations manifest in neurological dysfunction is currently unknown. To address these questions, we have generated mice with a WASH complex mutation to decipher the contribution of WASH members to nerve cell function. Using proteomic, histological, and behavioral assays, we find that disturbance of the WASH complex produces both motor impairments and cognitive deficits in mice. Our work provides evidence that WASH complex-dependent protein trafficking is a driver of pathophysiology relevant to neurodegenerative disorders, providing a new avenue for future therapeutic endeavors.*

## ▲ **Why Won't My Mice Breed?**

Speaker: Gabriel McKeon

*It is often taken for granted that all mice breed well. When researchers do not get the numbers of mice they are expecting, they often ask for help. Research facilities personnel should have the basic know-how to support labs in their quest to improve mouse breeding performance. Various techniques used in breeding colonies are discussed touching on benefits and costs. These techniques can apply to large colonies, transgenic core facilities, or small groups of cages mice with poor breeding performance. Let's lower the lights, turn on some Barry White, and talk about mouse breeding.*

## ☆ **In the Wake of Hurricanes: The Rebuilding of the Caribbean Primate Research Center in the Aftermath of Irma and Maria (Project Monkey Island)**

Speaker: Nicole Compo and Steve Shipley

*Since 1938, the small island of Cayo Santiago, off the coast of Puerto Rico (PR), has been populated by a colony of free-ranging rhesus macaques. The Caribbean Primate Research Center (CPRC), as it is known today, has grown from those original 450 monkeys to its 11<sup>th</sup> generation, resulting in a population of nearly 5,000 monkeys at two sites: the original island and the Sabana Seca Field Station (SSFS). Though the island and its monkey inhabitants have survived a world war, fiscal crises and numerous changes in ownership and management over 8 decades, it was a natural disaster that would ultimately prove to be its greatest challenge. In September of 2017, PR was devastated by back-to-back hurricanes: Hurricane Irma, which skirted the island and left more than a million people (including the CPRC) without electricity and, less than two weeks later, a direct hit by the category 5 Hurricane Maria. Both the CPRC sites were severely affected and, like the rest of PR, were plunged into communication-less darkness. Each site had its own set of challenges, which had to be addressed despite that our employees were, in many cases, facing devastating losses to their own lives. Despite this, one unifying goal was evident in post-Maria reality: ensuring the care of our monkeys in the midst of the chaos. Basic daily tasks became significant tests to our ability to adapt to a world without running water, cell phones, and access to food and gasoline. Availability of produce was limited and the natural vegetation of Cayo Santiago was all but gone, eliminating a valuable source of natural enrichment and foraging opportunities to the free-ranging colony. Over the subsequent months, new challenges arose: lack of air conditioning and excessive heat took a physical and mental toll on our employees and our generator proved to be wholly unreliable. Despite it all, work with research groups continued and our team was awarded a GLAS grant. We saw no appreciable change in morbidity or mortality and all escapees from a damaged corral were recovered. In the time since Hurricane Maria, we have been buoyed by an outpouring of support from the laboratory animal, primatology and research communities, and as a result, the immense task of rebuilding both facilities has been well underway.*

## ✱ **Capacity, Density, and Revenue: New Rodent IVC Designs and Micro-Level Technology for Facility Upgrades**

Speaker: Richard Cluck

*Today's most common obstacles facing animal research organizations are 1) outdated facilities and equipment cannot keep up with demands for research capacity growth, 2) aging equipment has reached its design lifecycle and 3) new decisions on upgrade strategies are needed to increase space utilization, workflow, operational efficiency, and sustainability. This presentation highlights the latest advances in environmental technology for enhanced rodent housing and provides with different scenarios for increasing housing density in existing space and compensating for HVAC inadequacies. Demonstrates expected ROI and examines key considerations in selecting equipment and technology to promote cost-effective operational efficiency and overall sustainability.*

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## ▲ **The Automation of Animal Behavior**

Speaker: Eric McCoy

*Success in translating animal behavior into human treatments is very limited. Traditional measures to determine animal pain typically involve causing an acute or chronic pain condition followed by stimulation of the injured area resulting in a reactive response from the animal. Understanding when an animal is affected by spontaneous pain is difficult. The recent development of machine learning is becoming an effective way to address this issue. Previously the mouse grimace scale was manually scored in order to determine whether an animal was in pain. Recently, our lab developed an automated machine learning system utilizing the mouse grimace scale to determine when an animal is undergoing spontaneous pain. The automation process allows our lab to examine the pain of multiple animals during different pain conditions. These automated processes are not only being used in the pain field, but are also being utilized in many other scientific fields such as age matching people based on their gut biome to scanning tissue samples for signs of breast cancer. With the improvements in automation, these machine learning processes are going to aid in improving the speed of diagnosis of many disease states.*

## ▲ **Galago 101: An Introduction to the History, Husbandry, and Care of Galagos (Genus: Otolemur)**

Speaker: Kelsey Finnie

*Galagos, or bushbabies, are small, nocturnal prosimians belonging to the genus Otolemur that have been involved in biomedical research since the 1980's. Galagos are largely considered an evolutionary animal model for understanding the development of vision and somatosensation. In addition to highlighting the galago as an animal model, we will discuss their natural history, special husbandry considerations, unique anatomical and physiological features, as well as detection and management of common health conditions.*

## ☆ **Animal Research: An Ethical Approach**

Speaker: Emily Weston

*Many people recognize that animal research is an important and necessary part of our everyday lives. From the discovery of basic biological processes to the development of new treatments, advancements in animal research have benefited both humans and animals. However, some people may not realize just how highly regulated the field is, both to protect the animals and to make sure that study outcomes get us closer to research goals. There are many perspectives on the ethics and benefits of animal research, but there are also many misconceptions about how animal research is actually conducted. This presentation uses real life examples and experiences to give a very quick overview of why animal research is important, and how we focus on animal welfare in our every day jobs to ensure that everyone that comes into contact with a research animal is equipped with the skills and understanding to perform the very best work possible.*

# Koi Wet Lab

**Thursday, June 6<sup>th</sup> from 2:00pm – 4:00pm**

**Location: North Carolina State University College of  
Veterinary Medicine (NCSU-CVM)**

*Transportation will be provided from the District IV Meeting Site  
to the NCSU-CVM*



**Course Instructor: Lauren Buslinger**

**Cost to Register: \$30 per person\***

Attendees will learn techniques such as:

- **Anesthesia Induction**
- **Surgical Monitoring**
- **Anesthesia Recovery**
- **Venipuncture**
- **Biopsy**
- **Physical Exam**

*\*Space is limited to 40 registrants*

# “Anesthesia 101: Nuts ‘n’ Bolts of the Anesthesia Machine and Patient Monitoring Devices”

**Friday, June 7<sup>th</sup> from 1:00pm – 3:00pm**

**Location: NCSU McKimmon Center** (*District IV Meeting Site*)

This anesthesia workshop will discuss the many components of an anesthesia machine from the oxygen flow meter to soda lime canisters. The workshop will also cover checks and balances to ensure a properly working anesthesia machine and touch on rodent specific equipment. The latter part of the discussion will cover end tidal CO<sub>2</sub> monitoring and pulse oximetry.



**Course Instructors: Dr. Tyler Long & Dr. Donna Webb**

**Cost to Register: \$20 per person (includes lunch)\***

\*Space is limited to 15 registrants

# 2019 District IV Mini- Leadership Academy

**Friday, June 7<sup>th</sup> from 10:30am – 2:00pm**

**Location: NCSU McKimmon Center** (*District IV Meeting Site*)

**Program Instructors: Dr. Ann Turner, Mark Sharpless,  
Lisa Secret, Dr. William Singleton, and Courtney Nesline**



**Earn 3.0 CEUs and Certificate of Completion**

**Cost to Register: \$10 per person\***  
**(cost includes Howling Cow ice cream)**

**\*Space is limited to 30 registrants**

# **2019 District IV AALAS Mini-Leadership Academy\***

\*Must pre-register to attend; space is limited to 30 registrants

## ***Welcome and Introductions***

Icebreaker, Intro of RTB AALAS Officers (EC Members), Attendee Intros

## ***AALAS: Past, Present, and Future***

Speaker: Dr. Ann Turner, Executive Director AALAS and the AALAS Foundation  
*Americans are “joiners” and associations play important roles in American culture. Background about associations in general and AALAS specifically will be presented. Information about the organization, structure and leadership of AALAS will be discussed as well as programs and services offered through the various levels of the association. Volunteer roles and leadership responsibilities will be examined and discussed.*

## ***National AALAS Update/District 4 Items***

Speaker: Mark Sharpless, MBA, CMAR, JM, RVT

## ***Change Management***

Speaker: Lisa Secrest, CMAR, RLATG

*People want to be led through change not managed through it. How you can make change work, lead them through it while keeping your resolve and still have your enthusiasm and commitment.*

## ***Bridging Communication Gaps to Build Better Relationships***

Speaker: Dr. William Singleton, DVM, DACLAM

*This presentation builds on our basic understandings of effective communication to more deeply appreciate how to engage in conversations that have the potential for difficulty but necessary to job performance. We will identify factors that potentially lead to difficult conversations and learn how to avoid them when possible. Quite often it's the conversation that we don't have that leads to conversation that we must have. As we advance in our career many aspects of our technical work will become more routine, the ongoing areas of growth regardless of our title is our ability to productively engaged with those that we work with in ways that are meaningful and productive. This session will use real life scenarios and active learning strategies to provide attendees the opportunity to practice the techniques discussed.*

*This session will be ideal for those individuals who are charged with managing or interacting with people, either as direct reports or through the course of routine work.*

*At the session conclusion, attendees will have improved confidence in how they approach and manage difficult conversations. They will also have practiced strategies that can be incorporated into daily work life to develop greater proficiency in building meaningful and productive relationships.*

## ***AALAS Committee, AALAS Foundation, and Local Branch Overview/Wrap Up***

Speaker: Courtney Nesline, CMAR, RLATG

*Courtney will give an overview of National and Local AALAS with emphasis on how to get involved in leadership.*

*2019 AALAS District IV Meeting*

*Hosted by RTB AALAS*