



PHI ZETA RESEARCH DAY FORUM

NOVEMBER 2, 2022 – VETERINARY EDUCATION CENTER

8:00: Opening Statement

Dr. Frank F. Bartol,
Alumni Professor and Associate Dean for Research & Graduate Studies,
Auburn University College of Veterinary Medicine

8:15-12:00 MORNING Presentations - Overton Auditorium Moderator (Morning Sessions): Dr. Satyanarayana Pondugula

Veterinary Students

- 8:15 Hannah Bostick Application speed and energy level effects of diffuse diode laser irradiation on heat accumulation and stromal collagen coagulation in the equine cornea
- 8:30 Ava Mullin Pilot Project on Clinical Characterization of Low-Dose Acetylcholinesterase Inhibition
- 8:45 Kaitlyn Speights Quantitative analysis of stress following student palpation per rectum in the mare
- 9:00 Zach Wriedt Do Dogs with Chronic Bronchitis Cast NETs?

Graduate Students

- 9:15 Ferrin Antony β -catenin inhibition during conjunctival melanoma suppresses tumor progression
- 9:30 Morgan Brown The impact of single-dose trazodone administration on endogenous adrenocorticotrophic hormone (eACTH) and serum cortisol concentrations in healthy dogs
- 9:45 Serena Ceriotti Pulmonary disposition and pharmacokinetics of oral chloramphenicol in adult horses: a pilot study
- 10:00 Serena Ceriotti Beta2-adrenergic receptor expression changes with ageing in the equine respiratory tract

10:15 Break

- 10:30 Jordan Doss Albumin Quotient as an Indicator of Blood Brain Barrier Integrity in Cats



PROGRAM

- 10:45 Pankaj Gaonkar Dissemination of antibiotic resistance genes across the food chain of commercial antibiotic-free poultry farms
- 11:00 Aliaa Ismail Evaluation of the Role of Conditionally Replicative Adenovirus on Osteosarcoma Tumor Cell Growth *in Vitro*
- 11:15 Shari Kennedy Seroprevalence of Bovine Viral Diarrhea Virus in Feral Swine in 17 states
- 11:30 Steven Kitchens Use of MinHash Software "Mash" on *Salmonella* Muenster Whole-Genome Sequences
- 11:45 Sarah Kooy Amikacin concentration of the tibiotarsal versus tarsometatarsal joint in horses following intravenous regional limb perfusion

12:00–1:00 POSTER Presentations

1:30-3:30 AFTERNOON Presentations – Overton Auditorium Moderator (Afternoon Sessions): Dr. Stuart Price

Graduate Students (continued)

- 1:30 Sarah Lewis Influence of trazodone on intradermal histamine reactions in normal dogs
- 1:45 Annette Lundberg *In vitro* activity of fluorescent photobiomodulation therapy on meticillin-susceptible and -resistant *Staphylococcus pseudintermedius* and *S. aureus*
- 2:00 Rebecca Nance Differential Gene Expression Analysis of Canine Osteosarcoma from a Precision Medicine Perspective
- 2:15 Julia Salamat Sotorasib, a KRAS-G12C inhibitor, may induce chemoresistance by activating human pregnane xenobiotic receptor
- 2:30 Taylor Yenrick Developmental Toxicity of Perchloroethylene (PERC) in Zebrafish (*Danio rerio*)
- 2:45 Huifei Sophia Zheng How Does Thyroid Hormone Regulate the *de novo* Cholesterol Synthesis in the Adrenal Gland

Faculty/Staff

- 3:00 Aime Johnson Adenoviral Vecteded GnRH Contraceptive Vaccine for Cat Population Control



4:00 KEYNOTE LECTURE-Overton Auditorium

5:00 INDUCTION AND AWARDS ANNOUNCEMENT

INDUCTION of new Phi Zeta Members

Research Awards Presentations

PHI ZETA KEYNOTE SPEAKER

“Cachexia: Basic Science to Clinical Trials”



Daniel L. Marks, MD, PhD

Senior Associate Dean,
Research Professor,
Pediatric Endocrinology
Ray Hickey Chair for the Director of the
Papé Family Pediatric Research
Institute
Oregon Health & Science University

Daniel L. Marks M.D., Ph.D. received medical and graduate training at the University of Washington, then completed his pediatric residency at the University of Utah, and a fellowship in pediatric endocrinology at OHSU. He is currently Senior Associate Dean for Research at OHSU. He is also Professor in Pediatric Endocrinology, Ray Hickey Chair for Pediatric Research, Director of the Papé Family Pediatric Research Institute, and Associate Director of the OHSU MD PhD program. His current investigations are focused on the neuroendocrine control of body weight. He has a particular interest in the brain mechanisms of disease-associated cachexia, with emphasis on cachexia in cancer patients and children with chronic disease.



Posters

Undergraduate Students

- Kathryn Edmondson Comparing Aav9 Delivery Routes in the Treatment of Feline Gm2 Gangliosidosis
- Paige Hall Gene therapy for peripheral disease in feline GM2 gangliosidosis
- Su Kim Are anti-Müllerian hormone receptor type 2 (AMHR2)-expressing cells responsible for the adrenal gland development?
- Ben Maggard The Sexually Dimorphic Developmental Trajectory of the Mouse Adrenal Gland Transcriptome
- Caroline Parrish Designing the PCR for the STK11 and MSK1 genes in canine mammary cancer
- Luke Eller *In vitro* genetic modification of canine adenovirus type two
Isabella Shimko-Lofano

Veterinary Students

- Deanna Arnold The Effects of Chew Toys on Cognitive Welfare in Working Dogs
- Heather Gosnell Qualitative Analysis of Intern Applications and its Relationship to Performance
- Startus Hutcherson Accuracy of canine vertebrae pedicle pin placement using an augmented reality neuronavigational device
- Jessica Meier Effect of the industrial chemical Bisphenol A on endocrine function of the male gonad
- Quintan Rossow Acute Developmental Toxicity of the TCE Metabolite DCVC in Zebrafish (*Danio rerio*)

Graduate Students

- Inass Ahmed Natural apoptosis-inducing anticancer compounds augment docetaxel chemotherapeutic effect and selectively kill human prostate cancer cells
- Wenqi Cao Blood transcriptome responses to PFOA and GenX treatment in the marsupial biomedical model *Monodelphis domestica*
- Atonu Chakraborty Unraveling the Mystery of CAV2 Tropism: Characterization of Canine Adenovirus type 2 Virus Infection
- Y Savanie Fernando Confirming the DHCR24 expression in the inner cortex of adrenal gland using DHCR24 LacZ reporter mice



PROGRAM

Deepika Goyal	Primer Design Targeting a Frameshift Mutation in CEACAM24
Natasha Grabau	Effects of sleep on memory, anxiety, and depression-like states in mice
Vander LeKites	Increasing sleep by chemogenetic activation of specific neurons in the Nucleus Accumbens in mice
Xiaolei Ma	Effect of mineral oil as a lubricant to collect feces from cats for microbiome studies
Rachel Smith	Nationwide molecular survey for <i>Dirofilaria immitis</i> and <i>Dirofilaria repens</i> in companion dogs and cats, United States of America
Jyoti Yadav	Antibody Gene Therapy for Rabies Encephalitis
Ying Zhang	Origin of α -satellite repeat arrays from mitochondrial molecular fossils - sequential insertion, expansion, and evolution in the nuclear genome
Yue Zhang	Transcriptome landscape of the canine zonary placenta
Kevin Zhong	H3N2 influenza virus from companion dogs in Alabama, USA

Faculty/Postdoctoral Fellows/Staff

Susan Elrod	Assessment of Chemical and Microbial Stability of a Sedation Formulation for New World Camelids
Courtney Garrett	Assessing the effect of dosage and injection route on AAV gene therapy in the treatment of feline GM2 gangliosidosis