

FALL & WINTER 2017

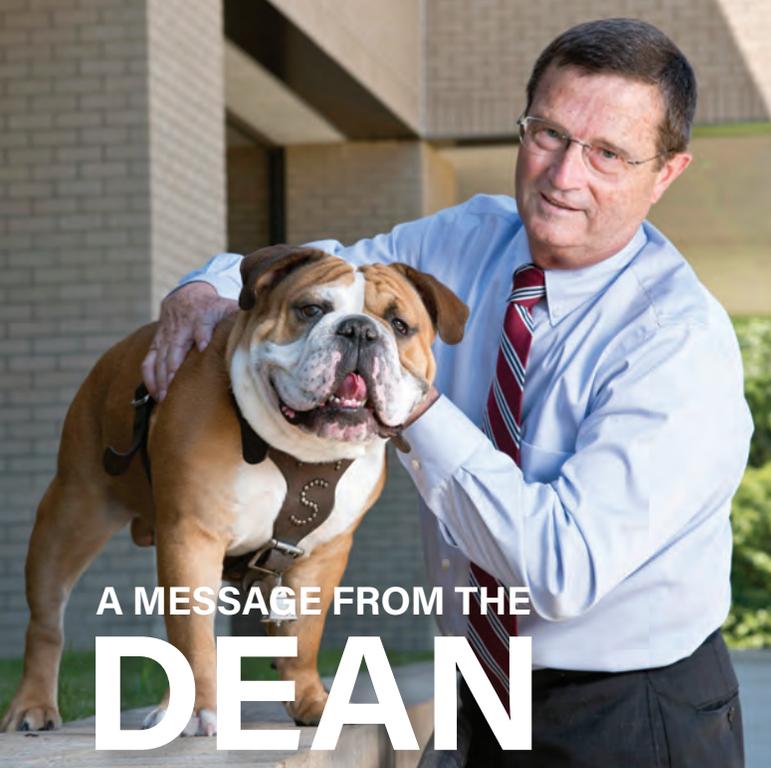
PEGASUS PRESS

MISSISSIPPI STATE UNIVERSITY • COLLEGE OF VETERINARY MEDICINE



CVM RESEARCHER STUDIES
EFFECTS OF CANNABIDIOL
ON MULTIPLE SCLEROSIS

EARNING RESPECT BY EXCEEDING EXPECTATIONS



A MESSAGE FROM THE DEAN

DR. KENT HOBLET

As 2017 comes to a close and we begin a new year, I am taking some time to reflect on the successes MSU-CVM has seen this past year. One success is our new class of DVM students. On June 22, 2017, we welcomed 95 students into the class of 2021. This marks our 41st entering class of DVM students. Two of the entering class have previous service in the U.S. armed forces, and fifteen are first-generation college students. Additionally, the average GPA that these students earned in their undergraduate careers is a healthy 3.62. These students come to us with exceptional educational accomplishments and give me great hope for the future of our profession. We are excited to have them here and look forward to their contributions as colleagues in the veterinary medical profession.

Several new faculty members joined our CVM family during the past year. In January 2017, Dr. Christine Calder (DVM 1998) joined our clinical sciences faculty in behavior medicine. She completed her specialty boards in October 2017. Dr. Claudio Natalini joined us as a board-certified anesthesiologist in June 2017. A third faculty member, Dr. Talisha Moore (DVM 2011), also joined our neurology/neurosurgery group this past year after completing a residency at Purdue University. Dr. Moore's areas of professional interest are neuro-oncology and seizure management.

House Officers are an important component of our clinical education programs, and we have newly established residencies approved by the American College of Veterinary Preventive Medicine and the American Board of Veterinary Practitioners. House Officers work toward their own specialty certification, while at the same time teaching veterinary students and working to improve patient care. Our goal is to continue expanding and seeing these positions grow in years to come.

Looking to the future, in 2018 the College will have a faculty member located on the Mississippi Gulf Coast at the Institute for Marine

Mammal Studies (IMMS) in Gulfport, Mississippi. IMMS is involved in the rescue and conservation research of dolphins, other marine mammals and endangered Kemp's Ridley sea turtles. The CVM's involvement is funded by a large grant from the federal RESTORE Act, which will also enable CVM-based faculty and students to be regularly involved in projects on the coast.

Opportunities also continue to expand for our students interested in study abroad and international service opportunities. June 2018 will mark our fifth year conducting a for-credit study abroad course in Uganda, led by Dr. Margaret Khaitisa. This program allows our students to work with veterinary students from the East African countries of Uganda, Tanzania, Kenya and Rwanda. Study abroad provides students with a hands-on understanding of the control of transboundary diseases, conservation medicine and One Health.

As a result of Mississippi State University's expertise in biocomputing and genomics, and the College's combined DVM-PhD program, the CVM has been selected to provide PhD education and research training for veterinarians who will work at the new USDA Plum Island replacement, the National Bio-and-Agro-Defense Facility being constructed in Manhattan, Kansas. The program, which is funded by a grant from the USDA, will allow veterinarians to study for a Phd and enable them to work as experts in the study of specific foreign animal diseases.

Much has changed in veterinary education since our inaugural class entered the CVM in 1977, and there are many significant new opportunities for veterinarians. Members of our faculty are working to prepare students for these opportunities, in addition to covering the "basics" that were present in the curriculum 40 years ago that still remain relevant today.

In reality, we only have a few years to provide the basic veterinary medical education needed by a graduate veterinarian to serve as the foundation for their career. To that end, Dr. Jack Smith, associate dean for academic affairs, is leading a Curriculum Visioning task force comprised of CVM faculty to develop ideas that enable us to continue providing a superior learning experience for our students. We invite our alumni and others to follow the progress reports, as well as provide input to this task force on our CVM Facebook page.

Dr. Kent Hoblet

Dean & Professor | CVM Office of the Dean
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COVER PHOTOS

FRONT: *Dr. Babara Kaplan prepares a solution using a unique mixing method by forcing liquid back and forth between syringes. The solution is used to study whether cannabinoids can slow down the destructive process of multiple sclerosis.*

BACK: *Students and their pets participate in the 2017 Hill's 5K race.*

CONTENTS

MARIJUANA ON A MISSION

p. 2



ALL COLLEGE AWARDS DAY

p. 5



VETASPIRE

p. 8



SMOKY MOUNTAIN WILDFIRES

p. 14



ANNUAL RESEARCH DAY

p. 4



RUBY'S RECOVERY

p. 6



LAB FINDS HEALING

p. 13



ALUMNI WEEKEND

p. 16





COMMITMENT TO NUTRITION

Your cat probably loves a lot of the same foods you do and is happy to eat a small piece of food when offered. Your dog may relish just about any food that you're willing to share. It's easy to please our pets with food, but is it good nutrition? Pet owners depend on their veterinarians to recommend the healthiest pet nutrition based on science and experience. Providing training for students in the College of Veterinary Medicine in the field of nutrition is important for the quality of life, health, longevity, and improved activity of the animals cared for. Nutritional intervention is considered one of the primary forms of prevention and treatment in many disorders of animals.



Hill's Pet Nutrition is committed to enriching the lives of people and pets. Hill's fosters its commitment to the community by supporting educational and outreach programs at MSU-CVM including Safe Haven, a program that provides short-term

shelter and medical care for the pets of women and children entering regional domestic violence shelters. Hill's also provides pet food for Homeward Bound Project of MS, a project that supports the transport and adoption of shelter animals. Each semester, Hill's offers nutritional lectures for students and faculty to engage new ideas and help put nutrition into practice. Hill's recognizes MSU-CVM's veterinary technicians' many contributions by supporting MSU's Vet Tech Day. Support from



Dr. Rebecca List speaks to students.

Hill's Pet Nutrition also extends to student wellness activities, 5-K races, tailgates, philanthropic events, and other educational enhancement events.

"Hill's Pet Nutrition demonstrates an unwavering commitment to pet nutrition and education. Their ongoing support to enrich and lengthen the lives of pets is inspiring, and we are thankful for their contributions, said Jimmy Kight, CVM director of development.

BY MELISSA MONTGOMERY



MARIJUANA ON A MISSION:

MSU COLLEGE OF VETERINARY MEDICINE RESEARCHER STUDIES EFFECTS OF CANNABIDIOL ON MULTIPLE SCLEROSIS

Multiple sclerosis is an often-debilitating disease that causes a person's immune system to attack their nervous system, leading to pain, cognitive impairment and trouble with basic motor functions. It can affect a person of any age or gender, and, according to the National Multiple Sclerosis Society, currently affects an estimated 2.3 million people worldwide. While multiple sclerosis does not yet have a cure, scientists are advancing the understanding and treatment of this disease each year.

One of these scientists is Dr. Barbara Kaplan, an assistant professor in the Department of Basic Sciences at MSU-CVM, whose research team studies the effects of marijuana compounds and environmental contaminants on autoimmune disease processes.

She began this line of research almost twenty years ago, in her time as a graduate student at Michigan State University. Although Kaplan acknowledges that marijuana can be controversial topic, as a scientist, she believes it is not one researchers or the public should shy away from discussing.

"Interaction between the nervous system and the immune system is still in its infancy as a science," Kaplan said. "Multiple sclerosis is a disease that encompasses both systems, and I think it is something that is very important to study. If we can take advantage of the marijuana compounds that have potentially beneficial biological

effects without any detrimental effects, they could be extremely helpful."

Kaplan has been running her own laboratory at MSU-CVM for four years, and is currently conducting experiments with a drug called Cannabidiol. Cannabidiol, one of the non-psychoactive compounds found in marijuana plants, has been found to suppress the function of the immune system, which aids in the treatment of autoimmune diseases.

Cannabidiol has recently been highly publicized as an effective treatment for children with epilepsy. Kaplan's team is researching whether Cannabidiol could have the same positive effects on people with multiple sclerosis.

"What we are finding with our multiple sclerosis research is there is probably some benefit to these compounds," Kaplan said. "We don't know yet, though, how the compound works. We still need to study its biological effects overall, but we are definitely making progress."

Kaplan's lab has recently garnered attention from the National Institutes of Health in several areas of research.

Dr. Jim Nichols, a DVM-PhD student (DVM 2016) who works under the direction of Kaplan, was selected to present his research abstract

on Cannabidiol at NIH's first Veterinary Sciences Technology Colloquium in August 2017. Out of 26 PhD students who submitted abstracts to the Colloquium, Nichols was chosen as one of six to present his research to scientists and administrators from around the country.

"The research we do is potentially very groundbreaking for multiple sclerosis, so each day I wake up and think 'I'm making a difference with what I do today.'" Nichols said. "I love the research that I do, so it felt really great to be chosen to present it to my colleagues, the administration of other universities' PhD programs, and NIH members."

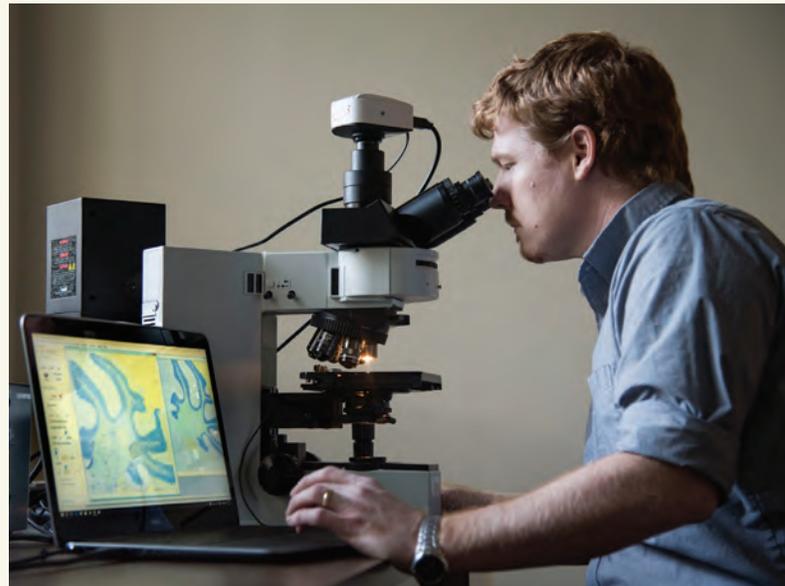
In September 2017, Kaplan received a \$300,000 R-15 grant from NIH's National Institutes of Environmental Health Science for her lab's other research project on the effects of environmental contaminants on the immune system. The grant focuses on bringing in and training undergraduate researchers, to provide them with experience in a professional scientific setting.

With this grant, Kaplan has added two undergraduate researchers to her lab team, which is otherwise comprised of a postdoctoral researcher, Nichols, and another DVM-PhD student. In addition to teaching undergraduate students research skills, Kaplan emphasizes the importance of sharing what they study.

"Even before the grant, I had some undergrad students come in on a volunteer basis, just so they could gain some experience, and so that I could gain some experience mentoring," Kaplan said. "I want them to learn as much as they can and give them experience communicating about their science."

Kaplan views communication as a key aspect of her job as a scientist. Because the public can sometimes misunderstand the value of the research she and other scientists are doing, she believes it is paramount to communicate her findings in a way non-scientists can understand. This is a skill she both demonstrates and aims to pass on to her researchers.

Amye McDonald, a sophomore microbiology major at Mississippi State, was able to begin work in Kaplan's lab last fall, as a result of the R-15 grant. She said she has enjoyed getting hands-on experience in a research lab and has benefitted from having a mentor who is skilled in sharing her research.

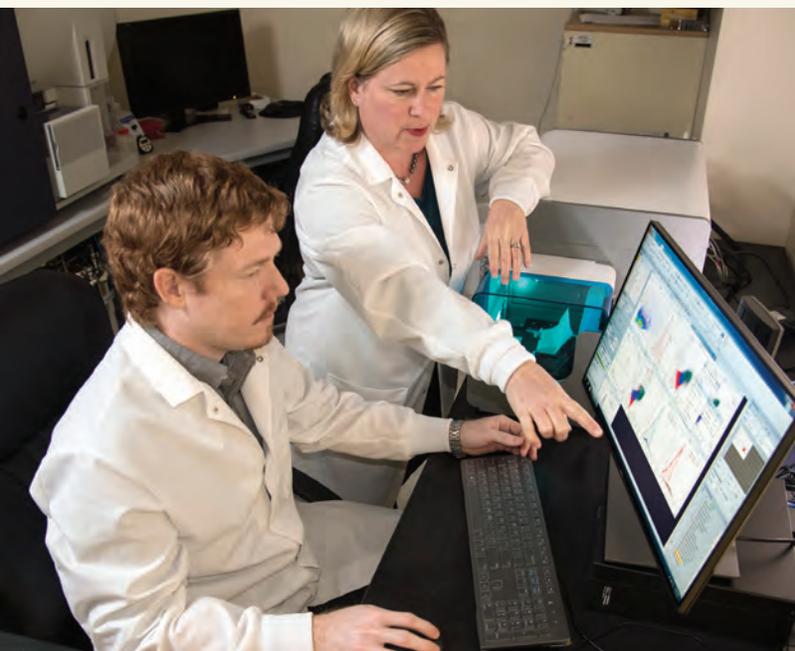


"Having this opportunity to work in a lab as an undergraduate student has been invaluable," McDonald said. "Dr. Kaplan does a great job of explaining things as she does them, while also giving us the chance to play an active role in the investigations that we perform."

Kaplan understands the value of providing undergraduate students with research opportunities, because she first discovered her love for research as an undergraduate majoring in environmental toxicology. Now that Kaplan runs her own lab, she has used her passion for immunology to continue to make progress in the area of multiple sclerosis research. She said she is proud to work in a field where improvements in medicine might one day improve human lives.

"I think I have a little corner that I've contributed to this field of research," Kaplan said. "I am proud of the work we do, and I think we do good, effective work. We are contributing to how these compounds are acting on the immune system, and I think that is important. We are seeing progress in a number of areas, and I'm going to do the best I can to continue this success."

BY SAMANTHA GIBSON



ANNUAL RESEARCH DAY 2017



GRADUATE STUDENT ORAL PRESENTATION

1st place - Navatha Alugubelly; 2nd place - Kris Hubbard;
3rd place - Pretti Muire; Dr. Mark Lawrence



GRADUATE STUDENT POSTER PRESENTATION

1st place - Royce Nichols (not pictured); 2nd place - Mary Frances Nakamya;
Dr. Mark Lawrence; 3rd place - Sandeep Kondakala

MSU-CVM's annual Research Day provides veterinary students, graduate students, and faculty the chance to showcase their accomplishments in research for the year as they present it to their professors and peers.

"Research Day is a very important part of our college's overall training program to prepare veterinary and graduate students for careers in research," said Dr. Mark Lawrence, associate dean for Research and Graduate Studies. "It shows them what can be accomplished in research by allowing them to interact with role models in the profession and giving them valuable experience in presenting their own research."

This year's keynote address was provided by Craig Franklin, DVM, PhD, and Diplomate of the American College of Laboratory Animal Medicine (DACLAM). Dr. Franklin is a professor in the Department of Veterinary Pathobiology at the University of Missouri College of Veterinary Medicine. He is director of the college's Veterinary Research Scholars Program, a PhD training program for veterinarians. Franklin is a laboratory animal veterinarian whose career illustrates how a laboratory animal veterinarian can be engaged and be a leader in training veterinarians for research and conduct an active research program.

Presentations demonstrated the breadth of MSU-CVM research focus areas and winners included:

GRADUATE STUDENT ORAL PRESENTATIONS

FIRST PLACE: Navatha Alugubelly

SECOND PLACE: Kristina Hubbard

THIRD PLACE: Pretti Muire

GRADUATE STUDENT POSTER PRESENTATIONS

FIRST PLACE: Royce Nichols

SECOND PLACE: Mary Frances Nakamya

THIRD PLACE: Sandeep Kondakala

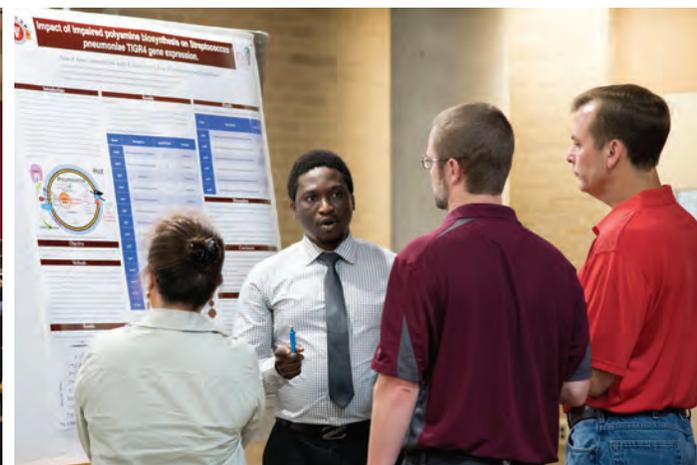
SUMMER RESEARCH EXPERIENCE ORAL PRESENTATIONS

(photo unavailable)

FIRST PLACE: Jessica Sherman

SECOND PLACE: James Yates

THIRD PLACE: Caitlyn Outlaw



ALL COLLEGE AWARDS DAY 2017



Attendees to the MSU-CVM 2017 All College Day enjoyed a picnic along with the annual All College Day Awards Ceremony.

ZOETIS AWARD FOR VETERINARY RESEARCH EXCELLENCE

Dr. Trey Howell



THE C. EDWARD COUVILLION, DVM, PHD, ENDOWED GRADUATE SCHOLARSHIP

Dr. James Nichols

STAFF AWARDS

Jenny Burns

Joan Stevens

Nancy Wilson



Dr. Philip Bushby, pictured with his family, poses with his Dean's Pegasus Award.

DEAN'S PEGASUS AWARD

Dr. Philip Bushby

VICE PRESIDENT'S PEGASUS AWARD

Drs. Bill and Betty Reeves



PRESIDENT'S PEGASUS AWARD

Dr. & Mrs. Mikell and
Mary Cheek Hall Davis

PEGASUS FACULTY AWARDS

Dr. Cate Mochal-King | Award for Service

Dr. Jeb Cade | Award for Teaching

Dr. Matt Griffin | Award for Research





RUBY THE HORSE BEATS THE ODDS WITH HELP FROM CVM EQUINE TEAM

Ruby has always been a horse who beats the odds. Despite being well known in world of Western Pleasure horse shows, the American Quarter Horse had humble beginnings. Her owner, Jessica Parris, first met Ruby in 2010, when the two-year-old horse was an unlikely show prospect.

"She was a bit of a runt," Parris said. "Kind of small and weak for her age, but I saw a huge potential in her and thought she was worth the risk. I liked the talent and athleticism she had."

Under trainer Mark Dunham, Ruby's talent and athleticism developed into something special. In 2014, Ruby, known by her show name "Cool Lookin' Machine," won the American Quarter Horse Association (AQHA) Congress Championship. Since then, she has become a two-time Congress Champion, a multiple World Champion in the American Quarter Horse Association and the National Snaffle Bit Association, and an earner of 300 plus AQHA performance points.

"She's got a lot of heart," Parris said. "Nobody ever thought she'd win the Congress, but she's a total Cinderella story."

In December of 2016, after a year of working on a new show event, Ruby faced a trauma that could have been impossible to overcome. She got out of her stall at Dunham's training barn in Jonesboro, Arkansas, and wedged herself between a wall and a manure spreader. She tried to jump in order to escape, and

ended up hung on the machine's trailer hitch, which punctured her abdomen. Her back leg was also wounded, showing visible bone. Ruby was found by a stall cleaner, who immediately called in Dunham.

"I thought she was dead," Dunham said. "But I came up and put a hand on her head, and she started flailing. I was so relieved."

It took Dunham and the stall cleaner an hour and a half to get Ruby off of the hitch. He immediately wrapped the abdominal injury with a quilt and several leg wraps, making an improvised belly band, and gave her some antibiotics and pain medicine. Then, he loaded her in a trailer and made his way to MSU-CVM.

"I knew I had to get her somewhere fast," Dunham said. "I got out of here and took her to Starkville as fast as I could without breaking the speed limit."

He had given Ruby some hay for the ride, and she had eaten it all by the time they made it to the College four hours later. Dr. Robin Fontenot, an assistant clinical professor who was on call for the Christmas holiday, quickly prepared to perform surgery.

"Her trainer did everything right," Fontenot said. "If he hadn't, she would have eviscerated. The wound was deep and as big as two or three of my hands. A wound like that is hard to heal, but we pieced it back together the best we could."

Parris, who lives in Missouri, spent the entire night agonizing over the surgery but trusted that Ruby was in good hands.

“It was so hard, but Dr. Fontenot updated me every step of the way,” Parrish said. “She was phenomenal.”

After the initial surgery, the team put sterile bandages on Ruby’s leg and belly, along with a special hernia belt to ensure the integrity of her abdomen—there was still a large risk the abdominal wound would eviscerate. They used a Wound Vac to gently clean the fluid from the wound and medical-grade maggots, which work as debriders, implanted by Dr. Cathleen Mochal.

“Debriding would have been much more aggressive if we’d done it surgically, but the maggots preserve a lot of extra tissue,” Fontenot said. “They can speed the healing process considerably. After a week or two, the wound stopped draining, and Ruby was out of this sick, toxic time.”

It took several weeks and multiple castings for the tissue on Ruby’s leg wound to grow back over her exposed bone. She stayed at the College for a total of nine weeks, and throughout it all, remained a trooper.

“Ruby was happy and agreeable the entire time,” Parris said. “I worried about that, thinking there had to be a time when she would get tired, but she never did. And I really attribute that to the good people at MSU. I don’t think we would have had such a good outcome anywhere else, because of the customized care and attention Ruby was able to get there.”

Ultimately, Ruby, earning her nickname as “the super mare,” recovered better than anyone could have expected.

“All of these things could have been life-threatening, but the stars kind of aligned for Ruby,” Fontenot said. “I think the take home message is that with a really committed team, a committed owner, and a cooperative patient, you can get a case like this to pull through.”

Ruby was able to go back to Dunham’s stable in February and, after rehabbing for several months, started doing light training in late July. Parris was able to ride her again for the first time in August.

“It was emotional,” Parris said. “Just for her to be alive was a big deal. The fact that she’s doing so well is a bit miraculous. She’s back to her playful self and has her drive to work. We’ve always said, ‘Ruby’s tough. She’s got grit,’ but this accident has really proven it.”

Dunham and Parris happily expect Ruby to return to the show pen in spring of 2018, once again beating the odds.

“2017 was supposed to be her year,” Dunham said. “But if 2018 can be her year, I’ll be elated.”

BY SAMANTHA GIBSON





VETASPIRE OPENS DOORS FOR ASPIRING YOUNG VETERINARIANS

Many children know from a young age they want to become veterinarians when they grow up. Some children are able to gain experience volunteering in a veterinary clinic, or they know a veterinarian who can give them advice about veterinary school. However, not all children have these resources. The MSU-CVM VetAspire program bridges the gap by providing disadvantaged high school and college students with an immersive day in the field of veterinary medicine.

Dr. Brittany Moore-Henderson, MSU-CVM's community outreach veterinarian, started the program in 2014 when she was a third-year student at the College

"I didn't have mentorship as far as trying to get to vet school," Moore-Henderson said. "When I was in seventh grade, I found out about veterinary medicine and I knew that was what I wanted to do, but I didn't have any guidance throughout the process. I wanted to be able to give students from underserved areas the ability to learn about veterinary medicine at a younger age than I did."

VetAspire runs monthly from September to April of each year, excluding December when students are off for winter break. Each month has its own coordinator, a second-year veterinary student who plans the events for the day and leads the students around the College.

Five students each month are accepted into the program, and while Moore-Henderson and the coordinators consider all students from high school juniors to college seniors, priority goes to students who are economically, socially or educationally disadvantaged.

Carol Baker, the VetAspire coordinator for the August 2017 session, joined the program because she understands the need for early exposure to veterinary medicine.

"I found veterinary medicine later than most of my classmates, and even though I got to vet school, I can tell the difference in experience between them and myself," Baker said. "This program is great because we have a wide variety of activities that shows the many different things veterinarians are a part of and what our school has to offer."

Baker started her VetAspire session by giving the participants a tour of the vet school. They then attended a session on veterinary pathology and diagnostics, a critical care lab and a farrier lab led by Dr. Ben Nabors, an instructor in the Department of Clinical Sciences.

"The farrier lab was my favorite part of the day," said Courtney Lynn, a sophomore at the Mississippi University for Women. "My horse is dealing with some feet issues right now, so it was cool that I got to ask all these questions. He (Nabors) had us help him

file the horse's hoof to put the shoe on, and I'd never done that before. It was really fun."

Lynn, who is from Columbus, attended VetAspire to help her decide between pursuing nursing school or veterinary school after completing her undergraduate studies.

Dortria Bolton, a junior from Beaumont who also participated in the August program, said she has wanted to be a large animal veterinarian since she was six years old.

"I had a goat, and she died because she was pregnant and couldn't have the babies," Bolton said. "I want to be able to be there for animals in that kind of situation."

In the afternoon, the participants attended a livestock lab where they were able to examine an eight-day-old baby calf. "It was

definitely the highlight of the day," Baker said. "She was as cute as can be, and they just loved her."

Baker closed the program with lectures from Dr. Allison Gardner, who spoke about the college's veterinary technician program, and Dr. Richard Meiring, the Assistant Dean for Admissions and Student Affairs, who discussed how to apply to MSU-CVM.

One August participant, Lori Roberts, said her day at VetAspire confirmed that she wants to attend MSU-CVM, which she has been working towards since she started high school. "I want to be in class right now," the high school senior from Richton said. "This is where I want to be—vet school at Mississippi State."

BY SAMANTHA GIBSON

This program is great because we have a wide variety of activities that shows . . . what our school has to offer.

— CAROL BAKER,
SECOND YEAR DVM STUDENT



VetAspire students participate in hands-on labs and learning experiences.



CVM WELCOMES ALUMNI FELLOW **DR. LIBBY TODD**

The College of Veterinary Medicine is proud to recognize Dr. Mary “Libby” Coleman Todd as our 2017 Distinguished Alumni Fellow. A native of Birmingham, Alabama, Todd graduated from Mississippi State University in 1995 with a bachelor’s degree in dairy science and is a 1999 doctor of veterinary medicine graduate from the MSU College of Veterinary Medicine.

Upon graduating, Todd was recognized with a Dean’s Award as the outstanding graduating student, and she was also honored with the Gentle Doctor award. Todd first practiced as a small animal veterinarian in the Birmingham area for eight years following graduation. She currently holds a staff position with Liberty Animal Hospital in Birmingham.

She has not let the two and a half hour commute from Birmingham to Starkville stop her from being a dedicated alum. She visits regularly, attends events, mentors students, and serves on interview committees. She’s truly a part of what makes our college great. She brings a unique perspective

to our students as she has specialized training in the study of grief and bereavement which allows her to help her clients through the difficult time surrounding the illness and death of a beloved pet.

Professionally, Todd has been quite active with both state and national veterinary associations. She is an active participant in both the Alabama Veterinary Medical Association and the American Veterinary Medical Association. She served as the president of the Alabama Veterinary Medical Association from 2010–2011 and considers one of her greatest professional achievements to be her selection as an inaugural participant in the Future Leaders Program of the American Veterinary Medical Association. This honor was bestowed on her by her peers and speaks highly of her leadership, dedication, and determination to the field of veterinary medicine.

In 2014, Veterinary Practice News named Todd as one of the “14 Vets to Watch in 2014.” This is an annual list

of distinguished practitioners and academics to watch in the new year. In 2015, Dr. Todd was recognized at the College of Veterinary Medicine’s All College Day awards program as that year’s recipient of the Dean’s Pegasus Award. This award is presented to a person or persons who have demonstrated outstanding achievements in teaching, research, and/or service on behalf of the University and Veterinary Medicine.

Dr. Libby Todd currently resides in Vestavia Heights, Alabama, with her husband, John, and their pets.

Alumni Fellows Weekend at MSU provides an opportunity for each college to honor distinguished alumni. The 2017 Alumni Fellows were invited to an opening reception hosted by the Alumni Association, breakfast and interactions with faculty and students at each college, lunch at the home of President Mark and First Lady Rhonda Keenum, a roundtable with the vice presidents, an Alumni Fellows Spotlight, and special recognition on the field at the football game that weekend.



MEET THE FACULTY



BARBARA L. F. KAPLAN, PhD

Assistant Professor
Department of Basic Sciences
Center for Environmental Health Sciences

JOHN THOMASON, DVM, MS, DACVIM

Assistant Professor
Small Animal Internal Medicine
Department of Clinical Sciences

WHAT BROUGHT YOU TO MSU-CVM?

I came to MSU-CVM in 2013. I had been a research assistant professor at Michigan State University before that and was given the opportunity to run my own research laboratory here.

WHAT IS YOUR CURRENT RESEARCH FOCUSED ON?

My research focuses on how chemicals affect the incidence and severity of autoimmune disease. I use a model of multiple sclerosis and have three related projects. The first concerns how low level environmental chemical exposure affects the disease, and the second is about understanding how marijuana compounds affect the disease. The third project uses induced T regulatory cells to assess whether they can control the disease as a possible cell-based therapy.

WHAT DO YOU THINK IS MOST IMPORTANT FOR VETERINARY SCHOOL STUDENTS TO LEARN?

I think the most important thing for vet students to learn is balance. It is critical to know and understand the science behind the treatments, but equally important to be able to effectively communicate the science behind the disease or treatment with owners, other veterinarians or scientists and students.

WHAT ARE YOUR HOBBIES AND INTERESTS OUTSIDE OF WORK?

I spend most of my time outside of work with my family, but I also enjoy some alone time, which I spend walking or reading.

WHAT BROUGHT YOU TO MSU-CVM?

After graduation from the Virginia-Maryland College of Veterinary Medicine, I came down to MSU-CVM in July of 2006 for a Small Animal Internal Medicine/Surgery Rotating Internship and never left.

WHAT IS YOUR TEACHING INTEREST?

I enjoy bringing everything together. Classes are often taught on a specific topic (all the “-ologies” are taught separately) but that doesn’t happen in the patient. All body systems are dependent on other body systems, and all the “-ologies” are dependent on other “-ologies.” I do believe courses need to be taught separately initially, but I enjoy bringing all of those courses together to better understand patient health.

WHAT IS YOUR FAVORITE THING ABOUT WORKING AT MSU-CVM?

Without a doubt, the people. Everyone is very friendly and courteous, which makes MSU-CVM a wonderful work environment. I love coming to work every day.

WHAT DO YOU THINK IS MOST IMPORTANT FOR VETERINARY SCHOOL STUDENTS TO LEARN?

Most everything in veterinary medicine lives in the grey zone. We all want cases to be black or white but that rarely happens. Most patients will not be textbook cases, and veterinarians need to be prepared for when things don’t always go perfectly as planned. Also, never stop learning.

WHAT ARE YOUR HOBBIES AND INTERESTS OUTSIDE OF WORK?

Currently, my 1 year old daughter occupies most of my time outside of work, and I love every minute of it. However, if I get a free moment to myself, I am a huge history buff and love learning about American and military history. Our country has a fascinating history with some very interesting people and amazing events, and I enjoy learning about it all.

EMPLOYEES OF THE MONTH

**AUGUST
2017**



GARDNER

Alex Gardner has been an animal technician in the MSU-CVM Department of Clinical Sciences since 2016. He is married to Dr. Allison Gardner, the director of the college's Veterinary Medical Technology program. "It is because of her encouragement and support that I accepted this position last year," Gardner said. Gardner said his favorite things about working as an animal technician are helping students and sharing with them his knowledge of the cattle business. In his spare time, he enjoys working on their Red Angus farm, Rockin' Double A, LLC. "We started out with just two Red Angus cows and a few commercial cows, and now through the use of artificial insemination, embryo transfer, and keeping replacement heifers, we have a herd of 25 head," Gardner said. He said he aims to produce cattle that do well in Mississippi's climate and terrain and can go on to be donor cows for other cattle farms.

**SEPTEMBER
2017**



GRAY

Verleen Gray has worked as a MSU-CVM communications operator since June of 2014. She enjoys helping clients, in any way she can, and "serving them with a smile." Gray said she is motivated to do her best work by the joy she sees in clients or students when they can walk away from the operator desk confident in the information they have been given. Gray has two daughters, Morgan and Alexandria. Morgan is a fashion and merchandising major at MSU, who loves giving her mother fashion tips, and Alexandria plays basketball at Starkville High School. In her free time, Gray serves at her church, attends MSU sporting events and supports Alexandria at her basketball games.

**OCTOBER
2017**



WESTERWILLER

Shelby Westerwiller has been an animal technician in the College's Equine Medicine and Surgery Service since May of 2015. "I chose my career because I have always loved working with horses," Westerwiller said. "There is nothing more motivating than seeing our clients out and about at competitions, and knowing that you made an impact on returning their horse to performance." She also enjoys working with students, and teaching them skills they will one day use in practice. Westerwiller's favorite part of her job is that each day is so different. "We never know what emergency could walk through the doors," she said. "Our team handles chaos well, and that is really awesome to be a part of." Westerwiller is from Patalaska, Ohio, where most of her family still resides. In her free time, she enjoys working with her own horses, attending rodeos and doing just about anything outside.

NEW FACULTY

MOORE



Dr. Talisha Moore joined the Clinical Sciences faculty in July as an Assistant Clinical Professor of Veterinary Neurology. She previously worked as a Clinical Instructor at the Purdue University College of Veterinary Medicine, where she received her residence training in neurology and neurosurgery. Moore received her DVM from MSU-CVM in 2011, after completing her B.S. in psychology at Millsaps College in 2003. Moore's areas of professional interest are neuro-oncology and seizure management.



LEO THE LAB FINDS HEALING AT MSU-CVM

Jackson, Mississippi-native Will Cobb wasn't necessarily interested in becoming a pet owner at the age of 21, but when he first met Leo, a seven-week-old puppy, Cobb felt a strong bond and he knew they were meant to be forever friends.

Cobb's youth minister's lab had had a litter of puppies, and Cobb's family chose to bring home a little white lab—Leo. Leo was originally supposed to be Cobb's sister's dog, but Cobb immediately fell in love with the friendly, energetic puppy. "It only took an hour or two before I claimed him for myself," Cobb said.

Now, Leo is seven and "the king of the household," said Camille Kee, Cobb's girlfriend. The couple has two other dogs, but Leo is the only who sleeps upstairs. Leo is usually full of energy and loves running and playing with toys. Cobb knew something was wrong with his beloved dog when Leo began breathing abnormally hard and fast.

"He was still a happy dog, and as sweet as can be, but you could tell everything he did was suddenly labored. He hadn't been eating well and didn't want to go outside as much," Cobb said.

Concerned, Cobb and Kee took Leo to the Animal Emergency and Referral Center (AERC) in Flowood, Mississippi, where Leo was diagnosed with respiratory distress and an infection of the chest cavity. The AERC is an affiliate of the Mississippi State University College of Veterinary Medicine.

"They told us that he had a lot of fluid in his chest cavity. It was a complete shock to us," Cobb said. Leo's chest was rapidly filling with more fluid, so AERC veterinarians referred Leo to MSU's Animal Health Center. Cobb and Kee immediately drove Leo the two and a half hours from Jackson to Starkville, as they would do multiple times during the week of Leo's treatment.

"It was a no brainer on bringing him to Starkville," Cobb said.

Once they arrived at MSU, Leo's respiratory distress was dire. He was immediately transferred to the ICU, where he received a

CT scan. After consulting with Leo's medical team, led by small animal surgery faculty member Dr. Elizabeth Swanson, Cobb and Kee decided to send Leo to surgery, in hopes of finding and removing the source of his infection.

The surgery was a success, and the source of Leo's infection was removed.

Madison Wilson, a third-year vet student who was also a part of Leo's medical team, was thrilled with Leo's recovery. "I met Leo when he was transferred over to the small animal surgery service, and I immediately fell in love with him—everyone did," Wilson said. "Leo is very handsome and incredibly sweet. He was wagging his tail the day after having major thoracic surgery. He was a champ!"

Wilson, who spent a lot of time with Leo during his week at the Animal Health Center, found it very rewarding to be a part of his recovery and smiles just talking about the dog.

"He is just a good 'ole Labrador with a big smile, great manners, and he never gave us any trouble during treatments," Wilson said. "Being able to see a very sick patient go to surgery, wake up happy, recover without complications, and then go home acting five years younger is one of the most rewarding things I have experienced in vet school thus far."

Cobb and Kee both agreed Leo was acting like a puppy again and were impressed with how popular he was with the Animal Health Center staff—before they left, Leo had to do a lap around the building to say goodbye to everyone who had helped him heal after his surgery.

"He is acting like he is back to normal and wants to go run around and play and have fun, but we are still waiting on his chest to fully heal, so he is stuck taking it easy for a few more weeks," Cobb said. "I really can't thank Madison and Dr. Swanson and the rest of the staff enough for taking care of him and letting him love on them."



CVM ALUMNI AIDS IN SMOKY MOUNTAIN WILDFIRE RELIEF EFFORTS

There had been smoke in Gatlinburg for months, since the wildfires started burning in North Carolina and Georgia. Eastern Tennessee had been in a drought for most of 2016, and the mountains were down ten inches of rain from the normal amount. On November 23, a wildfire started on the grounds of Great Smoky Mountains National Park, less than a mile from the house of Dr. Bob Dennis.

The weekend after Thanksgiving, the fire began to spread down the mountain into the towns of Gatlinburg and Pigeon Forge. Dennis, a 1981 MSU-CVM graduate who owns the only veterinary hospital in the area, evacuated his house and went to the clinic.

“The fire was within a mile of the clinic in two directions,” Dennis said. “We stayed there until midnight to make sure the wind and the rain were enough to keep it safe.”

Dennis met his wife, Patti, as an undergrad at Mississippi State, and the two decided to move to Gatlinburg several years after Dennis graduated from the CVM.

“We moved up there for the cool weather when we saw there was a practice for sale,” Dennis said. “We owned that clinic for ten years before I hurt my hand while deep sea fishing in the Gulf.”

The injury resulted in Dennis contracting a flesh-eating bacteria in his hand, and he lost the ability to perform surgery.

“I had to have three surgeries in a row, and I was rehabbed for a year,” Dennis said. “I sold the practice because I didn’t know if I’d ever be able to practice again.”

In 2003, Dennis consulted with a hand specialist who found that Dennis’ use of his hand had greatly improved. Dennis was able to go back to private practice.

“I bought the clinic in Pigeon Forge, and we’ve been here ever since,” Dennis said. “It was a wild scenario when the fire went through.”

The wildfire burned for nearly a week before a 90-mile-per-hour wind pushed it down the mountain towards Dennis’ house, which was less than a mile from the park boundary. The sky was orange with heat, and smoke was everywhere, blocking out the sun. Dennis said his entire house was covered with ash.

“The fire was just straight up and down the side of the mountain,” Dennis said. “You had a hard time even breathing.”

As Dennis and his wife evacuated with their pets in tow, transformers in the area started catching fire. They made it to the Animal Clinic in Pigeon Forge just as the police started closing evacuation routes, which were covered in fire.

“People from the major developments in Gatlinburg literally had to wade into the middle of the Pigeon River and walk,” Dennis said. “It was a pretty scary evening for us, much less some of those pets I can imagine who were just left in their homes. It was just a major problem with animals themselves, in addition to all the people trying to get out.”

Dennis said his veterinary clinic had only a few boarders, but as soon as he arrived, people started showing up with their pets.

“One couple watched their house burn a hundred feet away in the car with their cat, and it burned part of their car also,” Dennis said. “There were elderly people who left burning houses, bringing their pets with them.”

Although the Dennises and many others lost their homes, the veterinary clinic remained safe. In the early hours of Monday



morning, the wind shifted, blowing the fire in the opposite direction of the clinic, and it started to rain.

“After all was said and done, it was probably an hour away from us—if it hadn’t changed in that last hour, we probably would’ve gotten burned out,” Dennis said. “Other people were losing battles left and right.”

After the storm was over, Dennis and his team began working with the local shelter, which had been evacuated, to treat the many animals who had suffered in the fire. Dennis said veterinarians and companies from around the country immediately came in to offer their support.

“Veterinarians and technicians from all over the Southeast and the Midwest just poured in,” Dennis said. “We had people calling us from all over the country saying ‘What can we do?’ It

was amazing, the outpouring of help we got. It really just blew me away. People donated money, some donated time, and some donated products. It made you feel good, it really did.”

Three weeks after the fire, it snowed in Gatlinburg and Pigeon Forge, and the towns started their long roads to recovery. Dennis said now, a little over a year later, things are finally getting back to normal, thanks to the efforts of veterinarians and other volunteers who did everything they could for the area.

“It made you feel proud to be part of the veterinary community, the response we got from our neighbors and from veterinarians from all over the country,” Dennis said. “It makes you feel good to be a part of a profession that cares so much.”

BY SAMANTHA GIBSON

“The fire was just straight up and down the side of the mountain . . . You had a hard time even breathing.”



CALENDAR OF EVENTS

ALUMNI WEEKEND

January 23

Veterinary Camp application opens online.
Students ages 13 to 17 years old can submit applications online at cvm.msstate.edu/outreach/veterinary-camp.

February 2

Alumnus of the Year program

February 22-24

**Mississippi Veterinary Medical Association
Winter Conference**

Location: The Mill Conference Center,
600 Russell Street, Starkville, MS 39759

February 28

Veterinary Camp application closes online
Final day to submit applications online at
cvm.msstate.edu/outreach/veterinary-camp.

April 6 & 7

MSU-CVM Open House

May 2

Commencement

May 31-June 2

Veterinary Camp (Day Camp session)

June 6-10

Veterinary Camp (Overnight Camp session)

CVM alumni enjoy getting together for our alumni weekends! Please join us for our Fall Alumni Weekend 2018, coming up on October 12th & 13th.

For more information, visit www.cvm.msstate.edu.





CVM OFFICE OF DEVELOPMENT NEWS

INVESTING IN THE FUTURE OF VETERINARY MEDICINE

We are fortunate in the College of Veterinary Medicine that so many of our alumni and clients choose to invest in our students, faculty, programs, and animals. In my experience, people look for ways to make a gift to something they are passionate about. One donor summed up their ultimate reason for giving as their way to “leave a mark” on the world. There are a multitude of reasons why a person makes a gift to the College of Veterinary Medicine, and there may be just as many ways that a person can make a gift.

The most common gift is of cash or check. A donor may write a check for \$25, \$50, \$100 or more to offer general support for one of our programs that they believe in or may have impacted them. Donors also may decide to pledge a gift, which can be structured to have a larger, more specific impact. For example, a client may have been so pleased with the care a student provided while their pet was being cared for at MSU-CVM that they desire to endow a scholarship. This would entail making a gift

of \$5,000 each year over the next five years, which would total \$25,000 after that period of time and provides a \$1,000 scholarship each year in perpetuity.

We are beginning to see an increase in gifts of property, farmland, and timber. The university actively manages 30,000 acres of donated farm and timberland. The income from these properties supports specific endowments that are established by the donor. Often, this mode of gifting is classified as an appreciated asset. Donating appreciated assets can have significant tax advantages not just for the wealthy, but also for those of modest means. Recently, we had a donor to the college of veterinary medicine who decided that a gift of appreciated stock would be the best route for her to establish an endowment. Other examples of appreciated assets are bonds, mutual funds, and exchange-traded funds.

Estate gifts offer an opportunity for a donor to make the largest impact. We have over \$40 million in planned gifts to the College

on our books. In the future, these gifts will provide for scholarships, faculty support, program support, client assistance, and general advancement of the College. People may choose to include us in their will for an amount of money or a percentage of their estate. Others make these gifts through annuities, IRA and 401k accounts, remainder trusts, living trusts, lead trusts and a variety of other estate giving vehicles.

Private gifts are what allow our students and faculty to work and learn in a state-of-the-art facility, which offers exceptional care to the four-legged family members we serve. Please let us know if we can ever help you here at MSU. Thank you for investing in the future of veterinary medicine.

Warm Regards,

Jimmy Kight
Director of Development

Giving + Getting the most from your assets

When most people think about making a charitable gift, they think of giving cash. While we welcome gifts of any kind to help support Mississippi State University, there are many ways that you can give and benefit through making a gift of other assets to us.

- *You can avoid paying capital gains tax if you give appreciated assets.*
- *You will receive a charitable deduction for your gift which can lower your tax bill.*
- *You can make a gift today while preserving your cash for immediate or future needs.*
- *You and your family can receive benefits such as lifetime income.*
- *You may be able to make greater gifts than you ever thought possible.*

For more information on how you can give and get the most from your assets, contact the MSU Foundation Office of Planned Giving.

Wes Gordon, Director of Planned Giving
(662) 325-3707 | wgordon@foundation.msstate.edu



MISSISSIPPI STATE UNIVERSITY™
FOUNDATION

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GRANTS & CONTRACTS

AWARDED TO CVM FACULTY

Henry Wan (PI), Gregory Pharr (CoPI). USDA Agricultural Research Service. Environmental Management and Animal Health as They Related to Processing Yields and Food Safety of Broiler Meat and Table Eggs. \$150,000

Henry Wan (PI). USDA Animal and Plant Health Inspection Service, National Wildlife Research Center. Identify Co-Factors that are Required to Cause Disease Associated with VAh Outbreaks in Mississippi Catfish Ponds Using Metagenomics. \$75,000

Barbara Kaplan (PI). National Institutes of Health. TCDD-treated B Cells Modulate T effector and T regulatory Function in EAE. \$436,500

Caroline Betbeze (PI). Ceva Animal Health. Ceva Services Agreement. \$26,553

Mark Lawrence (PI). Ralco Nutrition, Incorporated. In Vivo Protection of AHPND-causing Strains of *Vibrio Parahaemolyticus* Using Essential Oils in Shrimp. \$12,404

Amelia Woolums (PI). Georgia Institute of Technology. Intravaginal Delivery of mRNA. \$61,171

James R. Butler (PI). Biohorizons Implant Systems, Inc. Reverse Torque Strength of Dental Implants on Dog Bone. \$4,583

INTERNAL GRANTS

Matt Griffin (PI), Graham Rosser (CoPI), David Wise (CoPI). CVM ORGS. Establishment of discriminatory in situ hybridization assay for *Henneguya ictaluri* through whole genome sequencing. \$9,290

Camilo Bulla (PI), Amelia Woolums (CoPI). CVM ORGS. Designer platelets reprogramming of macrophages; a paradigm shift in cell-based therapy. \$10,000

Trey Howell (PI), Matthew Ross (CoPI). CVM ORGS. Effects of obesity and Type 2 diabetes on organophosphate pesticide toxicity. \$9,966

Graham Rosser (PI), Matt Griffin (CoPI), Davis Wise (CoPI), Wes Baumgartner (CoPI). CVM ORGS. Comparative susceptibility of channel and blue x channel hybrid catfish to the trematode *Bolbophorus damnificus*. \$9,739

Elizabeth Swanson (PI). CVM ORGS. Assessment of the prevalence and composition of bacterial biofilms in canine wounds. \$10,000

Andrea Valera-Stokes (PI), John Stokes (CoPI). CVM ORGS. Assessing the degree of protective immunity to a rickettsial infection by a heterologous, non-pathogenic *Rickettsia* species. \$10,000

EXTERNAL GRANTS

Gregory Pharr (PI). USDA National Institute of Food and Agriculture. Transcriptomics Analysis of Early B-Cell Development in the Chicken Embryo. \$147,000

Lanny Pace (PI). Martha Pulido Landinez (CoPI). United States Food and Drug Administration. Using MVRDL to increase the FDA Vet-LRN sample analysis capacity during animal food/feed emergency events. \$36,375

Hossam Abdelhamed (PI). USDA Agricultural Research Services. Impact of florfenicol use on development of antimicrobial resistance in catfish intestinal microbiome. \$50,000

Mark Lawrence (PI). USDA Agricultural Research Services. Detection of protein biomarkers for high-risk *Listeria monocytogenes*. \$50,000

Lanny Pace (PI). USDA Animal & Plant Health Inspection Service. NAHLN Level 2: MS 2017. \$120,693

Chingling Wang (PI). United States Department of Energy, Jackson State University. Evaluation of Low Lying Plants in Erosion Control for Hg Contaminated Floodplain Soils. \$20,000

Henry Wan (PI). USDA Animal and Plant Health Inspection Service, National Wildlife Research Center. Mechanisms of Emergence of Avian Influenza Viruses in Poyang Lake. \$300,000

Larry Hanson (PI). USDA Animal and Plant Health Inspection Service, National Wildlife Research Center. Potential of Great Egrets (*Ardea albus*) to be Vectors for the Transmission *Edwardsiella piscicida* between Channel Catfish Culture Ponds. \$25,000

Margaret Khaita (PI), George Tabler (CoPI). USDA Foreign Agriculture Service. Strengthening Agricultural Production and Regional Trade Among Women Smallholder Farmers in Tanzania. \$40,000

Chinling Wang (PI). CVM ORGS MAFES. Understanding of Clinical and Subclinical Clostridium prefringens and its Association with Gut Health and Coccidiosis in Chickens. \$5,000

Lesya Pinchuk (PI), Attila Karsi (Co-PI), Hossam Abdelhamed (Co-PI). CVM ORGS MAFES. *Edwardsiella ictaluri* Uptake and Bacterial Killing in Catfish Anterior Kidney Macrophages Exposed to Live Attenuated Vaccines in vivo. \$5,000

Lora Petrie-Hanson (PI). CVM ORGS MAFES. Enhancing fish gut immunity and characterization of gut innate immune cells. \$5,000

Hossam Abdelhamed (PI), Attila Karsi (Co-PI). CVM ORGS MAFES. Development of live attenuated vaccines for prevention of columnaris disease in catfish. \$5,000

Larry Hanson (PI), Lora Petrie-Hanson (Co-PI). CVM ORGS MAFES. Factors influencing the colonization and persistence of Channel catfish with the virulent strain of *Aeromonas hydrophila*. \$5,000

Attila Karsi (PI), Hossam Abdelhamed (Co-PI). CVM ORGS MAFES. Improving the genetic stability safety and efficacy of the EI?evpB vaccine strain. \$5,000

CVM NOTES & NEWS

ALUMNI NEWS

Dr. Cherie Buisson (DVM 2000) became one of the world's first Certified Hospice and Palliative Care Veterinarians in October 2017. Her certification was granted by the International Association for Animal Hospice and Palliative Care (IAAHPC).

Dr. Michael Pesato (DVM 2015) was awarded The William B. Boucher Award for 2017 by the University of Pennsylvania's School of Veterinary Medicine. The Boucher Award honors a house officer for excellent teaching at New Bolton Center.



FACULTY & STAFF NEWS

Jana Morgan and husband, Chris, together with proud big brother, Caleb, welcomed daughter and sister Gemma Claire to the world on May 4, 2016.

Dr. Lanny Pace (DVM 1982) was the 2017 recipient of the E. P. Pope Award from the American Association of Veterinary Laboratory Diagnosticians (AAVLD).

Dr. Christine Calder (DVM 1998) earned Diplomate status in the American College of Veterinary Behaviorists.

NOTE TO ALUMNI:

Please send us your news! If you would like to share announcements such as new positions, new titles, marriages, births, deaths, or awards, please let us know. You can send your news to Katie Timmerman at katie.timmerman@msstate.edu.

Another place to keep up with your fellow graduates is on Facebook at facebook.com/alumnimsucvm.



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