

FALL & WINTER 2018

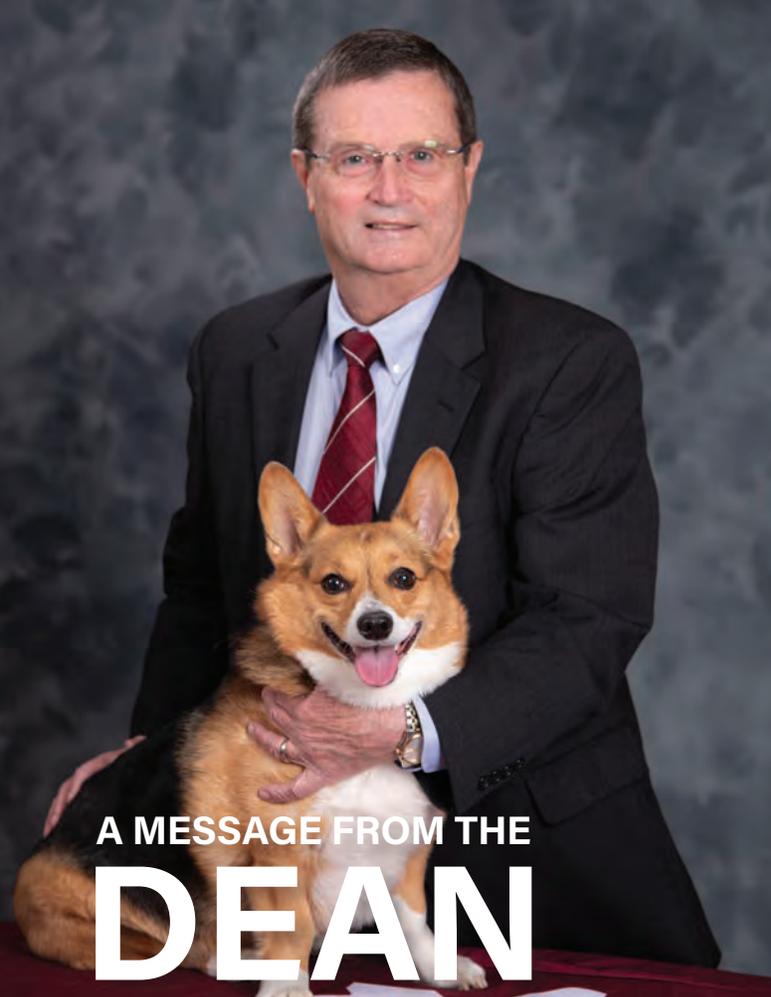
PEGASUS PRESS

MISSISSIPPI STATE UNIVERSITY • COLLEGE OF VETERINARY MEDICINE



MSU CVM-LED INNOVATION
LAB FOR FISH TO HELP
PREVENT WORLD HUNGER

EARNING RESPECT BY EXCEEDING EXPECTATIONS



A MESSAGE FROM THE DEAN

DR. KENT HOBLET

Writing this column is always a great reminder to me of just how many impressive things are being accomplished at the MSU CVM. Our College is bustling with a variety of events, projects and activities. After reviewing this issue of Pegasus Press, I think you will agree with me that CVM faculty, staff and students are actively fulfilling the University's mission of offering excellent programs of teaching, research and service.

For starters, last fall the CVM was awarded a \$15 million USAID grant establishing the Feed the Future Innovation Lab for Fish, thanks in large part to the work of former Dean of Research and Graduate Studies Dr. Mark Lawrence, who now serves as the lab's director. Over the last 20 years, Dr. Lawrence has played an instrumental role in establishing MSU and the CVM as one of the leading institutions in the world in aquatic animal health and aquaculture-related food security. He and the impressive team he has assembled for this international initiative aimed at reducing poverty and improving health in third-world countries will not only have a lasting impact on the lives of so many in Africa and Asia, but also bring even greater international recognition to MSU CVM.

In October, the College hosted the inaugural meeting of the newly created Dean's Council, which was established to help guide me and the CVM leadership team as we navigate the promises and challenges the College faces now and in the future. This impressive group of individuals represents a variety of professions from veterinary medicine and teaching to public service, sales and entrepreneurship, bringing several different

perspectives to the table. We appreciate their willingness to serve the College in this capacity and look forward to accomplishing great things together.

Applications for this summer's Vet Camp are pouring in, and plans are underway to host close to 300 students aged 10 to 17 who are interested in pursuing veterinary medicine or other animal-related career paths. The very first session of Vet Camp was held in 2011, and the program has grown significantly since then. We've expanded not only the age ranges accepted, but also the length and number of camps offered. This investment in the future is beginning to pay off, as we are now seeing former campers enrolled as students at the CVM.

Over the last couple of weeks, interviews were conducted for almost 350 perspective students out of an applicant pool of more than 1,400 with a goal of selecting 95 for the MSU CVM class of 2023. Our two years of classroom and labs plus two years of hands-on, in-clinic study, as well as our non-tracking curriculum allowing fourth-year students to pursue externships specific to their areas of interest here or abroad, attracts outstanding individuals destined to become successful in whatever field of veterinary medicine they choose to practice.

There are so many more positive things to share that are happening at the MSU CVM; unfortunately, my space here is limited. So, I encourage you to not only read about them in this magazine, but also, to come and see for yourself. Our success would not be possible without the support of so many of you, and you are always welcome here!

Dr. Kent Hoblet
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COVER PHOTOS

FRONT: *By improving production and access to fish, researchers hope to have a real impact on reducing hunger and improving health in developing countries, where women such as those pictured here play an important role in aquaculture.*

BACK: *Born premature and thought to be the world's smallest bull, Lil' Bill weighed only 7.9 pounds when he arrived at MSU CVM last fall.*

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NINETEEN NAMED TO SERVE ON DEAN'S COUNCIL



In the fall of 2018, MSU CVM Dean Kent Hoblet announced the initiation of 19 distinguished members to the CVM Dean's Council. The council was established to assist the dean in key areas of promotion, growth, and sustainability of the college by providing strategic advice regarding vision, direction, and long-term planning of the college, as well as assisting in acquiring resources from private, corporate, state, and federal levels and assisting with the student recruitment efforts of the college. In addition, the council will serve in an advisory capacity for the marketing and public relations efforts of the college and as an advocate of the college to university administration, the State of Mississippi, and as appropriate, on a national level.

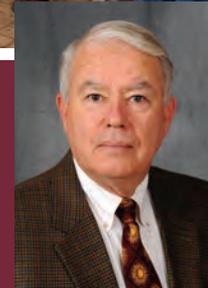
"Having guidance, support, and feedback from a group of individuals with a strong connection to the college, genuine interest in its mission, and sincere concern for its continued success is most certainly beneficial to all of us in leadership roles here at the CVM," Dr. Hoblet said. "We're thankful for their willingness to serve and the input they will provide."

Selected by the dean in consultation with his senior leadership team, plans are for council members to serve five-year terms (with the initial group serving staggered terms to avoid complete turnover), and the council chairman serving a two-year term. The council will meet in the fall and spring each year, and members can be reappointed indefinitely by mutual agreement between them and the dean.

The council's initial meeting was held October 11-12, 2018. Members were greeted with a reception the evening they arrived and received an informative overview of the CVM presented the following day by the dean, associate dean, development staff, communications team, faculty members, and students.

The council will meet again in March, when they will hear about the CVM's recently awarded \$15M USAID grant for the Feed the Future Fish Innovation Lab, tour the Veterinary Specialty Center, and receive an update on the interview and admissions process for the incoming DVM class.

For additional information about the Dean's Council, visit the CVM website at cvm.msstate.edu, where council member bios are available. Individual members will also be featured in upcoming issues of *Pegasus Press*.



Dr. P. Mikell Davis
CHAIRMAN

MEMBERS OF THE COUNCIL:

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- Dr. Kevin Smith
- Ms. Lynn Spruill
- Dr. Susie Taylor
- Dr. Wanda West



WITH MSU CVM AT THE TABLE, FISH TO HELP ALLEVIATE WORLD HUNGER

A full stomach is something most of us take for granted. However, in many parts of the world, hunger is a painful reality. Millions of people in third-world countries suffer or die of starvation each year. Little is more compelling than the image of a child dying of malnutrition, and scores of organizations, volunteers, and activists have made alleviating this atrocity priority one. Unfortunately, despite their best efforts—and although much has been accomplished—the devastating problem of world hunger remains. In reality, it's about much more than just food. It's a complex problem that requires a complex approach, and with the MSU CVM now at the table, there's a good chance that fish may help alleviate world hunger.

Last fall, MSU CVM professor and now former Associate Dean of Research and Graduate Studies Dr. Mark Lawrence was selected to lead an international initiative aimed at reducing poverty and improving the health of people in developing countries. Dr. Lawrence will oversee \$15 million in funding from the U.S. Agency for International Development (USAID) and serve as

director for the newly established Feed the Future Innovation Lab for Fish, led through the MSU Global Center for Aquatic Food Security, which is dedicated to addressing challenges facing aquaculture and finding solutions to meeting food security needs throughout the world.

The project will integrate expertise of numerous public and private organizations, research agencies, domestic and international universities, as well as associations within target countries. Not a specific laboratory site, the interdisciplinary program is actually a mechanism through which academic, private, and public entities work together to identify and implement solutions to reduce poverty, as well as improve the livelihood, nutrition, and food security in priority areas in countries in Africa and Asia and other developing regions.

According to Dr. Lawrence, fish are one of the most widely traded agricultural commodities in the world. It is rich in critical micronutrients and a global resource that can dramatically

Fish are a great source of micronutrients such as vitamin A and B12, as well as high-quality proteins often found deficient in women and children. By improving production and access to fish, we can have real impact on reducing childhood stunting and improving health.

— DR. MARK LAWRENCE

impact the health and economic growth and development of people in developing countries; however, research is needed to fully understand and capitalize on the potential of this valuable commodity.

“One of the major limiting factors to aquaculture in many countries is access to affordable, high-quality feed,” Dr. Lawrence explained. “Some of our projects will be directed at improving feed access in target countries using innovative protein sources and local ingredients.”

Lawrence said another challenge is that the role of women in aquaculture production has historically been overlooked or undervalued despite their significant contributions. “Over 60 percent of the world’s hungry are women, and they often don’t have access to credit or control of assets needed for aquaculture,” he said, noting that because of the prevalence of hunger in women in developing countries, malnutrition is a leading cause of death for children.

“Fish are a great source of micronutrients such as vitamin A and B12, as well as high-quality proteins often found deficient in women and children,” Lawrence said. “By improving production and access to fish, we can have a real impact on reducing childhood stunting and improving health.”

An expert in pathogenesis of bacterial diseases among aquatic animals, Dr. Lawrence joined the MSU CVM faculty in 1998 to further expand the University’s efforts in addressing bacterial diseases and vaccine development for catfish farmers in Mississippi and throughout the United States. Since then, MSU President Dr. Mark Keenum’s interest in and focus on increasing the University’s international impact has led to global food security becoming a research priority at MSU.

“Faculty in the MSU College of Veterinary Medicine and from several other MSU colleges have for many years been focused on ensuring a safe supply of seafood, and our selection to lead this important initiative comes after a great deal of hard work on the part of many people,” MSU CVM Dean Kent Hoblet said.

MSU CVM has a dozen specialized faculty in aquatic animal health, including a virologist, parasitologist, toxicologist, and molecular diagnostician, along with three pathologists, two immunologists, and three bacterial disease specialists dedicated to this specific area.

In addition to addressing problems in aquaculture production such as feed access and improving fish genetics, the MSU-led Fish Innovation Lab will also begin addressing fish diseases that have had devastating impacts on aquaculture worldwide. “Inclusion of projects to solve fish health problems in aquaculture is a new priority for the Feed the Future program, which is reflected by



the fact that, for the first time, a veterinarian will lead the Fish Innovation Lab,” Lawrence said.

Joining these veterinary experts in the FIL are faculty members and scientists from universities across the U.S. Current partners are the University of Rhode Island, Washington University in St. Louis, Texas State University, and Texas A&M University, along with faculty from additional colleges at MSU.

“The overall goal of the FIL is conducting research that leads to real world impact. USAID expects much more than just published papers,” Dr. Lawrence said. “True success will be measured by adoption of our findings and changes in practice, leading to an actual benefit to farmers, feed producers, and families.”

Dr. Lawrence said this means the team will be working with families, small-scale farmers and fishers, farmer associations, private industries, extension specialists, scientists at universities and research institutes, and donor organizations to disseminate research findings and ensure the project has real-world impacts.

Another problem the Fish Innovation Lab will be working to solve is improving resilience of aquaculture. “Natural disasters, weather events, disease outbreaks, conflicts, and economic crises often have disastrous effects on aquaculture, and many times aquaculture producers don’t recover,” Lawrence said. “This can cause widespread food insecurity in a region. We must find ways to help producers overcome and recover from such challenges.”

Accomplishing these things goes well beyond animals and involves much more than just veterinary medicine, according to Dr. Lawrence. “It requires the knowledge and expertise of those from a variety of different fields, including fish feed improvement, improved fish genetics, social science, nutrition, fish production, biosecurity, market access, food safety, and capacity development,” he said. “I’m proud of the team we’ve established for this important research, and I know that working together we can play a vital role in reducing hunger and improving lives in Africa and Asia.”

MSU will be releasing requests for applications for scientists to apply for research funding under the Feed the Future Innovation Lab for fish in each of the target countries within the next few months as well as engaging its own students in this endeavor in the future.

For additional information about the FIL, visit msstate.edu/newsroom/article/2018/09/msu-lead-new-usaid-feed-future-innovation-lab-fish/.

ALLEYS WELCOMED TO CVM AS ALUMNI FELLOWS AWARD JOINT RECIPIENTS



The College of Veterinary Medicine is proud to recognize Drs. Audra F. Alley and Mark L. Alley as our 2018 Distinguished Alumni Fellows.

Dr. Audra Alley graduated from MSU cum laude in her undergraduate and professional programs and credits MSU with instilling in her the ideals of hard work and determination as key components to a successful career. She holds a bachelor's degree in animal science she earned in 1993 and a doctor of veterinary medicine degree from 1996. Through the years, Audra has worked as an associate veterinarian in North Carolina, Tennessee, and West Virginia. She is presently lead veterinarian and owner of Shiloh Animal Hospital in Morrisville, North Carolina. Audra holds a certificate of veterinary acupuncture and a certificate of veterinary medical manipulation. In 2015, she achieved specialty certification from the American Board of Veterinary Practitioners (canine and feline practice). She is a native of Mobile, Alabama.

Fellow MSU classmate Dr. Mark Alley also received his doctor of veterinary medicine degree in 1996. He began his career as an associate veterinarian at Animal Wellness Inc. in West Virginia and then was a large animal associate veterinarian at Large Animal Services in Tennessee. He served nearly a decade as a clinical faculty member in the department of population health and pathobiology at North Carolina State University College of Veterinary Medicine. Presently, Mark is a senior veterinarian at Zoetis Technical Service. Over his career, Mark has received several honors and awards. He is a member of the North Carolina State University Animal Science Club Hall of Fame and the Zoetis President's Circle. Also, he holds professional memberships in the American Association of Bovine Practitioners, the Academy of Veterinary Consultants, and the National Cattlemen's Beef Association. He is a native of Kosciusko, Mississippi.

Alumni Fellows Weekend at MSU provides an opportunity for each college to honor distinguished alumni. The 2018 Alumni Fellows were invited to an opening reception and dinner hosted by the Alumni Association, breakfast and interactions with faculty and students at each of their respective colleges, 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 MSU vs Texas A&M football game that weekend.



PPM FACULTY MEMBERS EARN ACCOLADES



Two members of the Mississippi State University College of Veterinary Medicine (MSU CVM) faculty have recently been recognized for their contributions to the field of veterinary medicine.

MSU CVM PROFESSOR AMELIA WOOLUMS, who is a member of the Purdue University College of Veterinary Medicine (DVM) class of 1988, was awarded the Purdue CVM Distinguished Alumna Award at the most recent Purdue University Veterinary Conference. The award recognizes veterinarians and veterinary medical technologists who have set new standards of excellence in the veterinary medical profession and for society. It recognizes five areas of excellence. Dr. Woolums was nominated in two of them: excellence in teaching and excellence in research.

After earning her DVM, Dr. Woolums completed an internship in agricultural practices at Kansas State University and a residency in large animal medicine at the Western College of Veterinary Medicine in Saskatoon, Canada. Afterward, she returned to Purdue to serve as a clinical instructor of large animal medicine in the department of veterinary clinical sciences, before going on to earn her PhD at the University of California, Davis.

Following completion of her PhD, Dr. Woolums became an assistant professor of large animal medicine at the University of Georgia and was promoted to associate professor in 2005 and full professor in 2011. She was recruited to the MSU CVM Pathobiology and Population Medicine (PPM) Department in 2015, primarily to help develop a significant bovine research presence in the state.

According to Dr. Bill Epperson, head of the MSU CVM PPM Department, Dr. Woolums' outstanding work ethic and many accomplishments more than qualify her for this award. "Dr. Woolums is considered an excellent presenter, who effectively conveys complex material without being too technical. She is also greatly respected as a researcher in the area of bovine respiratory disease and virology," he said. "One of her peers effectively summed up her accomplishments in his letter of nomination: 'Dr. Woolums is a perfect combination of scientist and veterinary practitioner. She can communicate equally as well to the most brilliant molecular biologist as to the Mississippi farmer with a few hundred, high-risk calves. She is inquisitive and thoughtful, humble and always learning.'"

MSU CVM ASSOCIATE PROFESSOR ALICIA OLIVIER was awarded the American College of Veterinary Pathologists (ACVP) Mentor of the Year Award at the 2018 ACVP Annual Meeting in Washington D.C.

A 2005 MSU CVM graduate, Dr. Olivier was nominated for the award by the MSU CVM Student Chapter of the American College of Veterinary Pathologists (SCACVP), for which she serves as faculty advisor. Clare Brown, vice-president of the chapter, said the most striking of Dr. Olivier's traits is her intense enthusiasm for teaching. "I met her at last year's introductory SCACVP meeting, and it was immediately apparent how much she loves what she does," Brown wrote in her nomination letter to the ACVP in support of Olivier. "Even more apparent was how much joy she derives from sharing that love with others."

According to Dr. Epperson, who wrote a letter in support of the nomination, Dr. Olivier typically mentors four to six fourth-year students in advanced pathology rotations; advises one or two students for their clinical-pathologic conference; and serves as a faculty advisor for four to seven fourth-year students, as well as a faculty advisor for three or four first-year students, all while continuing to instruct courses and conduct research.

"I was thrilled that the DVM students wanted to nominate Dr. Olivier for this award because educating and mentoring students are her highest priorities. She is organized, energetic, and enthusiastic," Dr. Epperson said. "I have observed that students naturally gravitate to her. She represents ACVP very well and is immensely deserving of this award."

Embodying the spirit of the Mentor of the Year Award, Dr. Olivier stated the following when asked about her role mentoring residents and DVM students, "I think sometimes students agonize over 'bothering' us, but I always tell them to knock on the door. Not everyone has the same interests, but any interest you have, shout it out," she said. "If you're enthusiastic about it, let me know. Don't feel bad about asking for mentorship—It's what we do!"



LIL' BILL DEFIES THE ODDS WITH HELP FROM MSU CVM

Lil' Bill, a calf born weighing less than one-tenth of what most calves weigh, has a story unlike any other. Delivered on October 27, 2018, at what veterinarians guesstimate to be about six weeks premature, Lil' Bill has defied the odds by staying alive. He is thought to be the world's smallest bull and is under the care of MSU CVM bovine experts.

Lil' Bill came to the CVM after his owners discovered him in their pasture and attempted to care for him for a couple of days. As a family with much cattle experience, having raised Simmental cattle for many years, Lil' Bill's owners knew he was in need of advanced care and sought the CVM's help. They had brought cattle to the CVM before, but this situation was unlike any previous visit.

Lil' Bill was having trouble breathing, so Dr. Gretchen Grissett, CVM assistant clinical professor of pathobiology and production

medicine who is now Lil' Bill's attending veterinarian, and her veterinary team sprang into action, doing what was necessary to keep him alive!

"The calf's owners really wanted us to save him, and I think they really wanted to keep him, but he was in pretty tough shape with a lot of respiratory issues when he came to us," said Dr. Grissett, explaining that just like with premature babies, it is very common for premature calves to not have mature lungs.

When it was time for treatment options to be discussed, the owners decided to treat Lil' Bill initially and then take a wait-and-see approach before electing to pursue further care. Although he began to improve, it became obvious that he would have many additional health obstacles to overcome, so his owners came to the realization they couldn't properly care for him. Therefore, they allowed the CVM to adopt him.

Many of the issues we are facing with him are, in fact, very similar to those experienced with premature babies. It often takes them months to grow and become as strong as they should have been at birth...

— DR. GRETCHEN GRISSETT



demand more milk,” she said. “Now we’re encouraging him to become a ruminant, meaning he’s being offered grass and grain, in addition to milk. He loves the grass, and now weighs a whopping 19 pounds!”

...once awake, he would trot around looking for attention, often head-butting team members to demand more milk...

— DR. GRETCHEN GRISSETT

Although Lil’ Bill is no longer on therapeutic oxygen, no longer has a feeding tube, and is growing and eating grass, he’s still not out of the woods. Currently, his biggest issue is regurgitation. “We did testing to evaluate his esophageal function, and there were some abnormalities, meaning his food doesn’t move down properly. We have tried a variety of feeding regimens and techniques, even having him sleep with his head elevated,” Dr. Grissett said. “Over the holidays his sodium and blood pH dropped dangerously low, which we believe was due to the loss of electrolytes and

Normally, calves weigh around 50-80 pounds at birth, depending upon their breed. With that said, it’s obvious that Lil’ Bill, weighing just 7.9 pounds when he was first brought in, is far from the norm. Consequently, Dr. Grissett and her team ordered extensive DNA tests, believing the calf to have some form of dwarfism, in addition to being premature.

Because he was born too early, Dr. Grissett explained that the team is also carefully monitoring his joints. “The cartilage in Lil’ Bill’s joints is beginning to ossify more, but with his bones still not fully developed, we often splint his legs to provide adequate support. Allowing too much activity on his joints could lead to long-term orthopedic issues for this little guy,” she said. “Many of the issues we are facing with him are, in fact, very similar to those experienced with premature babies. It often takes them months to grow and become as strong as they should have been at birth, and they commonly face development delays and other such problems—if they’re fortunate enough to survive.”

There is some good news, though, according to Dr. Grissett. “There have definitely been some ups and downs, but Lil’ Bill is growing and getting stronger. At first, he slept a lot, which is normal for preemies, but once awake, he would trot around looking for attention, often head-butting team members to





bicarbonate through his saliva and regurgitation. My colleague, Dr. Amelia Woolums, who is an expert in bovine health, actually saved his life with extensive IV fluid therapy and monitoring. She found supplementing him with electrolytes in his milk is keeping his bloodwork normal."

Most of the time, calves more than three to four weeks premature, don't have a great chance of survival, so Lil' Bill has beat the odds by making it this far. "We are actively working to determine why he is regurgitating and how we can prevent it, including extrapolating conditions from other species that could be applicable and even consulting with other experts throughout the country," Dr. Grissett said. "Lil' Bill certainly has the will to survive. Our goal is to make sure he has the very best opportunity to do so!"

Lil' Bill may still have a long road ahead of him, but with the advanced care provided by the MSU CVM, the odds are in his favor! And, he certainly isn't lacking for fans to provide well wishes. In addition to all the TLC he's receiving from CVM students, the tiny calf's initial post on social media reached more than three million people, and he has also been featured on FOX News, The Sun, and several other media outlets nationally and internationally.

As of press time for this article, Lil' Bill was still with us. For updates on his progress, visit www.facebook.com/MSUCVMI/.

"Lil' Bill certainly has the will to survive. Our goal is to make sure he has the very best opportunity to do so!"

— DR. GRETCHEN GRISSETT

COBRE GRANT RENEWED

The NIH Center of Biomedical Research Excellence (COBRE) in Pathogen-Host Interactions was renewed for an additional five years of funding in the amount of approximately \$10.5 million last fall.

According to MSU CVM Interim Associate Dean of Research & Graduate Studies Dr. Stephen Pruett, COBRE at MSU focuses on cutting edge research on the relationship of pathogens and hosts, with the ultimate goal of developing new strategies to treat or control diseases such as listeriosis, a potentially lethal food-borne disease, malaria and related parasitic diseases, *Staphylococcus aureus* infections (wound infections blood poisoning, pneumonia and mastitis), and tick- and mosquito- borne diseases.

"In addition, COBRE includes activities designed to improve the competitiveness of our young investigators and help them establish

careers that will be a valued national resource for many years to come," he said.

The COBRE renewal process is based on competitive review by scientific experts, and it must also be approved by NIH Program staff and the director of the Office of Research Infrastructure and Capacity building, who are also scientists, according to Dr. Pruett.

"The hard work and significant accomplishments of our investigators in our first five years of funding and the excellent plans of our new investigators were largely responsible for the successful renewal of this funding," he said. "The work they are doing—and plan to do—will, without a doubt, have a significant impact on the future of these important areas of study and on the overall biomedical research enterprise at MSU."

ANNUAL RESEARCH DAY 2018

MSU CVM's Annual Research Day provides veterinary students, graduate students, and faculty the chance to showcase their accomplishments in research for the year through presentations to their professors and peers.

According to Dr. Mark Lawrence, who previously served as associated dean for research and graduate studies, the annual event is an important part of the college's efforts to prepare veterinary and graduate students for careers in research. "Research Day gives students an opportunity to interact with role models in the research profession and allows them valuable experience in presenting their own research," he said. "Our students are accomplishing some pretty amazing things; they deserve the recognition this event brings."

Students were recognized in three different categories at this year's event: Summer Research, Graduate Student Posters, and Graduate Student Oral presentations. Winners included:

SUMMER RESEARCH WINNERS

FIRST PLACE: Tobi Ku (*not pictured*)

SECOND PLACE: Leslie Reed

THIRD PLACE: Kara Majors

GRADUATE STUDENT POSTER WINNERS

FIRST PLACE: Jason Garcia

SECOND PLACE: Nikhil Nuthalapati (*not pictured*)

THIRD PLACE: James Nichols

GRADUATE STUDENT ORAL PRESENTATION WINNERS

FIRST PLACE: Brittany Szafran

SECOND PLACE: Royce Nichols

THIRD PLACE: Kaitlyn Waters

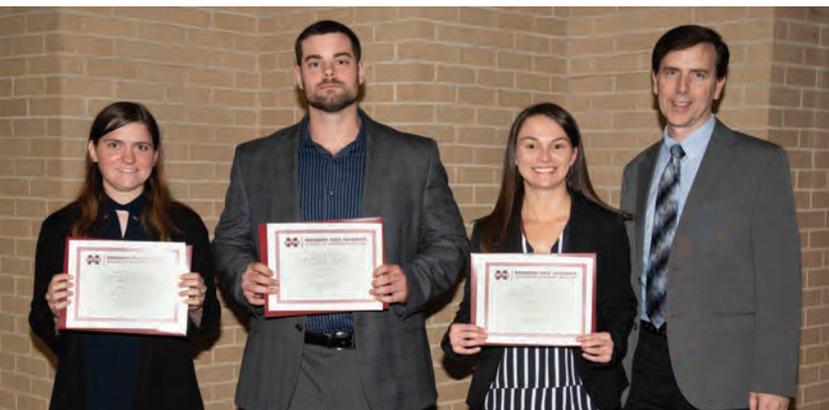
This event is sponsored annually by



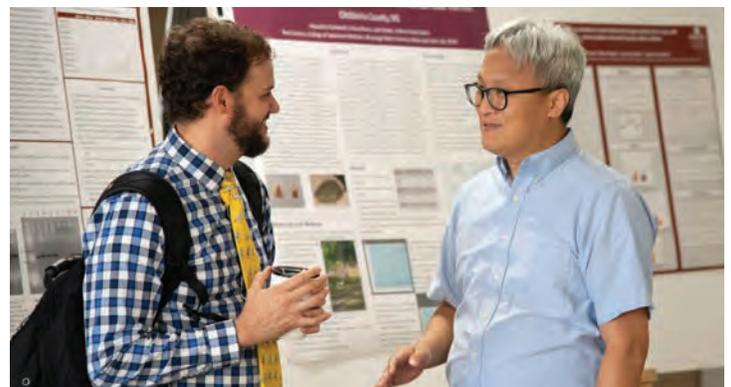
SUMMER RESEARCH STUDENT ORAL PRESENTATION
Leslie Reed (2nd place), Dr. Mark Lawrence, Kara Majors (3rd place)
not pictured: Tobi Ku (1st place)



GRADUATE STUDENT POSTER PRESENTATION
James Nichols (3rd place), Jason Garcia (1st place), Dr. Mark Lawrence
not pictured: Nikhil Nuthalapati (2nd place)



GRADUATE STUDENT ORAL PRESENTATION
Brittany Szafran (1st place), Royce Nichols (2nd place),
Kaitlyn Waters (3rd place), Dr. Mark Lawrence



MEET THE FACULTY



DR. CHRISTINE LOPP

Clinical Instructor, Department of Clinical Sciences

Dr. Christine Lopp returned to the MSU CVM in August 2018 as a clinical instructor, after having most recently completed a residency in large animal surgery at the University of Illinois College of Veterinary Medicine, while also earning her master of science in equine surgery. She earned her DVM from Ross University School of Veterinary Medicine in 2011 and previously completed internships in equine medicine, surgery, emergency and critical care at MSU.



DR. CHASE SEYER

Clinical Instructor, Department of Clinical Sciences

Dr. Chase Seyer joined the MSU CVM family as a clinical instructor in community veterinary services last July. He completed his undergraduate degree at Southeast Missouri State University and earned his DVM from St. George's University in Grenada in 2017. Dr. Seyer completed a year of clinical training at Auburn University College of Veterinary Medicine and worked as an associate veterinarian and relief veterinarian for a year in the Nashville area before coming to MSU.



DR. MATT WILLIAMS

Associate Clinical Professor, Department of Clinical Sciences

Dr. Matthew Williams is a native of Moulton, Alabama. He graduated from the University of Alabama at Birmingham with a BS in medical technology in 1996 and then earned his DVM from Tuskegee University in 2001. Dr. Williams completed a clinical pathology residency at Colorado State University from 2004-2007 and is certified by the American Society of Clinical Pathology (ASCP). He is a Diplomate of the American College of Veterinary Pathology with 12 years of experience as a clinical pathologist in the industry sector and academia.

EMPLOYEES OF THE MONTH



TIMMERMAN

JULY 2018

Katie Timmerman worked in the CVM Office of the Dean as the marketing and communications manager for three and one-half years before her husband's tenure-track faculty position moved their family from Mississippi to Oklahoma. Now Timmerman works as a manager in the Jackson College of Graduate Studies at the University of Central Oklahoma. Timmerman holds a Bachelor of Business Administration in marketing from the University of Michigan and a Master of Public Policy and Administration from Mississippi State University. Prior to joining the CVM team in 2014, she worked in the MSU Office of Admissions & Scholarships as a scholarship counselor. As for her time at the CVM, Timmerman says it was very special. "You become like family with the people you work with and encounter on a daily basis," she said. "I worked with an exceptional group of veterinarians, students, and staff and was able to grow professionally in my role as a communications professional. I had the privilege of overseeing some exciting marketing and communications initiatives to continue to elevate the image of the College." Timmerman and her husband, Nick, have a daughter, Eloise, and two fur babies, Oliver and Cinnamon, who are rescue pups.



RATCLIFF

SEPTEMBER 2018

Cindy Ratcliff has been working as an administrative assistant in the CVM Dean's office for six years. She says her favorite thing about her job is all the different people she gets to work with. "In my position, I have the privilege of working with our faculty, staff, and students, as well as many different individuals that work for or with the University," she said. "I really enjoy getting to know them and the chance to meet so many interesting visitors to the CVM." Ratcliff's duties and responsibilities include a variety of administrative functions, including scheduling meetings, preparing travel arrangements, planning events, working All College Day and the DAFVM summer celebration, serving on the planning committee for the DAFVM annual support staff conference, and most importantly, she says, keeping up with Dr. Hoblet and his schedule! "The dean's office is a really busy place; there's rarely a dull moment," she said. "It's a great place to work. I really enjoy my colleagues." Ratcliff and her husband, Ted, who have been married 40 years, have one grown son and two granddaughters. They are currently renovating an older home to move into and enjoy attending MSU sporting events, especially women's basketball games. They have a Boston terrier named Lady Bug.



THOMAS

NOVEMBER 2018

Jeff Thomas was a student worker and a night watchman at the CVM in the early 1990s, well before he joined the ITS department where he has worked for the last 18 years. He now serves as network manager and is responsible for about 30 servers, along with the computer systems at the AERC in Flowood, the VSC in west Starkville, and the MVRDL in Pearl. "Keeping up with all these different locations and their projects can be kind of hectic sometimes," he said. "But I really like what I do and the people that I work with. My favorite thing about this job is solving problems and helping people; in reality, that's what this job is all about." Thomas, who has a dual degree from MSU in insurance and risk management, says it just turned out that he likes working with computers a lot better than in the insurance field. He's also an avid scuba diver and has been on 20 cruises, which he says is a great way to get to dive in a variety of exotic locations.



NEW AERC REHAB CENTER IMPROVES QUALITY OF LIFE FOR BELOVED CANINE COMPANIONS

With the opening of Animal Emergency & Referral Center's Canine Rehabilitation Center, dogs like Sheeba, Nate, and Grace are getting a new lease on life. Under the direction of veterinarian and certified rehabilitation specialist Dr. Wendy Byrd, the Center opened last fall and was established to improve the quality of life of dogs through providing advanced musculoskeletal care.

According to Dr. Byrd, our companion animals have long suffered from many of the same conditions and injuries that we do, but until recent years, they received no formal rehabilitation afterwards.

"Rehab is a rapidly growing field that requires a patient-centered, team approach. Our goals are to control pain, improve strength, maintain or return to function, and reduce recovery times," she said. "I believe there is a new, client-driven demand for physical rehabilitation, and we are glad to be here to fill that need."

According to Dr. Byrd, as a certified canine rehabilitation specialist, she and her staff of two veterinary technologists work with each patient's primary care veterinarian to offer a comprehensive program combining traditional physical applications with current therapies to help minimize or reverse any functional impairment. "These therapies are professionally designed to meet the specific needs of each of our patients to improve mobility, manage pain, increase strength, and ultimately improve their quality of life," she said, noting that owners also receive a customized exercise regimen for their pets to be completed at home.

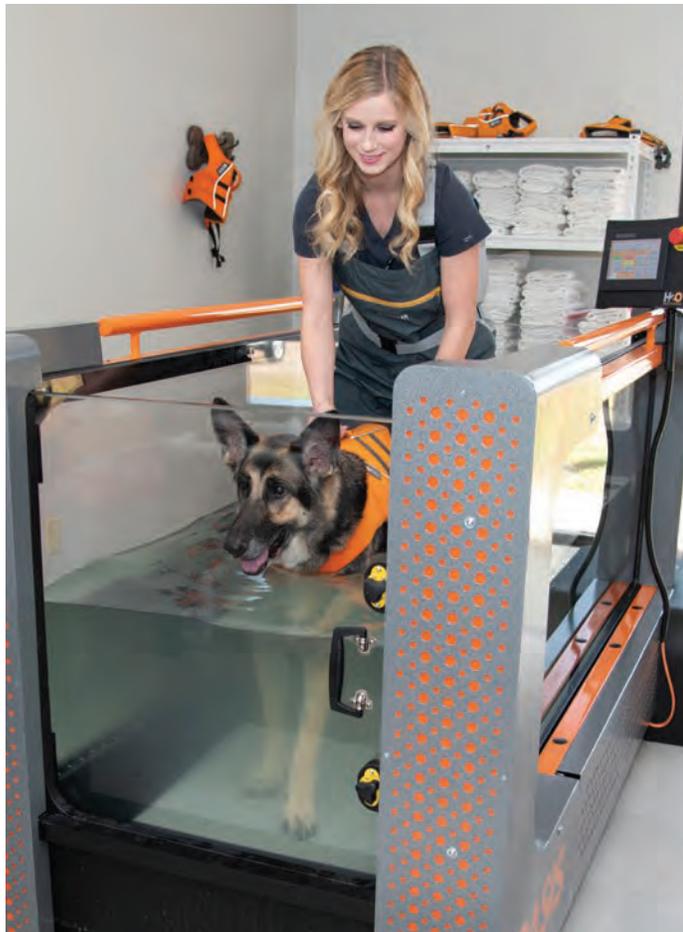
The Center offers a variety of services, including hydrotherapy, laser therapy, therapeutic exercise, electrical stimulation, and pulsed electromagnetic field (PEMF) therapy. Therapy regimens may include only one or several of these services based upon the patient's need, abilities, and progression.

These therapies are professionally designed to meet the specific needs of each of our patients to improve mobility, manage pain, increase strength, and ultimately improve their quality of life.

— DR. WENDY BYRD

As an example, Sheeba, an 11-year-old German shepherd with osteoarthritis, is a perfect candidate for hydrotherapy, according to Dr. Byrd. “The warm water and low-impact activity are ideal for Sheeba’s joints,” Dr. Byrd said, explaining that the underwater treadmill has many benefits and is effective, not only for osteoarthritis pain relief, but also in rehabilitation for post-operative orthopedic surgery and neurological injuries. “Exercise in water can improve strength, endurance, and joint function while minimizing pain in a safe, supportive environment.”

Sheeba’s owner, Debra Kelly, has no doubt that hydrotherapy has improved Sheeba’s quality of life. “When Sheeba was diagnosed by our family veterinarian as having hip dysplasia, the plan was just to put her on pain medication to give her some comfort,” Kelly said. “I went to the AERC Canine Rehab Center because I wanted to improve her life, and Dr. Wendy Byrd and her team have worked miracles. It amazes us that she is back chasing squirrels and taking long walks. Therapy has certainly helped her to live a happier life!”



Low-level laser therapy, a painless treatment that uses clinically tested wavelengths of light to stimulate natural biological processes leading to faster healing and pain relief, has proven beneficial for Nate, a 12-year-old Chihuahua, who suffers from intervertebral disc disease. “With the low-level laser, cells in the body absorb laser energy that stimulates the body to release pain-relieving compounds, increases circulation, and energizes the cells to participate in the healing process. Many times this therapy can take the place of pharmaceuticals and surgery to treat long-term, degenerative diseases,” Dr. Byrd explained.

MEET REHABILITATION THERAPIST WENDY BYRD, DVM, CCRT

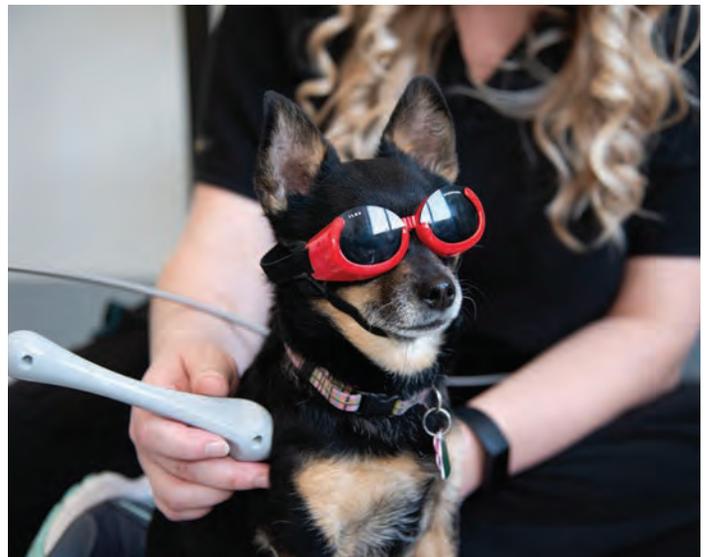


Dr. Byrd earned her DVM from MSU and has been a licensed veterinarian since 2008. She has career experience in general, surgical, and emergency practice settings. Her interest in physical wellness and pain management led her to pursue and complete her certification in canine rehabilitation. As a certified canine rehabilitation therapist (CCRT), Dr. Byrd

provides advanced musculoskeletal care for pets with sudden injuries or long-term degenerative conditions that affect joints, bones, muscles, tendons, ligaments, and nerves with a goal of reducing pain, promoting healing, and restoring or improving quality of life.

“There’s no doubt coming to therapy has dramatically improved Nate’s quality of life. He is able to walk and move better than before he started,” Nan Dear said. “He has had several setbacks from falls at home, but Dr. Byrd, Casey, and Alexis have lovingly worked with him each time to help him regain his mobility; without their help, he would not be walking. I’m so very thankful for all the TLC they provide!”

According to Dr. Byrd, therapeutic exercise is an essential and non-invasive form of treatment designed for use in a variety of musculoskeletal and neurological conditions. These activities strengthen specific muscles, increase flexibility, minimize pain, develop coordination and body awareness, as well as improve movement quality. Each patient at the Center receives an official home therapeutic exercise plan so owners can be involved in their pet’s healing and physical wellness. Pembroke Welsh Corgis Grace and Calvin have benefitted from therapeutic exercises for chronic neurologic disease. “There is no cure





...it's also good to know we're able to help those with chronic pain or conditions more fully enjoy the time they have with their owners.

– DR. WENDY BYRD

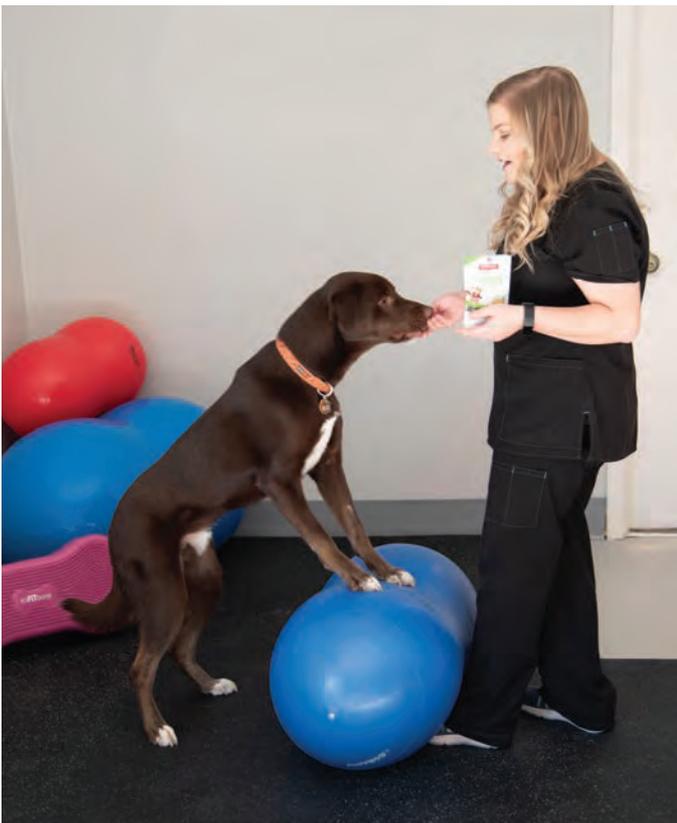
for their disease, but therapy is helping reduce their pain and improve their quality of life, which is so important to those of us with companion animals who are sick or aging and have trouble performing everyday activities,” Dr. Byrd said.

In addition to the therapies previously discussed, the Center also provides PEMF therapy, which uses pulsing magnetic fields to initiate normal biological cellular reactions that result in improved circulation and provide pain relief, as well as electrical stimulation, a modality that uses a controlled electrical current and is effective for the treatment of various orthopedic and neurologic diseases to assist with the management of acute or chronic pain, accelerate healing, and to delay muscle atrophy.

“There are a lot of different options we can try to help our companions enjoy a healthier, happier life,” Dr. Byrd said. “It’s

really just a matter of studying each of their cases, learning their individual personalities, and customizing a plan that suits them. It’s a great feeling to see a patient return to their pre-surgery or pre-injury activity level, but it’s also good to know we’re able to help those with chronic pain or conditions more fully enjoy the time they have with their owners.”

The Canine Rehabilitation Center is located at 2628 Courthouse Circle in Flowood. All consultation and treatment services are available by appointment only. A referral from your pet's regular veterinarian is required for rehabilitation. Patients are referred back to their primary practices for regular or routine veterinary care. For additional information, call the Center at (601) 497-2143 or aercK9rehab@gmail.com.

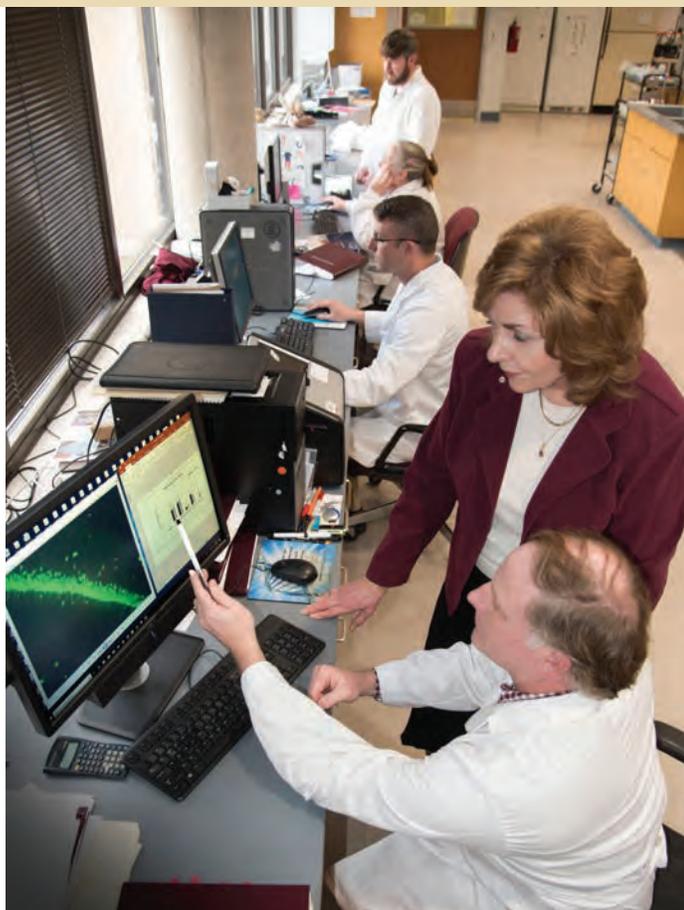


BENEFITS OF CANINE PHYSICAL REHABILITATION

- Reducing pain
- Promoting healing
- Restoring and/or maintaining movement
- Building muscle mass
- Increasing cardiovascular fitness
- Combating obesity
- Improving physical condition in sporting & working dogs
- Training for use of carts and braces and other such equipment

Canine rehabilitation adapts different manual techniques and modalities used by physical therapists in human patients and applies these same techniques to dogs. It can promote a more rapid recovery from neurological or orthopedic disorders and surgery, helping to avoid complications associated with prolonged rest, as well as help prevent obesity and improve physical and cardiovascular fitness.

CEHS TO FURTHER DEVELOP NOVEL ANTIDOTES



The MSU CVM Center for Environmental Health Sciences (CEHS) recently received two NIH Countermeasures Against Chemical Threats (CounterACT) awards for further development of the Center's novel antidotes to nerve agent and organophosphate insecticide poisoning with an anti-terrorist perspective.

CounterACT is focused on research aimed at the identification of better therapeutic medical countermeasures against chemical threats.

According to CVM CEHS Director and Toxicologist Dr. Janice Chambers, a major concern for survivors of a chemical attack is the potential for permanent brain damage caused by seizures. Since the brain cannot repair such damage easily, there is critical need for an antidote that can enter the brain and reverse any early biochemical effects before long-term effects set in.

For the past eight years, Chambers and her team have been developing antidotes that improve survival rates after nerve agent exposure.

"We're trying to develop antidotes that might replace or be used in conjunction with the currently approved antidote. The goal is to get an antidote into the brain and reduce some of the toxic action to prevent, or at least attenuate, the brain damage," said Dr. Chambers.

Current antidotes, which protect the heart, lungs, and other vital organs, used for such instances do not work because they are unable to cross the blood-brain barrier, which is a layer of cells between the blood and the brain. This prevents many chemicals, and some drugs, from moving from the blood into the brain.

"If approved, these antidotes would give more confidence to both warfighters and civilians that not only could their lives be saved, but also their brain function could be preserved," Dr. Chambers said.

Each of the two CEHS projects is predicated on continuing development of the patented and licensed antidotes that display the ability to penetrate the blood-brain barrier and can attenuate some of the brain damage.

The larger of the two projects is an NIH U01, a three-year award with a total cost of \$1,297,133, and titled "Identification of Novel Brain-Penetrating Phenoxyalkyl Pyridinium Oxime Countermeasures." Dr. Chambers will lead this project and will accumulate the data sets that are needed to down-select to a lead compound and an alternate compound to present for FDA approval.

Along with Dr. Chambers, co-investigators on the project are CVM Toxicology and Pharmacology Professor Dr. Matt Ross and Interim Basic Sciences Department Head Dr. Bob Wills.

The smaller project is an NIH R21, a two-year award with a total cost of \$394,764, and titled "Identification of Novel Brain-Penetrating Antidotes for Phorate Toxicity." R21 awards are high-risk, high-payoff projects. This one will search the antidote library for efficacious compounds that can remediate poisoning from phorate, a very toxic organophosphate insecticide that elicits unusual delays and violent signs of poisoning. Dr. Chambers will lead this project, with Dr. Matt Ross and MSU chemistry professor Dr. Steve Gwaltney as co-investigators.

"Either alone, or in combination with 2-PAM, the only FDA-approved reactivator drug in the U.S., these novel oximes could contribute to survival," said Dr. Chambers. "Uniquely, they could reduce or prevent the brain damage caused by the prolonged seizures induced by organophosphate insecticides."

According to Dr. Chambers, the idea is that those in combat could carry the antidote with them in the event they are likely to enter an area where nerve agents have been released. From a civilian standpoint, the antidote would be available in the strategic stockpile of countermeasures maintained in the event of terrorist attacks or accidents.

Right now, though, Chambers and team must move forward in determining if the antidote is even safe to administer in humans, how much of it can be tolerated if so, and how long it will be effective in the body.

"Our perspective is not just to save the life, but to save the brain, too, to allow the person who is exposed to this type of chemical the hope of a normal life after that event," she said.

Our perspective is not just to save the life, but to save the brain, too...

— DR. JANICE CHAMBERS



AN AFFILIATE OF
MISSISSIPPI STATE
UNIVERSITY



A FREESTYLE APPROACH TO DIABETES MANAGEMENT

When Katie Lawrence's Cavalier King Charles Spaniel, MacGregor, started losing weight in 2017, it was obvious something was wrong. That May, Dr. Scott Houston of Brandon Animal Hospital referred MacGregor and Katie to Dr. Emily Skovira-Austin at the Animal Emergency and Referral Center (AERC) in Flowood, who diagnosed MacGregor with exocrine pancreatic insufficiency (EPI), before sending him back to Dr. Houston for follow up and treatment.

Then in September 2018, MacGregor was once again referred to the AERC. This time, he was referred to Dr. John Thomason for evaluation of a heart murmur and progressive lethargy. When Dr. Thomason determined that diabetes mellitus was

the culprit, MacGregor was put on an insulin regimen and sent back to Dr. Houston. However, by October, Katie could tell that something still wasn't quite right.

"I called the AERC because he was losing a lot of weight and drinking a lot but not eating as much. His pancreatic insufficiency made regulating his insulin really tough; I was having to get readings 6 or 7 times a day, and his blood sugar was scary high," Katie said. "We tried several different insulins in different dosages before Dr. Austin recommended a human insulin. She also put him on a human monitor, and now, we can change his dosage really easily, and his quality of life is so much better!"

With this monitor, we can change his dosage really easily, and his quality of life is so much better!

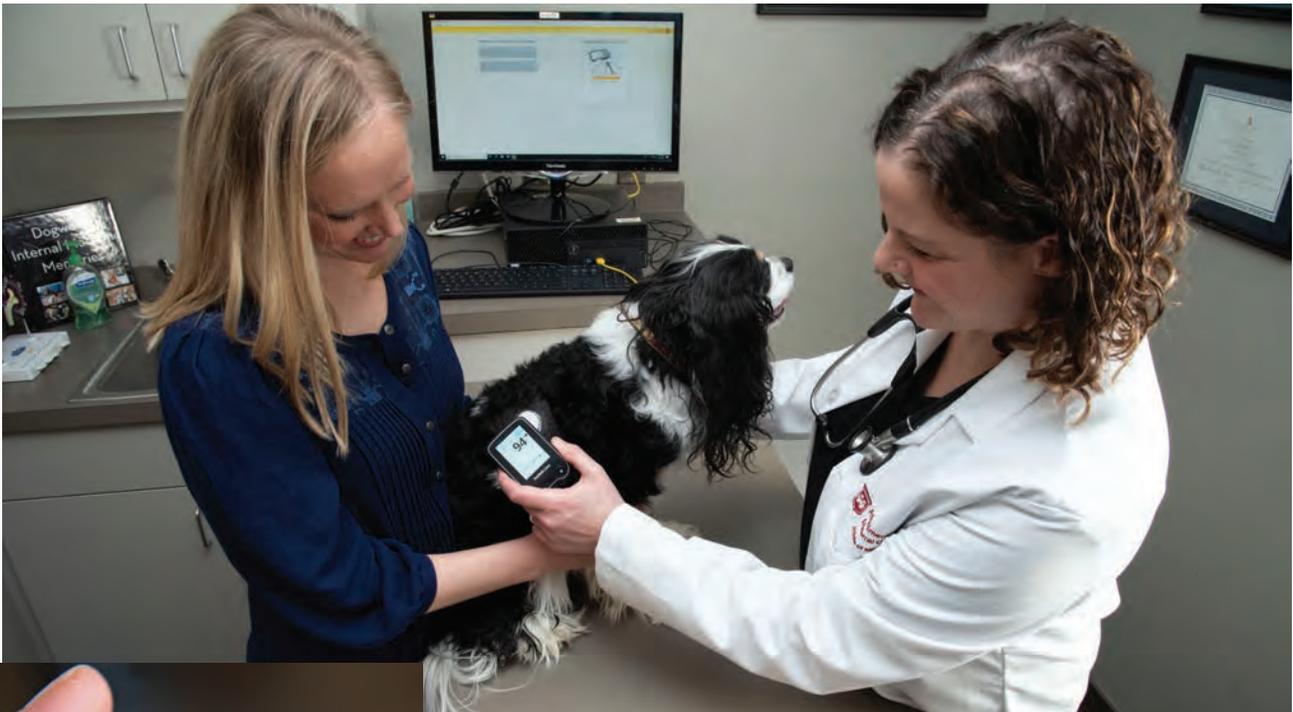
— KATIE LAWRENCE

“The Freestyle Libre monitor is designed to monitor human glucose levels continuously without drawing blood, and with the advice of Dr. Patty Lathan, one of my colleagues at the MSU CVM, Katie and I decided it could be ideal for MacGregor,” Dr. Austin said. “The sensor is placed on his back and will store up to eight hours of continuous glucose readings. The values from it are transferred to the corresponding hand-held reader at least every eight hours to compile a long-term record of them.”

At the end of the sensor’s 10-day lifespan, Katie and MacGregor visit the AERC to see Dr. Austin and evaluate the readings. At that point, MacGregor receives B12 injections to help manage his EPI, and Dr. Austin re-evaluates his dose of insulin. Once his insulin levels become more consistent, the frequency of their visits to the AERC will decrease.

“This thing basically paid for itself in just a few visits. You just have to scan it every eight hours. If I can’t make it home at lunch, now my sister or mom can run by the house, scan him and send the numbers to me. Before, he had to be stuck each time, and he wouldn’t let anyone else do it,” Katie said.

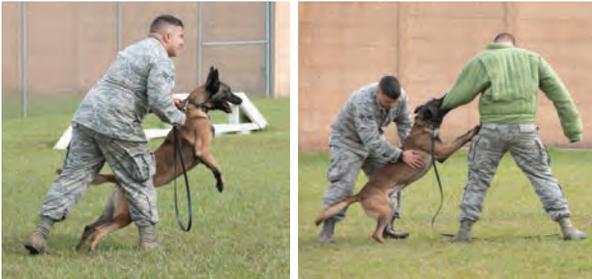
“I have four Cavaliers—three that I own and one foster. Eloise had knee surgery at the CVM Animal Health Center, and DJ, my foster from the Cavalier Rescue Group, has some neurological conditions that the CVM Veterinary Specialty Center has been helping us figure out. So we love the MSU College of Veterinary Medicine and are so thankful for them.”



The FreeStyle Libre is a continuous blood glucose monitoring system that records readings every 15 minutes. They were designed for humans, but we place several each week, and they have made life much better for our diabetic patients and their owners. They are not 100% accurate, but following the trends in glucose levels they provide is very helpful. We are about to start a study to evaluate their accuracy here soon!

— DR. PATTY LATHAN, DVM, ASSOCIATE PROFESSOR,
MSU CVM SMALL ANIMAL INTERNAL MEDICINE SERVICE

STUDENTS VISIT CAFB WORKING DOG UNIT



In the fall of each year, a group of first- and second-year veterinary students at MSU CVM are given the opportunity to see first-hand some of the training the amazing dogs that work with the US Military undergo. Reb Byrne, a former military pilot, and his wife Mary Anne, both of whom are animal lovers and good friends of the College, host a tour of the working dog kennels located at nearby Columbus Air Force Base. The visit is an opportunity for students to learn a little about what serving as a veterinarian with our military dogs and handlers might be like. Students get an overview of what is expected of the dogs, the care their handlers are trained to administer, and a thrilling demonstration of the dogs in action, along with a tour of the kennels and overall military base. The CVM is thankful to the Byrnes for their support and for making this opportunity available to our future veterinarians!

STUDENTS FROM UGANDA VISIT CVM

For the past five years, students from the MSU CVM have traveled to Uganda as part of a study abroad program. Last fall, the CVM hosted three students from Makerere University, College of Veterinary Medicine, Animal Resources & Biosecurity in Kampala, Uganda, as part of this One Health and Tropical Veterinary Medicine Student Exchange Program.

According to CVM Department of Pathobiology and Population Medicine Professor Dr. Margaret Khaitsa, who is actively involved with the program, the Ugandan students participated in an intensive, five-week course focusing on clinical applications of veterinary medicine. “While they were here, the students sat in on rotations with food animal medicine, necropsy, shelter medicine, and poultry management and partook in many cultural events as well as visited the MVRDL, PRDL, Aquaculture Lab, the University of Tennessee and various farms in the area,” she said. “This short visit provided a wonderful opportunity for them to get hands-on experience, or at least to see first-hand, things that can make a significant difference in food animal, epidemiology, and population health management.”

Dr. Khaitsa said the overall goal of the Tropical Veterinary Medicine Student Exchange Program is to expose Ugandan



students to key components of animal production and health management, disease surveillance, public health systems, and food safety and security, in an effort to help improve animal health—and consequently human health—in their native country, as well as to provide MSU CVM students the opportunity to experience these same components—or the lack thereof, in many instances— abroad in order to encourage international careers, related research, or foster future volunteer efforts.

People at MSU are amazing. They are highly hospitable and are really at the top of their game. Like if you meet someone and you really want some assistance, they will do their best. Which is something that really makes the system function here. I really commend this program and suggest it. It's very beneficial for students from Uganda and even other countries to come here. Its an experience I've never met anywhere else. The machines, facilities, and how diagnoses are done, the attention given to cases, it's really amazing.

— KAMOGA JOSEPH

MAKERERE UNIVERSITY, COLLEGE OF VETERINARY MEDICINE, ANIMAL RESOURCES & BIOSECURITY STUDENT
AND PARTICIPANT IN MSU CVM ONE HEALTH AND TROPICAL VETERINARY MEDICINE STUDENT EXCHANGE PROGRAM

MDEQ FUNDING BENEFITS MARINE MAMMALS AND CVM



The Institute for Marine Mammal Studies (IMMS) in Gulfport was founded in 1984 for the purposes of public education, conservation, and research of marine mammals in both the wild and under human care.

Funding from a grant awarded through the Mississippi Department of Environmental Quality (MDEQ) by the National Fish and Wildlife Federation (NFWF) Gulf Environmental Benefit Fund (GEBF) has provided opportunities to expand collaborative efforts between the MSU College of Veterinary Medicine and IMMS. The GEBF was

established in 2013 as a result of plea agreements from the 2010 Deepwater Horizon explosion and oil spill. GEBF grants are awarded to state and local organizations with boots on the ground, boats in the water and expertise on-hand to implement projects with immediate and long-term benefits to Gulf Coast natural resources.

The GEBF has provided important funding that, among other things, allows organizations such as IMMS and the CVM to collaborate in an effort to increase capacity to treat and care for sick and injured marine mammals and sea turtles.

In January 2018, this collaboration was further bolstered when the CVM hired Dr. Debra Moore as an assistant clinical professor stationed in Gulfport to oversee the veterinary care provided to the animals at IMMS, as well as to mentor CVM students completing externships there. Less than one year later, Dr. Moore and IMMS have cared for approximately 175 sea turtles, dolphins, and other marine animals. In addition, scores of the College's veterinary students have had the opportunity to visit IMMS, shadow Dr. Moore and actively participate in caring for these amazing animals.

The MSU CVM is thankful for the funding provided by the MDEQ that has made this mutually-beneficial partnership possible!

DOG BOWL TROPHY

MSU CVM Dean Kent Hoblet, Associate Dean Ron McLaughlin, Animal Health Center Veterinary Technician Lisa Pritchard (a.k.a. Bully's handler), and Jak (a.k.a. Bully) accept the Dog Bowl Trophy in Davis Wade Stadium at Scott Field in recognition of MSU defeating Texas A&M during the 2018 football season. The trophy will remain on display in the AHC until the two teams once again meet on the gridiron.

The Dog Bowl was created by former MSU and Texas A&M coach Jackie Sherrill. He had the idea of a traveling trophy that would reside in the CVM of the winner of the annual meeting between the Bulldogs and Aggies.





A LASTING IMPRESSION: NEW ENDOWMENT HONORS LONGTIME FACULTY MEMBER

One of the most exciting aspects of beginning a new journey such as four years of veterinary school is not knowing exactly where the path ahead will lead. The promise associated with starting new courses and learning in a fast-paced environment is a much-anticipated adventure for many students. Meeting classmates, forming life-long friendships and being mentored by world-class veterinarians also leads veterinary students to embrace the difficult but rewarding years at Mississippi State University College of Veterinary Medicine.

As a MSU CVM student from 1991-1995, Dr. John Rehak enjoyed studying under many knowledgeable and talented faculty members. "Often, it is not easy to recognize the total value of an experience, educational or otherwise, when one is engrossed in it; however, there are people and moments during an experience one can immediately identify as likely to have a lasting, positive impression," Dr. Rehak said. "During my years as a CVM student, I was fortunate to have had a dedicated faculty, staff, and administration, many of whom contributed to my development professionally and personally. I believe many students and alumni would agree that Dr. Robert Cooper is one of those people who provides that positive experience at MSU CVM."

To honor Dr. Robert Cooper and recognize the profound and life-changing impact he has had on the students he taught, Dr. Rehak established the Dr. Robert Cooper Endowed Scholarship. "Dr. Cooper's mentoring and guidance, an important component of my education and development at MSU CVM, has since evolved into a friendship of now over 25 years. As the beneficiary of all of this, I wanted to contribute something back to MSU CVM," Dr. Rehak said. "At the same time, I want to provide recognition to a deserving member of the College of Veterinary Medicine."

Since the inception of the CVM, Dr. Robert Cooper has been a significant part of the CVM family. He spent the majority of his career serving in a teaching capacity. He also served as director of the Animal Health Center, and he retired as an associate dean and professor. Since then, Dr. Cooper has returned part time to the classroom to teach anatomy. "This endowed scholarship is a wonderful way to honor a very humble man who is one of the true pillars of the MSU CVM," said Dr. Kent Hoblet, CVM dean.

The Dr. Robert Cooper Endowed Scholarship will be available to MSU CVM students pursuing a doctor of veterinary medicine, DVM interns or residents, or students enrolled in the graduate program. Applicants must be in good academic standing and

“...there are people and moments during an experience one can immediately identify as likely to have a lasting, positive impression.”

have a strong interest in anatomy and surgery. Preference will be given to applicants involved in veterinary student groups or community outreach, and financial need will be considered.

A native of Maryland but raised in Mississippi, Dr. Rehak received a Bachelor of Business Administration from Loyola College, a Doctor of Veterinary Medicine from MSU CVM, and a Master of Business Administration from Tulane University A.B. Freeman School of Business. He is currently working as a senior regional consulting veterinarian for Elanco Animal Health.

Dr. Rehak's gift reflects a commitment to the future success of the CVM. By establishing an endowment, Dr. Cooper's legacy

becomes a permanent part of the College's success. Many donors choose to honor family members, friends, or a favorite professor with the lasting tribute of an endowment gift. Each year, endowed scholarships help make a CVM education accessible to talented veterinary students. A student who receives an endowed scholarship is entering a select group of the College's best and brightest. They will take this honor into their veterinary careers and will join the ranks of our most distinguished alumni.

As an open fund in the MSU Foundation, the Dr. Robert Cooper Endowed Scholarship may be increased through gifts at msufoundation.com.

This endowed scholarship is a wonderful way to honor a very humble man who is one of the true pillars of the MSU CVM.

Make your giving go farther for MSU.

There is no better time to consider Mississippi State University in your yearly charitable giving plans. Annual gifts benefit MSU immediately; however, by adding a planned gift, such as including us in your will, you can:

- *Increase the impact of your giving.*
- *Receive greater tax savings.*
- *Preserve wealth for you and your family.*
- *Leave your legacy for Mississippi State's future.*

For more information on creating a planned gift, contact the MSU Foundation Office of Planned Giving.



MSU is an AA/EEO university.

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



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FOUNDATION



RESILIENCE LEADS TO DREAM JOB FOR CVM ALUM

For Dr. Rachele Stammen, an associate veterinarian at Yerkes National Primate Research Center (NPRC) at Emory University, landing her "dream job" came after a long journey, filled with much hard work and a strong commitment to reaching her goals.

Dr. Stammen, who earned her Doctor of Veterinary Medicine degree from the Mississippi State University College of Veterinary Medicine (MSU CVM) in 2015, always knew she wanted to be a veterinarian. However, the first time she applied to veterinary school, she didn't get in. That led to her applying for a job at a Battelle Biomedical Research Center (BRC) in Columbus, Ohio.

"I really didn't know much about the job when I applied, except that I would work with a variety of species, including primates, rodents, pigs, ferrets, and rabbits," Dr. Stammen said. "As a

laboratory animal technician, I helped execute research to develop vaccines and therapeutics against high-containment bioterrorism agents and toxic materials."

Dr. Stammen worked at Battelle BRC for four years and, during that time, was introduced to the laboratory animal world, which fueled her love for non-human primates. When she next applied and was accepted to the MSU CVM, she considered lab animal medicine as a career option but kept an open mind. However, it was when visiting Tulane National Primate Research Center during her third year of studies that Dr. Stammen decided that lab animal medicine with an emphasis in non-human primates was definitely for her.

Because of MSU CVM's 2-and-2 curriculum (two years of coursework and labs, plus two years hands-on, in-clinic study),

As a laboratory animal technician, I helped execute research to develop vaccines and therapeutics against high-containment bioterrorism agents and toxic materials.

— DR. RACHELE STAMMEN

Dr. Stammen was able to tailor her entire fourth year around her interest in lab animal medicine. She completed externships at five different research facilities/programs, one of which was at Yerkes NPRC.

“I fell in love with the program, the people, and Atlanta during those three weeks,” said Dr. Stammen. “Emory’s program seemed like the perfect fit for me, given my interest in non-human primates.”

So, after completing her DVM, Dr. Stammen pursued a laboratory animal residency at Emory University. She spent her first year at Yerkes and her second year at Emory’s School of Medicine Division of Animal Resources, where she worked with more traditional lab animal species. She then returned to Yerkes for a non-human primate medicine fellowship and eventually achieved board certification as a specialist in laboratory animal medicine in 2018.

“When a position opened up at Yerkes a few months before the end of my fellowship, it was perfect timing,” said Dr. Stammen. “I know my residency and fellowship there, which essentially served as a working interview, is what helped me secure this role.”



“Completing my externship at Yerkes made me realize that pursuing a career in lab animal medicine was my dream job, and now I have it,” she continued. “This journey has shown me how resilient I can be, especially when things don’t go as planned. It has shaped me into a confident and determined, but humble person—who also greatly enjoys being a veterinarian!”



Dr. Stammen’s research was recently featured as a cover story by the *Journal of the American Association for Laboratory Animal Science*. Based upon her findings, the immunization program for rhesus macaques at Yerkes NPRC was revised.

“**Completing my externship at Yerkes made me realize that pursuing a career in lab animal medicine was my dream job, and now I have it.**”
— DR. RACHELLE STAMMEN



CALENDAR OF EVENTS

EMMY AWARD-WINNING LUCKY DOG SHOW FILMS SEGMENTS AT CVM

January 28

Veterinary Camp application opened online and remains open through February 25.

Camp sessions expanded to accommodate additional age groups. Visit cvm.msstate.edu/outreach/veterinary-camp to apply or for additional information.

February 26

**Animal Emergency & Referral Center
Canine Rehabilitation Center Ribbon Cutting & Open House**

2628 Courthouse Circle, Flowood, MS 39232

10:30 a.m. – Ribbon Cutting & Community Open House

5:30-7 p.m. – Open House for veterinary practitioners
and clinicians

March 1

Alumnus of the Year Program

March 2-3

Principles of Fracture Repair Wet Lab/CE Opportunity at MSU CVM

Hands-on learning experience presented by Veterinary Orthopedic Implants featuring MSU CVM's own Dr. Jason Syrcle, DVM, DACVS-SA. Visit <https://vetimplants.com/vetadvance-principles-of-fracture-repair-at-msu/> to register or for more information.

March 21-22

Dean's Council Meeting

April 5-6

MSU CVM Open House

May 1

Class of 2019 Commencement

2 p.m. at Humphrey Coliseum

Last fall, a film crew from Litton Entertainment visited the MSU campus and CVM while filming for an upcoming episode of the CBS *Lucky Dog* show. Faculty, staff, and animals from the Animal Health Center along with Bully and handler Lisa Pritchard participated in the shoot, which was made possible through the sponsorship of MSU CVM alumnus Todd Henderson, DVM, and Nutramax Laboratories.

Lucky Dog is an Emmy Award-winning series featuring star trainer Brandon McMillan, who visits animal shelters to rescue hard-to-love, untrained, and unadoptable dogs. Brandon and his team work with these dogs at his training facility known as the Lucky Dog Ranch, with each episode of the show spotlighting a lucky family who adopts one of these even luckier dogs!



For more info about the *Lucky Dog* show, visit cbsdreamteam.com/lucky-dog. The episode featuring MSU CVM is slated to air later this year.



CVM OFFICE OF DEVELOPMENT NEWS

INFINITE IMPACT CAMPAIGN

Mississippi State University is entering the final two years of an eight-year, billion-dollar capital campaign, which will utilize private gifts to strategically position our institution to best improve the quality of life for our state, region, and across the globe. Currently, the University has received over \$915,500,000 in commitments with a campaign closing date of December 2020. The MSU College of Veterinary Medicine (CVM) has raised more than \$49,000,000 of its \$52,000,000 campaign goal. Nearly \$17,000,000 has been directed by donors for scholarships and over \$5,500,000 for faculty support. Funding for CVM facilities (such as the renovated client consultation rooms, the Purina Nutrition Center, and the Nutramax Laboratories Pharmacy), outreach and training programs (e.g., Shelter Medicine, Safe Haven, Homeward Bound) and annual support totals more than \$26,500,000.

The CVM's Infinite Impact Campaign has received gifts of appreciated stock, cash, checks, annuities, property, jewelry, and estates. We have seen our endowment for the college grow

from a little over \$9,000,000 to \$23,000,000. This growth is seen throughout the college, but most notably with scholarships. In 2015, we offered \$158,000 in scholarships. In contrast, we will provide more than \$600,000 in scholarship money in 2019. This is a direct result of a couple of large estate gifts.

Private gifts to the CVM allow us to offer a high-quality education to students, while providing first-class care to our patients. A capital campaign helps to identify areas for improvement and growth and nurtures potential. We are able to have an impact because people invest in the efforts of the college and believe in its mission. Thank you for what you do to make a difference in the lives of our students, faculty, animals, and the world of veterinary medicine.

Jimmy Kight
Director of Development



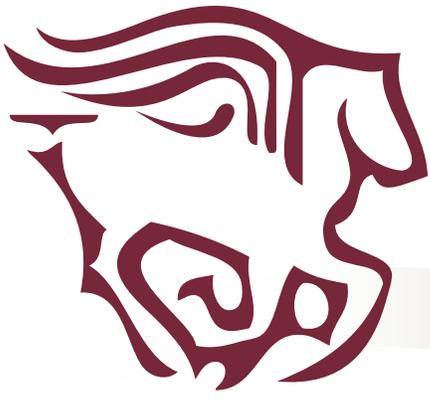
CVM STRATEGIC PLANNING UNDERWAY

Last October, the College of Veterinary Medicine began preparing its 2020 – 2027 strategic plan. Teams comprised of faculty and staff were assembled to review the College's mission, vision, values, strengths, and challenges in order to develop a working plan that will serve the CVM through its next Council on Education accreditation site visit in 2021, 50th anniversary in 2024 and well into 2027.

According to CVM Associate Dean for Administration Ron McLaughlin, who is overseeing the strategic planning process, strategies are being prepared in six specific areas: teaching and learning,

research and creativity, outreach and engagement, globalization, institutional culture and environment, and financial stability. "Planning for the future is one of the most important responsibilities we have. It is vital to our success," he said. "In this process, we welcome input from the College's many stakeholders, including alumni, students, future students, clients, donors, and producers."

The 2020–2027 strategic plan will be completed in December 2019. For additional information or to share feedback for planning purposes, email McLaughlin@cvm.msstate.edu.



2018 ALL COLLEGE AWARDS DAY

As with tradition, those attending the MSU CVM All College Awards Day festivities were treated to delicious barbecue served by members of the Mississippi Veterinary Medical Board and volunteers following the annual awards ceremony.

**ZOETIS AWARD FOR
VETERINARY RESEARCH EXCELLENCE**
Dr. Barbara Kaplan

VICE PRESIDENT'S PEGASUS AWARD
Dr. Sharon L. Oswald

**THE C. EDWARD COUVILLION, DVM, PHD,
ENDOWED GRADUATE SCHOLARSHIP**
Dr. Sherry Blackmon

PRESIDENT'S PEGASUS AWARD
Dr. John U. Thomson

STAFF AWARDS
Lisa Conner
Karen Cook
Stephanie Huffman

PEGASUS FACULTY AWARDS
Dr. Patricia S. Gaunt | Award for Service
Dr. Alicia Kathleen Olivier | Award for Teaching
Dr. Attila Karsi | Award for Research

DEAN'S PEGASUS AWARD
Dr. Mark Lawrence

**E. WYNN JONES AWARD FOR
EXCEPTIONAL SERVICE**
Dr. Bob Williams



PRESIDENT'S PEGASUS AWARD



MSU Vice President Amy Tuck presents Dr. John Thomson with the President's Pegasus Award on behalf of MSU President Mark Keenum

Each year the President's Pegasus Award is presented to an individual who has demonstrated outstanding achievements in teaching, research, and/or service on behalf of the University and veterinary medicine.

DR. JOHN U. THOMSON earned his DVM degree from Iowa State in 1967. He had, in effect, several careers as a veterinarian, spending the first 20 years working as a private veterinary practitioner in Clearfield, Iowa, population 323, alongside his father, Dr. Vale U. Thomson.

In 1987, Dr. Thomson became an extension veterinarian at South Dakota State University. A few years later, he became professor and head of the SDSU Veterinary Science Department and director of the South Dakota Animal Disease Research and Diagnostic Laboratory. He left SDSU in 1997 to join the faculty at Iowa State University's College of Veterinary Medicine. In 1999, Dr. Thomson became dean of the College of Veterinary Medicine at Mississippi State University, serving in that position for five years. In 2004, he returned to Iowa as dean of the College of Veterinary Medicine at Iowa State University. In 2011, he stepped down as dean but continued to serve on ISU faculty for several years focusing on outcomes-based medicine in food animal production.

During his career in academic veterinary medicine, Dr. Thomson was known among his peers as a visionary leader. He worked to bring industry, veterinary practitioners, and veterinary educators together in a unified coalition to press for legislation vital to the health of the veterinary profession. While he was dean at Mississippi State, he worked with Congressman Chip Pickering to secure passage of the National Veterinary Services Act (the Veterinary Medicine Repayment Program) in 2003, which today is helping graduates pay down debt in return for providing veterinary services in areas suffering from a shortage of veterinarians. A number of our own MSU graduates have been recipients of this loan repayment program, benefitting

themselves and, importantly, the rural communities they serve here in Mississippi and across the U.S.

Throughout his academic career, Dr. Thomson had a special vision for veterinary diagnostic laboratories and their role in academic veterinary medicine. During his tenure at Mississippi State, both the Poultry Veterinary Research and Diagnostic Laboratory and the Mississippi Veterinary and Diagnostic Laboratory became part of the MSU College of Veterinary Medicine, and he played a lead role in securing funding to build the 40,000 square foot facility in the Jackson suburb of Pearl that houses these two laboratories. During his career, he helped secure millions of dollars in funding to enhance veterinary education, research, and the veterinary diagnostic laboratories in South Dakota, Mississippi, and Iowa.

Dr. Thomson and his wife, Kay, have been faithful supporters of the MSU College of Veterinary Medicine. In 2000, they established The International Veterinary Humanitarian Endowed Fund to support MSU CVM veterinary students dedicated to combining their commitment to the betterment of mankind with the practice of veterinary medicine.

While serving as dean at the CVM, Dr. Thomson initiated a fundraising effort to create the Pegasus Partners Endowment Fund. Dr. and Mrs. Thomson became the first members of this fund, which is now able to provide international travel stipends to students each year.

VICE PRESIDENT'S PEGASUS AWARD



Dr. Reuben Moore &
Dr. Sharon L. Oswald

The Vice President's Award is given to a person who has made significant contributions to veterinary medicine in the State of Mississippi. **DR. SHARON L. OSWALD** is dean of the College of Business at Mississippi State University. Prior to this appointment, she was a faculty member in the Raymond J. Harbert College of Business at Auburn University for 24 years, where she held the title of Colonel George Privett Professor of Management, and served for twelve years as the head of the department of management. She now holds the title of professor emeritus. Dr. Oswald earned a BA degree from Auburn University, an MBA from UAB and a PhD from the University of Alabama. She has published more than 70 articles in several prestigious journals and co-authored one book. Currently, her primary research areas are entrepreneurship and international health care management. Dr. Oswald has been invited on two occasions to participate in an international panel on health care issues at the U.S. Embassy in the Czech Republic. She serves on an international board of directors for the Academy of Health Care Management headquartered in Prague, Czech Republic.

Dr. Oswald is also a pet lover and a client of the MSU CVM Animal Health Center. She was the proud owner to Quinn, a Shih Tzu, for 17 loving years. Quinn was well-loved by many, including the veterinary students who cared for him. In Quinn's memory, Dr. Oswald endowed The Quinn Oswald Endowed Client Consultation Room, a private client waiting room in the Animal Health Center. Quinn's consultation room offers clients and attending clinicians a comfortable and private space to discuss veterinary care.

DEAN'S PEGASUS AWARD



Dr. Mark Lawrence &
Dr. Kent Hoblet

The Dean's Pegasus Award is presented to a person who has demonstrated outstanding achievements in teaching, research, and/or service on behalf of Mississippi State University and the College of Veterinary Medicine. **DR. MARK LAWRENCE** has been a CVM faculty member for 20 years. An internationally known researcher, he holds five U.S. patents and currently has two patents pending. Dr. Lawrence has published 119 papers in peer-reviewed journals and made more than 100 presentations to professional societies and state and national organizations, as well as written numerous book chapters. He has done this while teaching a variety of immunology, microbiology and bacteriology courses, advising many graduate students, and actively serving various roles for a host of professional societies, boards, committees and panels.

Dr. Lawrence has been recognized with awards including the Zoetis Award for Veterinary Research Excellence, Pfizer Award for Research Excellence, CVM Dean's Award for Meritorious Service, CVM Faculty Research Award, and Award for Advancing Diversity in the MSU Division of Agriculture, Forestry and Veterinary Medicine. He is also a previous Dean's Pegasus Award recipient from 2003.

After earning his DVM at TAMU in 1990, Dr. Lawrence spent two years in practice in the Dallas area. He then went to graduate school at LSU, where he earned his PhD in veterinary microbiology in 1997. Afterward, he completed postdoctoral training in veterinary bacteriology at Virginia Tech in 1998.

Dr. Lawrence directed the NIH-funded Summer Research Experience for Veterinary Students at CVM for more than a decade. During the past several years, he led in the development of the MSU Global Center for Aquatic Food Security and led the College's effort in partnering with the National Fish and Wildlife Foundation to establish the Institute for Marine Mammal Studies dedicated to dolphin and sea turtle research and conservation on the Mississippi Gulf Coast that resulted in the CVM receiving a five-year, \$6.5 million grant from NFWF. In the past year, Dr. Lawrence led the CVM in obtaining a relationship with USDA ARS and APHIS that will train PhD students to work at the National Bio- and Agro-Defense Facility.

Most recently, Dr. Lawrence led, as principal investigator, in developing a grant proposal to secure the competitive \$15 million grant establishing CVM as the leader of a group of six universities for the new USAID Feed the Future Innovation Lab on Fish. This project is focusing applied research to reduce poverty, improve the livelihood, nutrition and food security in priority countries in East Africa, West Africa and South Asia.

DEAN'S PEGASUS AWARD FOR SERVICE



Dr. Wes Bumgartner &
Dr. Patricia S. Gaunt

Outstanding and unique service to the Mississippi aquaculture industry is the reason cited for **DR. PAT GAUNT** being named the 2018 recipient of the Dean's Pegasus Award for Service. A multi-disciplined professor with a proven record of delivering quality results in research and diagnostic laboratories, Dr. Gaunt has extensive experience in designing, implementing and reporting of clinical trials for approval of antibiotics for fish. She does outstanding work diagnosing fish diseases, communicating findings to farmers and prescribing treatments.

Dr. Gaunt is a stellar example of a clinical scholar who uses service to identify research required to solve important problems. A specific example is her work with feed additive antimicrobials, critically important to the Mississippi catfish industry. In addition, her work developing methodology to manufacture and distribute antimicrobial susceptibility testing disks when disks for the conduct of ROMET antimicrobial susceptibility testing became unavailable, as well as her work helping establish cutoff values for aquatic bacterial pathogens, which were accepted by the CLSI Veterinary Antimicrobial Susceptibility Testing Subcommittee, provide evidence of her impact on the state's aquaculture industry.

Dr. Gaunt is also actively involved with numerous professional organizations, serving as chair of the AVMA Aquatic Veterinary Medicine Committee. She also serves on the AVMA Council on Antimicrobials, as well as being a member of the Clinical and Laboratory Standards Institute, and co-editor-in-chief for the American Fisheries Society's Journal of Aquatic Animal Health and as a member of their publications overview committee. In addition, Dr. Gaunt serves on several IACUC committees as the attending veterinarian, on the CVM's Quality Advisory Committee, and as the CVM's liaison to the Mississippi Aquarium in Gulfport.

DEAN'S PEGASUS AWARD FOR TEACHING



Dr. Skip Jack &
Dr. Alicia Kathleen Olivier

The 2018 Dean's Pegasus Award for Teaching was presented to **DR. ALICIA OLIVIER** who earned her BS and DVM at MSU and completed her residency and PhD at Iowa State. She served as a faculty member at the University of Iowa College of Medicine for four years and then returned to the MSU CVM in 2014, where she has quickly become known as not only an accomplished, well-respected veterinary pathologist, but a warm, friendly and conscientious instructor and colleague. Dr. Olivier plays a significant role in the success of both the first-year veterinary pathology course and the third-year laboratory services rotation, and she is always willing to assist veterinary students and pathology residents whenever and however needed. Dr. Olivier has also served on the CVM admissions committee for several years, helping to ensure the College identifies and accepts the very best students.

While an MSU CVM student herself, Dr. Olivier was honored with the Gretta Somerville Scholarship, Salsbury Alternative Career Scholarship, Hills Pet Nutrition Award, Associate Dean's Award and was an NIH Summer Scholar. Since then, she has furthered her education and become a well-published researcher and sought after

speaker in the area of cystic fibrosis. Her work in this area is poised to bring additional recognition to her and the MSU CVM.

DEAN'S PEGASUS AWARD FOR RESEARCH/ CREATIVE ACHIEVEMENT



Dr. Steve Pruett &
Dr. Attila Karsi

The recipient of the 2018 Dean's Pegasus Award for Research/Creative Achievement, **DR. ATTILA KARSI**, was selected for not only having made significant contributions to the MSU CVM research program, but also being a team player at the College. Dr. Karsi's prolific publication numbers—55 peer-reviewed research papers in top journals in his field since joining the CVM in 2004 (33 of which were published in the past three years), three book chapters co-authored, two technical reports, two proceedings and 138 meeting abstracts presented regionally, nationally and internationally— are direct evidence of his commitment to learning and research. Dr. Karsi's successful support of his research with both intra- and extramural funding from multiple sources, totaling almost \$5 million, as well as his research resulting in three full patents, a patent that is pending, and an invention disclosure filed with the MSU Office of Technology Transfer are further evidence of his outstanding work.

However, Dr. Karsi's willingness to work as a team player is equally as important to the CVM as his rising national reputation as an accomplished and well-published researcher. His contributions to the CVM graduate, DVM and undergraduate curricula, as well as his collaboration with fellow faculty members, other departments at the University, the Thad Cochran Research Center, and federal agencies such as USDA/ARS are invaluable to the MSU CVM.

Dr. Karsi has served on several MSU and CVM committees, including the CVM admissions committee and MSU's Institutional Biosafety and Review Entity Committees, and he played an active role in the DVM summer research program.

E. WYNN JONES AWARD FOR EXCEPTIONAL SERVICE



Dr. Kent Hoblet & Dr. Bob Williams

The Dr. E. Wynn Jones Award for Exceptional Service recognizes individuals who have provided exceptional service to the College of Veterinary Medicine at Mississippi State University.

Dr. Jones was among the first faculty at the CVM, and even after he retired, he worked tirelessly on behalf of the College, serving as an example to all. The 2018 Dr. E. Wynn Jones Award was presented to longtime MSU faculty member **DR. BOB WILLIAMS**, who earned three degrees from MSU—a BS in 1961, MS in 1963 and PhD in 1977.

From 1964-1995, Dr. Williams worked with the MSU Cooperative Extension Service, serving as an extension economist leader in the department of agricultural economics and as a state agricultural program leader. His work in extension services was far reaching.

After more than three decades of service, Dr. Williams retired from the extension service—but his love of the University and passion for learning led him to return to work part-time only four months later, joining Dr. Rodney Foil in the office of the MSU Vice-President for the Division of Agriculture, Forestry and Veterinary Medicine, where he serves until this day. This 80-year-young gentleman coordinates building projects for DAFVM, works with DAFVM units to keep

agriculture and forestry income figures and other important data updated for use on the division home page and for the division's many reports and publications. He also works with the Ag communications staff to develop monthly success stories for the division and represents the vice-president at selected functions and committee meetings.

Dr. Williams has worked diligently on behalf of the CVM in areas such as Wise Center parking, remodeling aging facilities and building projects. He is always willing to listen and works hard to find creative solutions to difficult problems. Dr. Williams is seen throughout the CVM as always fair, unquestionably truthful, and completely trustworthy.

ZOETIS AWARD FOR VETERINARY RESEARCH EXCELLENCE



Dr. Steve Pruett & Dr. Barbara Kaplan

The Zoetis Award for Veterinary Research Excellence is presented annually to a member of the MSU CVM faculty who demonstrates outstanding achievement and dedication in the field of veterinary medicine.

DR. BARBARA KAPLAN, who joined the MSU CVM Department of Basic Sciences as an assistant professor in the Center for Environmental Health Sciences in 2013, is the recipient of the 2018 Zoetis Award. She obtained her undergraduate degree at the University of California at Davis in 1992 before obtaining her PhD at Michigan State University in 2001 and completing a three-year postdoctoral fellowship at the University of Chicago. She then returned to Michigan State as a research assistant professor where she remained until coming to MSU CVM.

Dr. Kaplan's accomplishments as a researcher are outstanding. Her work is concerned with the effects of plant-derived cannabinoids on immune responses, which is of critical importance to veterinary medicine as well as public health. Dr. Kaplan has received more than \$500,000 in grant funds and has produced 20 publications and 63 abstracts just since arriving at MSU. Her research results have appeared in first-tier, high-impact journals in the areas of toxicology and immunity.

She is the sole author on two book chapters entitled "Immunotoxicology of Drugs of Abuse" published in *Comprehensive Toxicology in 2017* and "Evaluation of Marijuana Compounds on Neuroimmune Endpoints in Experimental Autoimmune Encephalomyelitis" published in *Current Protocols in Toxicology in 2018*. In addition, she was the first author on a book chapter entitled "Toxic Responses of the Immune System" which was published in 2018 in *Casarett and Doull's Toxicology (9th edition)*, which is considered the most important reference book in the field of toxicology.

Dr. Kaplan is also very active in the Society of Toxicology, serving as the chair of its education committee and councilor on its leadership team. This service speaks to her great talents as both an educator and leader. In addition, she spends countless hours with students mentoring and advising them.

Dr. Barbara Kaplan is a true asset to the CVM and University and is most deserving of the Zoetis Award for Veterinary Research Excellence.

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



The C. Edward Couvillion, DVM, PhD, Endowed Graduate Scholarship was established in 2007 by Dr. Couvillion's family in honor of his dedication to teaching, service, and research.

Dr. Couvillion joined the CVM faculty in 1985 as assistant professor of parasitology. During his career, he conducted research in cattle and avian diseases and parasitology as well as wildlife studies throughout the Southeast. He was also awarded the Dean's Pegasus Award for Research, the SmithKline Beecham Award for Research Excellence, and the Norden Distinguished Teacher Award.

This is the first endowment in the MSU CVM Office for Research and Graduate Studies and is presented annually to a MSU CVM student enrolled in the MSU CVM PhD program or the veterinary medical sciences graduate program, who is actively involved in research and whose career goal will lead to further research.

DR. SHERRY BLACKMON, the 2018 recipient of the scholarship, received her bachelor's degree in biology from Bridgewater State University and in English from San Francisco State University. She began working at the CVM in the lab of Dr. Henry Wan as a DVM/PhD student in 2012, received her DVM in 2018, and is expected to graduate with her PhD this spring. Sherry's research projects involve risk assessment of emerging avian origin canine influenza A virus to public health and risk assessment of emerging influenza D viruses on agriculture, as well as determining seroprevalence of influenza viruses in shelter dogs. Her study regarding the influenza A virus was published in the *Journal of Virology*, and her work on the two subsequent projects is still underway. During her six years of training, Sherry has published nine publications, two of which she served as first author and seven of which she served as co-author. Two additional manuscripts are expected from her ongoing studies. Sherry is destined to be a successful veterinarian and research scientist and is most deserving of this scholarship and recognition.

DISTINGUISHED STAFF AWARDS



LISA CONNER – SURGERY SUPERVISOR

Surgery Supervisor Lisa Conner is not a stereotypical supervisor. According to her staff, she doesn't give orders and expect things to be done, but fully participates in the process from beginning to end. Lisa has earned the trust of her staff by being both a strong leader and consistently being the hardest worker of the group. She is known to always put others ahead of herself, and she consistently stands up for the surgery department. Lisa is truly a distinguished member of the CVM staff.



KAREN COOK – ADMINISTRATIVE ASSISTANT

Administrative Assistant Karen Cook is one of the first faces CVM visitors see. She is always polite, friendly, and helpful. Her hard work is often done behind the scenes but does not go un-noticed. Karen facilitates communication among various departments both within CVM and on main campus to ensure students' questions and concerns are addressed in a timely fashion. She also assists with office clerical tasks, planning events, the admissions process, and student advising for the CVM Veterinary Medical Technology Program. Karen is truly a distinguished member of the CVM staff.



STEPHANIE HUFFMAN – GRANTS AND CONTRACTS SPECIALIST

Grants and Contracts Specialist Stephanie Huffman is described as the "go to" person at all stages of proposal development, from planning through final submission. Her friendly and calm demeanor is welcomed and very appreciated, especially during the stress of meeting submission deadlines. Stephanie is always willing to answer questions and assist in proofing grant proposals, and she keeps everyone on track throughout the entire process. Stephanie is truly a distinguished member of the CVM staff.

CWD HITS MISSISSIPPI DEER POPULATION

The Mississippi Veterinary Research and Diagnostic Laboratory (MVRDL) and the Poultry Research and Diagnostic Laboratory, which are an arm of the MSU CVM housed in a joint facility in Pearl, Mississippi, is the only publicly supported laboratory system in the state approved to run state and/or federally required surveillance and regulatory tests for domestic, wild, and food animals in the state, including tests that must be done before the harvest, sale, and shipping of food animal products. As part of the National Animal Health Laboratory Network, they routinely test for endemic and foreign diseases, including high- and low-pathogenic avian influenza, classical swine fever, foot and mouth disease, exotic Newcastle disease, and now, chronic wasting disease (CWD).



According to Dr. Lanny Pace, executive director of the laboratory system, the only official tests for detection of CWD in the U.S. are authorized by USDA APHIS Veterinary Services and are only provided to state diagnostic laboratories through the NAHLN.

The state legislature provided funding for the federally mandated CWD testing equipment housed at MVRDL, and the lab is actively working with the Mississippi Department of Wildlife, Fisheries and Parks and the National Veterinary Services Laboratory (NVSL) to assist with the diagnosis and management of this contagious and fatal neurological illness that has now infiltrated the state's white-tailed deer population.

“The initial testing of every sample collected in the state is performed here at MVRDL, and we are required by federal regulations to send all ‘suspect’ cases of CWD to the NVSL in Ames, Iowa, for official confirmation,” Dr. Pace explained, noting that MVRDL tested more than 7,000 tissue samples from October 1, 2018, to February 6 this year, a number that will continue to increase prior to the closing of the state's deer hunting season in February.

The first confirmed case of CWD in Mississippi was in Issaquena County early last year. Since then at least 13 deer have tested “suspect” positive for the disease, with 11 confirmed positive and two pending confirmation as of press time for this publication.

“...MVRDL tested more than 7,000 tissue samples from October 1, 2018, to February 6 this year...”



WHERE WE ARE LOCATED



WISE CENTER

240 Wise Center Dr. • Mississippi State, MS 39762
Phone: 662.325.1351



VETERINARY SPECIALTY CENTER

1207 Hwy 182 W, Suite D • Starkville, MS 39759
Phone: 662.325.7339



MS VETERINARY RESEARCH & DIAGNOSTIC LABORATORY SYSTEM AND POULTRY RESEARCH & DIAGNOSTIC LABORATORY

3137 Highway 468 West • Pearl, MS 39208
Phone: 601.420.4700



ANIMAL EMERGENCY & REFERRAL CENTER

1009 Treetops Blvd. • Flowood, MS 39232
Phone: 601.939.8999



AQUATIC RESEARCH & DIAGNOSTIC LAB

127 Experiment Station Rd. • Stoneville, MS 38776
Phone: 662.686.3302

GRANTS & CONTRACTS

AWARDED TO CVM FACULTY

EXTERNAL GRANTS

Lora Petrie-Hanson (PI). Ralco Nutrition, Incorporated. The Effect of Ralco Feed Products on Channel Catfish Fingerling Growth and Health Status. \$13,435

Mark Lawrence (PI), Attila Karsi (PI), Hossam Abdelhamed (CoPI). FishVet Group. Safety and Storage Evaluation of an Improved Live Attenuated Edwardsiella ictaluri Vaccine. \$17,724

Camillo Bulla (PI), Amelia Woolums (CoPI), Peres Badial (CoPI). USDA NIFA. Designer Platelets Reprogramming of Macrophages and Endothelial Cells: A Paradigm Shift in Cell-Based Therapy. \$150,000

Bindumadhavi Bharani Nanduri (CoPI). USDA NIFA. Co-infection dynamics of three BRD pathogens: bovine herpesvirus 1, bovine respiratory syncytial virus and Mannheimia haemolytica. \$3,023

Andrea Varela-Stokes (PI). Institute for Systems Biology. Novel peptide based biomarkers for Lyme disease diagnostics. \$31,513

Larry Hanson (PI). Ralco Nutrition. Evaluation of effect of Oregano Oil on White spot syndrome virus susceptibility by oral virus challenge. \$ 4,930

Xiufeng (Henry) Wan (PI). USDA APHIS. Risk assessment of emerging avian-origin swine influenza viruses. \$150,000

Xiufeng (Henry) Wan (PI). USDA APHIS. Kaitlyn Waters NBAF Scientist Training Program. \$178,882

Lanny Pace (PI). USDA APHIS. NAHLN level 2: MS 2018. \$137,000

David Smith (PI), W. Cooper Brookshire (CoPI), William Epperson (CoPI), Carla Huston (CoPI), Brandi B. Karisch (CoPI), Robert Wills (CoPI), Kimberly A. Woodruff (CoPI). USDA NIFA. Educational Approaches to Improve Cattle Health and Reduce Antibiotic Use. \$1,138,620

W. Cooper Brookshire (PI), Keun Seo (CoPI). Steris Instrument Management Services. \$ 32,500

Attila Karsi (PI), Mark Lawrence (CoPI), Wes Baumgartner (CoPI), Hossam Abdelhamed (CoPI). USDA NIFA. Prevention of motile aeromonas septicemia in catfish by novel live attenuated vaccines. \$309,427

Xiufeng Wan (PI). USDA APHIS. Bi-directional transmission of avian influenza A viruses between domestic poultry and wild birds. \$270,000

Larry Hanson (PI). USDA APHIS. Determining environmental factors and animal vectors correlated with Edwardsiella piscicida disease outbreaks in hybrid catfish. \$25,100

Xiufeng (Henry) Wan (PI). National Institutes of Health Risk Assessment of Influenza A Virus. \$181,875

Claudio Correa Natalini (PI), Sarah Elizabeth Shane (CoPI), Robin Fontenot (CoPI), Robert Meyer (CoPI), Simone Hinz (CoPI). American Veterinary Medical Association. Determination of Plasma Levels for Target Intravenous Continuous Rate Infusion and Repeated Intramuscular Administration of Dexmedetomidine in Standing Horses. \$4,617

Stephen Pruett (PI), Giselle Thibaudeau Munn (CoPI), Bindumadhavi Nanduri (CoPI), XiuFeng (Henry) Wan (CoPI), Hossam Abdelhamed (CoPI), Jonas King (CoPI), Joo Youn Park (CoPI), Andrea Varela-Stokes (CoPI). National Institutes of Health. Center for Biomedical Research Excellence in Pathogen-Host Interactions. \$2,131,604 (year 6)

Chinling Wang (PI). National Institute of Diabetes & Digestive & Kidney Diseases. Optimized Selenium Intake, Gut Microbiota, and Diabetes. \$19,445

Janice Chambers (PI), Matthew Ross (CoPI), Robert Wills (CoPI). National Institutes of Health. Identification of Novel Brain-penetrating Phenoxalkyl Pyridinium Oxime Countermeasures. \$427,511 (year 1)

Janice Chambers (PI), Matthew Ross (CoPI), Steven Gwaltney (CoPI). National Institutes of Health - . Identification of Novel Brain-penetrating Oxime Antidotes for Phorate Toxicity. \$215,635 (year 1)

Hossam Abdlehamed (PI). USDA ARS. Recovery of intestinal microbiome of catfish after florfenicol application and florfenicol alternative. \$50,000

Bindhu Nanduri (CoPI). National Institutes of Health. EMCC MSU Bridge to Baccalaureate Degree Program. \$8,907

Xiufeng (Henry) Wan (PI). National Institutes of Health. Genome Based Influenza Vaccine Strain Selection Using Machine Learning. \$372,603 (Year 5)

INTERNAL GRANTS

Chinling Wang (PI), Cindy Lu (CoPI), CVM ORGS. Utilizing Outer Membrane Vesicles to Deliver Clostridium perfringens Toxin Genes as a Novel Strategy Against Necrotic Enteritis. \$10,000

John Thomason (PI), Alyssa Sullivant (CoPI), Todd Archer (CoPI), Andrew Mackin (CoPI). CVM ORGS. Effects of Storage and Leukoreduction on Histamine Concentrations in Units of Stored Canine Packed Red Blood Cells. \$9,610

Alyssa Sullivant (PI), Alicia Olivier (CoPI), Todd Archer (CoPI), Andrew Mackin (CoPI), John Thomason (CoPI). CVM ORGS. Expression of Gastrointestinal Histamine Receptors in Canine Inflammatory Bowel Disease. \$10,000

Graham Rosser (PI), Matt Griffin (CoPI), David Wise (CoPI), Wes Baumgartner (CoPI), Tommy King (CoPI). CVM ORGS. Investigations into the life-cycles and pathology associated with trematodes causing ocular diplostomiasis in catfish aquaculture in Mississippi. \$9,988

Lora Petrie-Hanson (PI). CVM ORGS. Characterization of Ick expressing cytotoxic cells in rag 1-/- mutant zebrafish. \$10,000

Lifang Yan (PI), Trey Howell (CoPI), Lanny Pace (CoPI). CVM ORGS MAFES. Comparison of Oxford Nanopore Sequencing with Conventional PCR Sequencing in Avian Infectious Bronchitis Virus and Avian Reovirus. \$9,989

Larry Hanson (PI), Henry Wan (CoPI). CVM ORGS MAFES. The incorporation of in expensive next gen sequencing into

the aquatic diagnostic laboratory to identify and characterize novel viruses. \$10,000

Amelia Woolums (PI), Robert Wills (CoPI). CVM ORGS MAFES. Assessing diversity of antimicrobial resistance phenotypes in Mannheimia haemolytica isolated from stocker cattle. \$9,506

Attila Karsi (PI), Robert Wills (CoPI). CVM ORGS MAFES. Construction and characterization of virulent Aeromonas hydrophila mutants. \$10,000

Hossam Abdelhamed (PI), Attila Karsi (CoPI). CVM ORGS MAFES. Transfer and stability of multidrug-resistant IncA/C plasmid isolated from Edwardsiella ictaluri. \$10,000

Sarah Shane (PI), Claudio Correa Natalini (CoPI), Robin Fontenot (CoPI), Cory Langston (CoPI). CVM ORGS. Partitioning in red blood cells after continuous rate infusion and repeated intramuscular administration of dexmedetomidine in horses. \$2,000

Lindsay Seyer (PI), Caroline Betze (CoPI). CVM ORGS. Description of the conjunctival microbiome of normal dogs and the effects of a preoperative antiseptic protocol. \$2,000

CVM NOTES & NEWS

2018 PROMOTIONS & TENURE

Michaela Beasley – Associate Clinical Professor
Caroline Betze – Associate Clinical Professor
James Brett – Clinical Professor
Christine Bryan – Associate Clinical Professor
Heath King – Associate Clinical Professor

Kate Mochal-King – Associate Clinical Professor
Ryan Butler – Associate Professor w/tenure
Wes Baumgartner – Associate Professor w/tenure
Alicia Olivier – Associate Professor
John Thomason – Associate Professor w/tenure

ALUMNI NEWS

Brolin Evans (DVM 2013), along with wife Leah Evans, welcomed their first children, twin girls Arden Jade and Aubrey Reece Evans, in June 2018.

Brolin Evans (DVM 2013) completed his oncology residency at NC State in June 2018 and became a diplomate of the American College of Veterinary Internal Medicine (Oncology) in July 2018. He is currently an oncologist in Atlanta, Georgia.

Brian Holt (DVM 2011), along with wife Stephanie Holt, welcomed a son, Samuel Richard Holt, in April 2018.

NOTE TO ALUMNI:

Please send us your news! We want to hear about and share new jobs and titles, marriages, births, and awards and recognition. Please direct to the attention of CVM Outreach Director Mel Thurlow at mel.thurlow@msstate.edu. You can also keep up with your fellow MSU CVM graduates on Facebook at [facebook.com/alumniumsucvm](https://www.facebook.com/alumniumsucvm).

FACULTY & STAFF NEWS

Dr. Amelia Woolums, MSU CVM professor of pathobiology and population medicine, was recently honored by her alma mater with the Purdue CVM Distinguished Alumna Award.

Dr. Alicia Olivier (DVM 2005), MSU CVM associate professor of pathobiology and population medicine, was awarded the 2018 American College of Veterinary Pathologists (ACVP) Mentor of the Year Award.

Dr. Mark Lawrence, previously MSU CVM dean of research & graduate studies, was named director of the recently funded \$15M USAID Feed the Future Innovation Lab on Fish, a division of the MSU Global Center for Aquatic Food Security.



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