

FALL & WINTER 2020

PEGASUS PRESS

MISSISSIPPI STATE UNIVERSITY • COLLEGE OF VETERINARY MEDICINE



MSU CVM ANESTHESIA AND
SMALL ANIMAL SURGERY SERVICES
DELIVER STATE-OF-THE ART,
SPECIALTY CARE FOR COMPANION
ANIMALS THROUGHOUT THE REGION

EARNING RESPECT BY EXCEEDING EXPECTATIONS



A MESSAGE FROM THE DEAN

DR. KENT HOBLET

As this issue of *Pegasus Press* lands in your mailbox, masks, frequent hand-washing, and social distancing have become just another part of the routine at MSU CVM. We have been fortunate thus far in mitigating the impact of the pandemic in our College. I am proud of how our faculty, staff, and students have continued to move ahead with future goals in mind. This is important because we have several key challenges to meet in 2021.

One is our mandatory review for accreditation by the AVMA Council on Education, which will occur in November. During this evaluation, which occurs every seven years, we must fully satisfy the requirements of all 11 standards outlined by the council. For example, one standard requires that the entire curriculum be evaluated comprehensively at least every seven years. In the first step, 17 members from across our three academic departments conducted a review, which took 18 months to complete. Following this review, a smaller task force worked with the College's curriculum committee to implement suggestions. The overall goal was to develop a curriculum that will provide the basis for building a 40-year career and then to implement it, with student learning and well-being kept of foremost importance.

Occurring at the same time was the development of our new Strategic Plan (Strategy for Excellence 2020-2026, available at vetmed.msstate.edu/about/mission). Interestingly, several common principles emerged from both processes: (1) maintain a two-phase curriculum with two full years of mentored clinical instruction with a comprehensive teaching hospital; (2) maintain and further develop clinical instruction; (3) fulfill the land grant mission to our state; (4) enhance clinical learning of all students;

and (5) continue building a robust research program to benefit the veterinary profession, our state, our nation, and our students.

After working to balance goals from the strategic plan with resources and our plans to implement a visionary curriculum, we sought and received approval from COE to increase the DVM class size this June from 95 to 112, which can be accommodated through the two classrooms added in the 2015 building project. In addition, in the Wise Center proper, the first-year multidisciplinary laboratory (MDL) has been remodeled, and the second-year MDL is being remodeled to expand space.

Our curriculum plan includes keeping all present core clinical rotations and continuing to provide clinical instruction for all common domestic species for all students. We will also maintain approximately one-half of the fourth year for externships, although we are moving to more four-week (as opposed to six-week) rotations. Plans are to add a combined food animal/equine emergency/after-hours rotation in the hospital and a core specialty block to include cardiology, ophthalmology, and dermatology. We also hope to break ground this spring for a 12,000-square-foot addition to the Animal Emergency and Referral Center in Flowood that will include student living space.

Changes in Starkville-area agriculture in recent years have resulted in variability of cases that are not always reflective of what graduates going into rural areas might be expected to encounter. To meet this challenge, as well as introduce our students to needed rural practice and communities, the CVM is developing and pilot testing a core teaching program that will be known as Enhanced Clinical Practicums (ECPs). The ECPs will further augment clinical teaching that occurs in our teaching hospital, two satellite clinics, and ambulatory clinic.

As you can see, the College continues to move forward despite the challenges of the pandemic. We wish you a great spring and summer. As always, do not hesitate to stop in if you are in the Starkville area or give me a call if you have any questions.

Dr. Kent Hoblet
Dean & Professor | CVM Office of the Dean | (662) 325-1131



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COVER PHOTOS

FRONT: MSU CVM Surgery Chief Dr. Michael Jaffe (front, left) guides third-year DVM student Savanna Richmond through a TPLO surgery on a canine patient while MSU CVM Anesthesia Chief Dr. Simone Hinz (back, left) discusses the anesthesia care plan with third-year DVM student Revati Patel.

BACK: Through the College's partnership with the Institute for Marine Mammal Studies in Gulfport, MSU CVM faculty and students are currently providing treatment and rehabilitation for a group of Kemp's ridley sea turtles involved in a mass cold-stunning event in the northeast last December.

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DEAN'S COUNCIL MEETS VIRTUALLY as Result of Pandemic

The semi-annual meeting of MSU CVM Dean's Council was conducted virtually last November. Although the Council was unable to convene in person for either their spring or fall session last year due to the COVID-19 pandemic, they have remained committed to fulfilling their duties of providing vision and direction for the College.

According to MSU CVM Dean Dr. Kent Hoblet, at the fall meeting, the Council received an update about the College's ongoing efforts to minimize the risk of COVID-19 infection for faculty, staff and students, and its success in maintaining operations in the process. The Council was also briefed on several new programs and projects related to construction, curriculum, and recruitment.

Dr. Joey Burt, assistant dean for clinical services and director of the Animal Health Center, shared a PowerPoint presentation focusing on a new 12,000-square-foot addition planned for the Animal Emergency & Referral Center in Flowood. The project will take about one year, and groundbreaking is scheduled for later this spring. (See story on page 29.)

An overview of the College's plans for a new Enhanced Clinical Practicum (ECP) program was shared by the

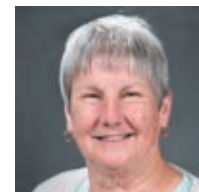
program's director, Dr. Carla Huston. Participation in the program, which will include two four-week blocks, will be required beginning with the class of 2025, which will enter the CVM in June. Dr. Huston has enrolled 12 mixed-animal general practices, and a pilot study of the program is currently underway. (See story on page 16.)

Three of the CVM's newer faculty members, Dr. Michael Jaffee, associate professor of small animal surgery; Dr. Mike Pesato (DVM, MSU CVM 2015) assistant clinical professor of food animal medicine, and Dr. Stephen Reichley, assistant clinical professor of aquatic animal health, addressed the Council, providing insight into their decisions to come to MSU, as well as a brief summary of their plans for teaching, research, and outreach in their respective programs.

Dr. Brittany Moore-Henderson, (DVM, MSU CVM 2016) director of admissions, discussed the challenges and opportunities resulting from the admissions process having to be conducted virtually this year.

The Council hopes to conduct its spring 2021 meeting in person on the CVM's main campus.

DEAN'S COUNCIL MEMBER SPOTLIGHTS



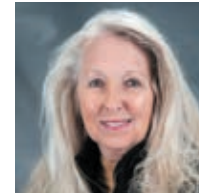
Dr. Susie Taylor was born and raised in Memphis, Tennessee. She received a Bachelor of Science degree from the University of Tennessee, Knoxville and her doctorate from the Mississippi State University College of Veterinary Medicine in 1983. Dr. Taylor was the 2014 recipient of the Mississippi State University CVM President's Pegasus Award. She owns a small animal practice in Bartlett, Tennessee, and has a family farm outside of Oakland, Tennessee, where she raises Angus cattle. Dr. Taylor is a CVM Pegasus Partner.



Lynn Spruill is a native of Starkville, Mississippi. She is a graduate of Mississippi State University where she earned a Bachelor of Science in business in 1974. She received her JD/MPA joint degree from Georgia State University in Atlanta, Georgia. Spruill is a former United States Naval Officer and pilot, Mayor of Addison, Texas, and pilot for Delta Air Lines. She co-owns and manages Spruill Property Management and is the Mayor of the City of Starkville. Ms. Spruill is a CVM donor.



Dr. Robert Filgo is a 1988 graduate of Mississippi State University College of Veterinary Medicine. He co-founded All Creatures Animal Care Center in Madison, Mississippi, and is a past president of the Mississippi Veterinary Medical Association. Dr. Filgo was the 2017 College of Veterinary Medicine Alumnus of the Year. His practice has accepted many CVM externs over the years. In his spare time, he enjoys outdoor activities with his wife, Courtney, and their three daughters.



Karen McCord is a graduate of Mississippi College and holds a Bachelor of Science in Accounting. She is an accountant for Reed Food Technology in Pearl, MS. McCord and her husband established the Karen J. and John G. McCord Endowed Scholarship Fund and have supported numerous other MSU CVM projects, including the recent remodeling of two of the College's overnight suites made available to guest speakers, visiting professors and other friends and supporters of the College.



OUTSTANDING SURGICAL TRAINING

Point of Pride for College

To say that surgical training begins in one's first year of veterinary school might seem a bit farfetched; however, in reality, that's exactly what happens at MSU CVM, where anatomy course instructors—who are themselves veterinarians with surgical experience—address the important and surgically relevant structures in a wide variety of species.

In year two of the College's DVM curriculum, students complete didactic courses to learn many surgical procedures in large and small animals, as well as participate in a laboratory course to learn surgical principles, tissue handling, hemostasis, operating room protocols, surgical instruments, and anesthesia principles and techniques. Also, in their

second year, MSU CVM students participate in a second-year surgery course, where they begin performing spay and neuter procedures on shelter animals under the direct supervision of clinical professors.

According to MSU CVM Associate Professor and Surgery Chief Dr. Michael Jaffe, this second-year surgery course is an experience offered at very few veterinary schools and is one reason the College's DVM graduates are practice-ready on day one.

"The second-year surgery course at MSU is a strong recruiting tool. There aren't many other schools that start students in

...our students are able to gain a wealth of valuable, hands-on surgical experience prior to graduation; therefore, they require little to no 'hand-holding' in the OR when they enter the workforce.

— DR. MICHAEL JAFFE

the OR in their second year of study," Dr. Jaffe said. "By doing so, our students are able to gain a wealth of valuable, hands-on surgical experience prior to graduation; therefore, they require little to no 'hand-holding' in the OR when they enter the workforce."

During clinical training, which is years three and four at MSU CVM, DVM students complete rotations where they continue to learn and practice surgical skills, diagnoses, and postoperative care. Two of these rotations, shelter medicine and community veterinary services, emphasize surgical procedures routinely performed in general veterinary practice. Then, when students move into the small animal surgery rotation, they receive training related



to soft tissue and orthopedic procedures. They also work with faculty surgeons and residents while on neurology, equine, and food animal medicine rotations.

Dr. Jaffe noted that students may also complete several elective courses where they can obtain additional surgical training and experience, as well.

"As a result of these rotations, most of

our students graduate having completed at least 50 surgeries. And, those who also take the surgical electives obviously have even more hands-on experience in the OR," Dr. Jaffe said. "This is why our students are so well-prepared to handle surgical cases following graduation. I think our College really sets the bar in this area!"

As a result of these rotations, most of our students graduate having completed at least 50 surgeries.

— DR. MICHAEL JAFFE





KEEPING PATIENTS COMFORTABLE Thanks to the MSU CVM Anesthesia Service

Pain. The goal is generally to avoid it. That's where the knowledge and expertise of pain management experts like those in the MSU CVM Anesthesia Service are able to positively impact the lives of scores of animals on a daily basis. From traumatic injuries to routine procedures and through complicated surgeries, this well-trained team prides itself in ensuring CVM patients experience as little pain as possible while receiving the lifesaving or life-improving medical care needed.

According to Anesthesia Service Chief Dr. Simone Hinz, the College's anesthesia service provides sedation, general anesthesia, regional anesthesia, and acute pain management to more than 2,000 patients requiring surgical or diagnostic procedures each year, servicing both the large animal and small animal services of the MSU CVM Animal Health Center. The team is also responsible for teaching the concepts and applications of anesthesia to second- and third-year veterinary students and veterinary technology students.

"While rendering these services and teaching students, we work closely with the College's many different specialty services to provide an interdisciplinary approach to pain management," Dr. Hinz said, noting that she and Drs. Robert

Meyer and Claudio Natalini serve as attending doctors for the service, which also currently has one anesthesia resident.

While any licensed veterinarian is qualified to administer anesthesia to their patients, only individuals who are Diplomates of the American College of Veterinary Anesthesia and Analgesia (ACVAA) are board-certified specialists. To become an ACVAA diplomate, an individual must hold a Doctor of Veterinary Medicine (DVM/VMD or foreign equivalent) degree, have completed a 12-month general internship or equivalent training, completed training in an approved ACVAA residency program in the field of anesthesia and analgesia, and have passed the ACVAA certifying examination. Both Drs. Meyer and Natalini hold ACVAA certification.

Hinz said the service's support staff is also highly skilled and extremely talented. "We are quite proud that all of our technicians have completed the veterinary technology program here at MSU and are certified veterinary technologists. Our senior technician also holds Academy of Veterinary Technician in Anesthesia and Analgesia certification," she said. "They do a great job for us in the OR and are actively involved in student learning," she said.

Patients require anesthesia for a variety of reasons. It is obviously required for surgery or various medical procedures such as endoscopies, but Dr. Meyer said because animal patients don't behave as humans, anesthesia is also needed for less invasive procedures like dental prophylaxis or diagnostic procedures such as CT or MRI.

"We provide anesthesia to various species, ranging from dogs and cats to horses and cattle and exotic species such as birds and big cats, and they often require very different ways of administering it," Dr. Meyer said. "We administer general anesthesia with inhalant anesthetics as well as total intravenous anesthesia and sedation. Pain management is of critical importance to us, and we keep our patients comfortable through systemic medications as well as local and regional nerve blocks."

"In addition, we use advanced monitoring equipment and technology to keep our patients as safe as possible," Dr. Meyer continued.

According to Dr. Natalini, the team employs a variety of equipment, such as ventilators, syringe pumps, fluid pumps, and nerve stimulators, depending upon each patient's needs. "We have recently incorporated ultrasound-guided nerve blocks to improve analgesia both intra- and postoperatively," Dr. Natalini said. "We also have a state-of-the-art Tefonius large animal anesthesia machine/ventilator, allowing us to provide superior inhaled anesthesia and ventilation support to our equine and bovine patients."

The College's relationship with Cedar Hill Animal Sanctuary in Columbus and the Institute for Marine Mammal Studies in Gulfport frequently requires the anesthesia service to work with species such as large exotic cats, dolphins, sea turtles, and sea lions.



"It's always interesting—and sometimes challenging—to work with exotic and marine species such as these," Dr. Natalini said. "However, your most challenging cases are often your most rewarding cases. Working with these animals, especially the sea lions at IMMS which present important physiologic differences from other mammals, is a really cool experience, and it's a wonderful learning opportunity for our students."

MSU CVM students do receive a wealth of outstanding textbook and hands-on learning in anesthesia and analgesia. "We are involved in physiology lectures for first-year DVM students and anesthesia lectures and labs for second-year DVM students, and we provide lectures for the veterinary medical technology program," Dr. Hinz said. "Labs in the second year here at MSU CVM actually allow for DVM students to participate in surgery, which is their first exposure to and work in the OR. I love to see the transformation from the beginning to the end of these labs."

Third-year DVM students and senior veterinary medical technology students complete a four-week rotation in the surgical unit of the College's Animal Health Center, specifically for hands-on anesthesia training. During this rotation, DVM students get primary case responsibility, meaning they are assigned a case to study, come up with an anesthetic plan, and then provide anesthesia to the patient—under supervision, of course.

"There is a lot of hands-on learning, which the students really enjoy. By the time they are finished with this rotation, they must be able to plan and provide anesthesia to a routine case without any help; we call this a threshold event," Dr. Natalini said. "It can be stressful when they first join us, but by the time they complete their threshold event, students are confident in their skills and really have a feeling of accomplishment."

"I love teaching and observing students evolve," he continued. "When our students graduate, they are ready to practice; the amount of exposure they receive prepares them as professionals. They may not realize that during their training, but after 30 years of teaching, I am completely confident we prepare them very well."

"Anesthesia is more than just using drugs to get animals to hold still. It is where surgery, medicine, physiology, pharmacology, and clinical pathology all come together in real time," Dr. Meyer said. "With a good understanding of those disciplines, students realize they can get 'under the hood' and manipulate events to the advantage of the animal and the success of the procedure."



SMALL ANIMAL SURGERY RAISES THE BAR

Hearing the word “surgery” can be frightening—especially when it’s regarding a beloved pet. Veterinary surgeons understand this and pride themselves in providing outstanding care for their patients as well as offering pet owners the information and reassurance they need to feel comfortable and confident placing their pet in the surgeon’s hands. Members of the MSU CVM Animal Health Center Small Animal Surgery Service are committed to ensuring their patients and clients have this type of experience.

“The excitement that comes from safely and successfully seeing a patient through surgery is one that never gets old,” MSU CVM Surgery Chief Dr. Michael Jaffe said. “To be able to alleviate the owners’ fears and return their pet to good health is very rewarding.”

Dr. Jaffe and his team of attending veterinary surgeons, residents, and interns spend their workdays doing this very thing, while teaching MSU CVM DVM students the skills they need to graduate and do the same.

Each year, the MSU CVM Small Animal Surgery Service trains three full-time small animal surgical residents and a specialty surgical intern and contributes to the advanced education of six small animal rotating interns. They also educate each DVM class of about 95 students per class during years three

and four, as well as spend a great deal of time working with second-year students in their surgery labs where they learn basic techniques and perform multiple spays and neuters.

Dr. Jaffe has a personal interest in small animal orthopedics; however, other faculty members have a variety of expertise and interests, so the service is capable of handling all types of surgical cases.

“We have cases referred to us from throughout the state as well as the southeastern region,” Dr. Jaffe said. “Our service performs several hundred surgeries yearly, including general soft tissue, orthopedic, and emergency surgeries. We are especially proud of the minimally invasive surgical options we are able to offer, including laparoscopy, thoracoscopy, arthroscopy, and minimally invasive fracture repairs.”

According to the service chief, the College has generously invested hundreds of thousands of dollars to provide its animal hospitals and students with the latest and best surgical equipment. “We are very proud to offer advanced scoping equipment, fluoroscopy, and an elaborate camera system in each of our surgery suites to further our goals of teaching students and providing state-of-the-art care to our patients,” he said.

“The track record the service has for training residents and students who are excellent surgeons speaks for itself.”

— MSU CVM ASSOCIATE DEAN DR. RON MCLAUGHLIN

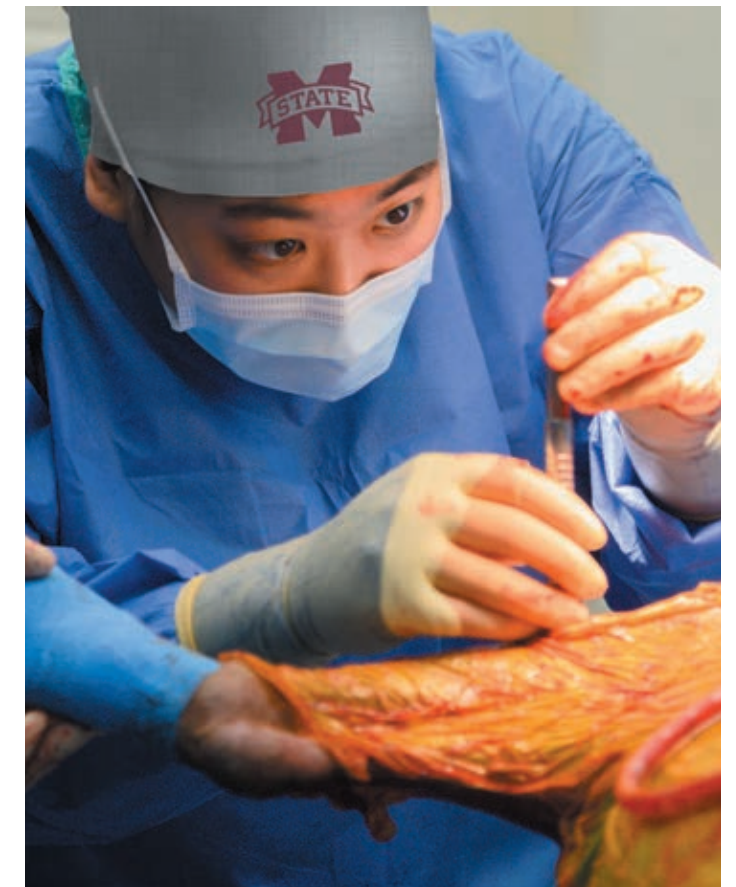
MSU CVM Associate Dean Dr. Ron McLaughlin, who is also a professor of surgery, said the MSU CVM surgery team is experienced, dedicated, and focused on providing high-quality patient care, friendly client service, and excellent teaching.

“As an insider, I get to see the hard work, passion, and dedication the surgery faculty, staff, and house officers put into doing their jobs well,” Dr. McLaughlin said. “The sacrifices each member of this team makes to ensure each patient receives the best care and each student receives the best education is truly remarkable. The track record the service has for training residents and students who are excellent surgeons speaks for itself.”

Dr. McLaughlin said a quote applicable to the specialty suggests, “Improve your skills not just until you get them right but until you can’t get them wrong.” It’s a goal worthy of achieving, and most who excel as surgeons, definitely have this tendency toward perfection.

Small animal surgery patients are definitely in good hands at MSU. However, according to both Drs. McLaughlin and Jaffe, it requires much more than just the work of skilled surgeons for surgery to go well. “As surgeons, to do our job well, we need the support of many other specialties. We work very closely with the anesthesia staff who help keep our patients safe and comfortable through surgery and afterwards. We also work very closely with our diagnostic imaging, pathology, and internal medicine services in diagnosing and working up challenging cases to come to the correct diagnosis, allowing us to plan the appropriate procedure,” Dr. Jaffe said.

In addition to surgical procedures, the small animal surgery team also helps run the small animal rehabilitation service where post-operative patients receive the care and physical therapy that gets them back to feeling like their old selves as they recover from injuries. “We have a full-time staff of credentialed rehab technicians that performs this vital function under the guidance of our doctors to help dozens of animals recover from their injuries on a weekly basis,” the service chief said.



One of the strong suits of the CVM’s small animal surgery service is the outstanding technical staff. “Our technical staff is top notch. From our surgical technicians, to the OR staff who keep things moving through each operation, to the staff that sterilizes, repairs, and cares for our surgical instruments, to the rehab technicians and ICU staff that work with patients post-op, everyone involved with training our students and caring for our patients has the highest qualifications,” said Dr. Jaffe.

Regarding training DVM students, Dr. Jaffe said it’s one of the most enjoyable parts of his job. “The role the small animal surgery team and I play in preparing DVM students as surgeons is one I take great pride in. Experiencing things that are common to me through their eyes for the first time and witnessing their excitement and enthusiasm is very rewarding,” he said.

“The opportunity to teach students is why most of us are here in academia rather than in more lucrative private practice positions,” Dr. McLaughlin added. “Our students are great to work with because they are passionate about their education and about becoming excellent veterinarians.”

“The students at MSU CVM are among the brightest and nicest people I know,” Dr. Jaffe said. “I am so excited to see the amazing accomplishments they will bring to the field. The next generation of veterinary medicine is in great hands!”

MEET the FACULTY



DR. MELODY WHITNEY

Clinical Instructor, Department of Clinical Sciences

Dr. Melody Whitney joined the MSU CVM faculty in July as a clinical instructor in small animal surgery. Dr. Whitney received her Bachelor of Science in biomedical sciences from Texas A&M University in 2012 and earned her VMD from the University of Pennsylvania in 2016. After graduation, Dr. Whitney completed two internships with Blue Pearl before completing a small animal surgery residency at MSU CVM.



DR. STEPHEN REICHLEY

Assistant Clinical Professor, Global Center for Aquatic Food Security and Department of Pathobiology and Population Medicine

Dr. Stephen Reichley returned to MSU CVM in August as an assistant clinical professor in pathobiology and population medicine after spending three years with Clear Springs Food in Idaho. Dr. Reichley graduated from the University of Findlay in 2009 with a Bachelor of Science in pre-veterinary medicine and biology and a minor in chemistry. He earned his DVM from The Ohio State University College of Veterinary Medicine in 2013 and received his PhD in veterinary medical science from MSU CVM in 2017. Dr. Reichley is a certified aquatic veterinarian.



DR. MICHAEL PESATO

Assistant Clinical Professor, Department of Pathobiology and Population Medicine

Dr. Michael Pesato received a bachelor of science in pre-veterinary studies and animal science from the University of Findlay, and in 2015, he earned his DVM from MSU CVM. He then completed an internship and residency in food animal medicine at University of Pennsylvania School of Veterinary Medicine in 2018. Dr. Pesato stayed with Penn Vet for two additional years practicing ambulatory medicine before returning to MSU CVM in August to focus on both in-house and ambulatory food animal medicine.

STAFF SPOTLIGHT

IT STAFF RISES TO CHALLENGE, HELPS COLLEGE FULFILL MISSION DURING PANDEMIC



The entire MSU CVM Information Technology staff was honored in August for their outstanding, team effort during the ongoing COVID-19 pandemic. “Our IT team has gone—and continues to go—above and beyond the call of duty to ensure that our faculty, staff, and students are fully prepared for virtual meetings and learning,” MSU CVM Dean Kent Hoblet said. “We are thankful for the top-notch services they provide and for their commitment to their duties every day, especially during this time of unprecedented need.”

Dr. Joey Burt, who oversees the IT service, said that the team never wavered in its designation as essential personnel and has been instrumental in the College’s ability to successfully continue providing an exceptional and uninterrupted educational experience for CVM students.

“The MSU CVM IT service provided stellar assistance as we were rapidly required to shift the educational offerings to virtual or hybrid formats,” Dr. Burt said. “Michael Dawkins led his team to analyze our IT needs, secure the necessary

equipment, and install all updates for easing the transition to these new ‘virtual’ formats.”

MSU CVM Associate Dean for Administration Dr. Ron McLaughlin said the CVM IT staff did a remarkable job of updating the information technology capability at the College when it became necessary to move quickly to online teaching during the COVID-19 pandemic. He also praised the outstanding technical support they provided to faculty and staff during the process.

“Michael Dawkins and his team developed an excellent plan and rapidly got all of our classrooms, conference rooms, and the operating rooms ready for virtual teaching. Their effort allowed us to maintain our teaching programs for the veterinary, technology, and graduate students,” Dr. McLaughlin said. “They also provided outstanding assistance as faculty and staff negotiated this transition. What they accomplished with equipment installation and user education was outstanding and is truly appreciated.”



Winding Career Path LANDS HALL IN MINNESOTA

When MSU CVM alumnae Victoria Hall arrived in Starkville to begin her studies, she had no idea she'd end up with such a diverse career. Dr. Hall, who earned her DVM from MSU CVM in 2014 and completed a concurrent MS in veterinary population medicine in 2015, is now the Patrick T. Redig Endowed Faculty Chair in Raptor and Ecosystem Health and executive director of The Raptor Center at University of Minnesota College of Veterinary Medicine.

"My path has been a winding one, but each step has given me an insight, skill, or lesson and moved me closer to realizing where my passions fall and what impact I want to make on the world," Dr. Hall said. "Joining The Raptor Center has been exciting because it combines all of my passions: educating and training students, professionals, and the public; veterinary medicine; wildlife rehabilitation; using science and research to inform conservation or public health action; and using wildlife as a platform to bring some much-needed inspiration and hope into the world."

According to Dr. Hall, each day at The Raptor Center brings a new experience. "Every day is different. Our hospital treats and rehabilitates around 800 raptors a year using innovative techniques while running a veterinary training program," she

said. "Our education team uses our 30 education ambassador raptors to teach and inspire over 100,000 people a year with ecosystem health and conservation messages. And, we have a dedicated community of 300 volunteers that helps enable our mission every single day."

As a part of the University of Minnesota, Dr. Hall said the center also conducts research into new veterinary and rehabilitation techniques for wildlife, as well as on larger ecosystem health and conservation topics.

Dr. Hall has continually grown her knowledge, experience, and career since coming to Mississippi State and entering the veterinary profession. As an undergraduate, she spent a semester studying abroad in rural Kenya where she did wildlife management research. There, she says she was "bitten by the bug" of how to use veterinary medicine to help impact entire populations of animals, as well as how to use her skills to help communities of people around the world. After she matriculated into the CVM through the College's early entry program in 2010, Dr. Hall led in founding the College's Vet Camp Program, a summer camp for 13-17-year-olds that has continued to grow and now accepts students from across the country.

"The large amount of externship time in the MSU CVM curriculum is essential to the success of graduates; it's something I hope is protected long into the future."

— DR. VICTORIA HALL

As an MSU CVM student, Dr. Hall also spent time with the Food and Agriculture Organization (FAO) of the United Nations in Vietnam and Italy working on emerging diseases; with the USDA assisting in development of international animal health capacity-building programs; and with the US Navy as a civilian member of the Pacific Partnership mission to build agricultural response capacity in the South Pacific Islands.



"While a student, I was able to experience many types of veterinary medicine. MSU CVM supported my passions every step of the way, being flexible with off time and externship time and recognizing that veterinary medicine exists in many forms besides purely clinical medicine," she said. "Each of these experiences taught me something different. The large amount of externship time in the MSU CVM curriculum is essential to the success of graduates; it's something I hope is protected long into the future."

Dr. Hall said MSU encouraged her to think globally and challenged her to think about how she could use her agriculture and veterinary training to make a larger impact on the world. Since graduation, she has used her many experiences in a variety of roles.

Following a year of private practice in Cincinnati, Ohio, Dr. Hall was awarded a highly competitive, two-year residency as an epidemic intelligence officer with the Centers for Disease Control and Prevention (CDC). There, she was part of a group of predominantly physicians, scientists, and a handful of veterinarians and served as a frontline response "Disease Detective," responding to infectious disease outbreaks such as measles virus, multidrug resistant tuberculosis, and Zika virus.

In 2018, Dr. Hall was selected to become the very first veterinary epidemiologist in the Wildlife Health Sciences Department at the Smithsonian's National Zoo and Conservation Biology Institute in Washington, DC.

"In DC, I worked to use epidemiology to increase care of animals in our facility and at zoos across North America, help with conservation efforts in captive and wild settings, and help build capacity in front-line conservation professionals around the world," she said. "I also served the larger Smithsonian Institution as the deputy public health officer for the Smithsonian COVID-19 Response Task Force, working to protect over 6,000 employees and 2,700 animals during the pandemic."

Dr. Hall has now transitioned to a career in higher education in her new roles at the University of Minnesota.

As executive director at The Raptor Center, she oversees the center as it provides veterinary medicine and rehabilitation for raptors, front-line research on new veterinary techniques and larger ecosystem health challenges, professional training programs and education, and outreach programming to the global public. As endowed faculty chair, she works within the overall university on larger ecosystem health projects, including COVID-19 in domestic animals and wildlife and global zoonotic disease concerns. She also has the opportunity to lecture and work with veterinary students and veterinary interns.

"Being a veterinarian is so incredibly exciting because the skill set gives you endless possibilities. By learning how to think critically and innovatively, clearly communicate with people, problem solve in times of limited resources and so much more, veterinarians graduate with skills that can be applied to so many fields," Dr. Hall said. "My veterinary experience has taken me around the world, landed me on a US Navy ship, led me to spend time in clinical practice treating cats and dogs, as well as in East Africa working on how to raise healthier cattle. I have done contact investigations for human cases of tuberculosis and have trained disease responders on how to wear personal protective equipment."

"And now, I have the joy of teaching this same varied skill set to the next generation within the profession, as well as helping educate those outside the profession about the importance of wildlife rehabilitation and conservation," she continued.

While Dr. Hall is excited about what lies ahead, she said no matter where she goes or what she does, MSU and the CVM will always be with her.

"The faculty, curriculum, and hands-on learning experiences at MSU CVM are phenomenal, and I'm thankful for the incredible support structure I have even years after graduation," she said. "My time there provided the foundation for me to accomplish all that I have thus far. I'm so thankful for the family I gained and the well-rounded education I received at MSU CVM!"



CVM PROCESSES UNIVERSITY'S COVID-19 TESTS

One of the most critical components of managing the spread of COVID-19 is testing; however, last fall, access to reliable and rapid testing was lacking for those in the Starkville-MSU area. Therefore, MSU President Dr. Mark Keenum called on an experienced team of researchers and diagnostic laboratory personnel at MSU CVM to partner with medical personnel at Longest Student Health Center (LSHC) to get the job done effectively and efficiently for the University.

MSU CVM leaders worked fervently to quickly order and install the required additional equipment and supplies to expand capacity and meet CDC Clinical Laboratory Improvement Amendments (CLIA) regulations to meet human testing standards.

Once CLIA approval was received and the infrastructure was in place, LSHC staff began sending samples from nasopharyngeal swabs collected from patients in sealed tubes via courier to sample receiving in the CVM's diagnostic laboratory where laboratory personnel record their identification into the College's computerized accession system. The tubes are then transported to the modular biosafety level 2 laboratory located south of the Morgan Freeman Equine Center (or to the Mississippi Veterinary Research and Diagnostic Laboratory in Pearl if necessary due to volume of testing). There, polymerase chain reaction, or PCR tests, considered the "gold standard" for COVID-19 tests by the U.S. Food and Drug Administration, are conducted. Results are entered into the CVM's computerized system and then transferred back to physicians at the Longest Student Health Center.

According to Dr. Stephen Pruett, the College's former interim associate dean for research and graduate studies, who oversees the team processing the samples, many CVM faculty members do some type of work involving PCR testing in their research, and the College also has a number of researchers who work with biosafety level 2 pathogens.

"Because the techniques are the same, this proved advantageous when setting up the lab and recruiting the personnel to run it," Dr. Pruett said.



"We are very pleased that our College of Veterinary Medicine is able to offer PCR testing for Mississippi State," said Reuben Moore, interim vice president for the Division of Agriculture, Forestry and Veterinary Medicine. "This is a huge contribution to our efforts in fighting the spread of COVID-19 here on campus. It also contributes to our ability to allow our students to have an on-campus experience rather than our courses only being offered virtually. We appreciate the faculty, staff, and administrators of CVM for their work in facilitating this testing capability."

PCR tests were previously processed by outside private labs with varying wait times as demand fluctuated when the health center initially began testing patients for COVID-19 last spring. CVM laboratory personnel can process up to 350 tests per shift on campus, drastically reducing wait times.

Diagnostic testing is a major part of CVM's service to the state as the college operates four labs which provide surveillance and diagnostic testing for the state's practicing veterinarians, individual producers, pet owners, and the livestock, aquaculture, and poultry industries.

In addition to COVID-19 testing capacity at CVM in Starkville, samples are also analyzed by CVM personnel at the MVRDL in Pearl if needed. During the pandemic, MVRDL staff have assisted the Mississippi State Department of Health with processing to expand their capacity.

"These are opportunities to help serve the university and our state. Since the start of the pandemic, our people have been working and continuing to provide their services," said CVM Dean Dr. Kent Hoblet. "Our goal is to try and keep the university operating as close to normal as we can. We are honored to provide the scientific expertise and facilities required to conduct this vital component of helping protect the health and well-being of our University family and fellow Mississippians."

SMITH NAMED INTERIM ASSOCIATE DEAN FOR RESEARCH AND GRADUATE STUDIES



Dr. David Smith, Hall-Davis Endowed Professor in the MSU CVM Department of Pathobiology and Population Management, was named interim associate dean for research and graduate studies in September.

Dr. Smith earned his DVM from The Ohio State University (OSU) College of Veterinary Medicine in 1983 and a PhD from OSU in 1997. He joined the

MSU CVM faculty in 2012 as the College's beef program leader, following a 15-year stint at the University of Nebraska-Lincoln School of Veterinary Medicine and Biomedical Sciences. Prior to that, Dr. Smith served as a graduate research associate and clinical instructor at OSU Department of Veterinary Preventive Medicine and Ohio Agricultural Research and Development Center, respectively. He was in private practice at Spring Meadow Veterinary Clinic, Inc., in Ashland, Ohio, from 1983-1992.

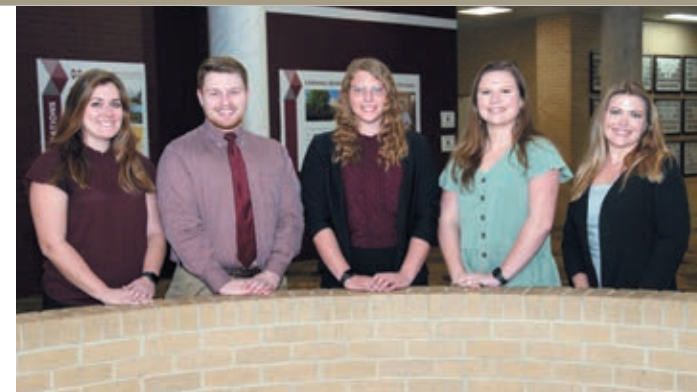
Dr. Smith is a member of the American Veterinary Medical Association (AVMA), American Association of Bovine Practitioners (AABP), Academy of Veterinary Consultants,

American Association of Extension Veterinarians (AAEV), and Conference of Research Workers in Animal Disease. He is a diplomate of the American College of Veterinary Preventive Medicine (ACVPM), and ACVPM-Epidemiology Specialty. He is a past president of the AAEV and the ACVPM- Epidemiology Specialty.

A member of the MSU CVM DVM-PhD Advisory Committee since 2019, Dr. Smith also serves on the AVMA Committee on Antimicrobials and AABP Committee on Biological and Pharmaceutical Issues. He is a previous member of the USDA Secretary of Agriculture Committee on Animal Health and AVMA Food Safety Advisory Committee and has been honored with the AABP Award of Excellence, ACVPM Hellwig-Jennings Award, and University of Nebraska Foundation Wendell Burgher Beef Industry Award.

"Dr. Smith is a highly respected researcher and professor, who represents MSU CVM well on a regional and national basis. We are fortunate to have him serve our College in this capacity," MSU CVM Dean Kent Hoblet said. "He works well with his peers and CVM students, and he definitely has the background and qualifications needed to fulfill the duties of this position. I know he will do an outstanding job."

COLLEGE'S VBMA CHAPTER RECOGNIZED



While the chapter did not win Chapter of the Year, the National VBMA board sent a letter recognizing them for the nomination and their hard work throughout the year.

The students were nominated for this award by their regional leader and chosen out of all 34 accredited veterinary colleges in the U.S. and Caribbean. They were selected based on success in keeping the association members, regional leader, and national leaders updated efficiently, while also putting forth tremendous effort in helping leaders via various forms of communication such as email, text, phone calls, Facebook, and other such methods.

According to MSU VBMA Chapter Advisor Dr. Joey Burt, these officers went above and beyond to ensure that communication within the chapter as well as among its many target audiences was organized, timely, and efficient. "VBMA provides our students essential skills that are the foundation for solid business careers throughout their professional veterinary life. These attributes allow graduates to immediately impact both their personal financial success and the success of the practices they join," he said. "These officers have done an outstanding job for our chapter and are destined to excel in their careers."

In January, the MSU CVM chapter of the Veterinary Business Management Association (VBMA) participated in the virtual VBMA National Meeting, where they learned how to best support members and how to better implement a quality business education outside of the classroom.

This year's VBMA National Meeting was special in that the MSU chapter was nominated for two awards: the Communication Excellence Award and the Chapter of the Year Award. The chapter came home with the Communication Excellence Award thanks to the hard work of chapter officers Amanda Rowe-Fowler, Kaylynn Cantrell, Zoey Stump, Caylin Potter, and Logan Tucker.

SAVING DENO'S SIGHT



In the life of a show pony, looks are important. When Stephen and Melissa Thomas' pony, Deno, suffered an injury to her eye while traveling to a horse show, they knew that they had to try to save her eye.

Deno, officially known as Rollingwoods Undeniable, is the pride and joy of Stephen and Melissa's daughter, Ransom. The Tyler, Texas, family purchased Deno two years ago for Ransom to show across the Southeast.

Following the accident and upon arrival to the MSU CVM Animal Health Center, it seemed as if Deno would lose her eye—abruptly ending her days as a show pony. Therefore, the MSU CVM ophthalmology team and Deno's family began exploring options to remove her eye and fit her for a prosthetic.

"Deno presented to us with trauma to the cornea of her eye. We assessed her, and it appeared she had no vision whatsoever, so we recommended removal of her eye," said MSU CVM Assistant Clinical Professor Dr. Becky Telle, who is a veterinary ophthalmologist. However, while she was hospitalized, awaiting transfer to another facility for the prosthetic eye, further evaluation showed she was healing and actually had

some vision. Therefore, after talking it thru with her owners, we elected to do surgery to repair the cornea and put a graft over it."

After surgery, Deno spent a few days in recovery at the Animal Health Center before returning to Texas to be with her family. While she recovered, the students assigned to Deno's case provided daily updates to the Thomas family—and even sent Ransom a care package complete with a card and hoofprint from Deno as well as an MSU CVM sweatshirt.

Since her discharge, Deno's recovery has continued, and her sight post-operation has even continued to improve. Ransom is back in the saddle, and Deno is back in the show ring with her.

"MSU CVM worked a miracle!" Melissa said. "Several very competent veterinarians said that saving her eye was not an option, that there was just too much damage, but the experts at MSU never gave up and saw hope where others saw none. They saved her eye, and on top of that, we got the added bonus of her regaining some of her sight!"



CVM TEAM MEMBERS HONORED BY DAFVM



The MSU Division of Agriculture, Forestry, and Veterinary Medicine honored a CVM faculty member and support staff member at the division's annual awards celebration last fall.

Dr. Amelia Woolums, a professor in the College's Department of Pathobiology and Population Management, received the Regions Bank-DAFVM Superior Faculty Award for Research. Dr. Woolums, who earned her DVM from Purdue University in 1988, an MS from University of Saskatchewan in 1991, and her PhD from University of California-Davis in 1998, joined the MSU CVM faculty in 2015. Her research portfolio focuses on three main areas of bovine respiratory disease (BRD): immune response to BRD, mechanisms of action and efficacy of BRD vaccines, and neonatal calf immunity and response to vaccination; it is recognized nationally and internationally by food-animal veterinarians.

"Bovine respiratory disease has long been considered the most economically important disease within the U.S. cattle industry, and Dr. Woolum's innovative and collaborative approaches have greatly enhanced the understanding and management of this disease," said MSU CVM Interim Associate Dean of Research & Graduate Studies and Hall-Davis Endowed Professor Dr. David Smith. "However, the impact of her work extends far beyond just research numbers and findings. Her collaborative nature and willingness to share her knowledge with others, particularly practicing veterinarians and students, truly set her apart," Dr. Smith continued.

Dr. Woolum's research during the past few years has been funded by organizations such as the USDA National Institute of Food and Agriculture, the Bill and Melinda Gates Foundation, and the U.S. Department of Defense. She has served as a panel manager for USDA grants and served on the National Cattlemen

Beef Association, American Association of Bovine Practitioners, and Academy of Veterinary Consultants animal health and wellness committees. Dr. Woolums is double-boarded in both internal medicine and veterinary microbiology and currently serves as both president of the American College of Veterinary Microbiology and president of the Conference of Research Workers in Animal Diseases.



Lanette Jordan, an anesthesia technician in the Animal Health Center, was honored with a Louis and Doris Wise Support Staff Award in the technical/paraprofessional category. Jordan, who joined the AHC staff six years ago, serves as the anesthesia service's senior technician, is a graduate of the College's veterinary technology program, and holds Academy

of Veterinary Technicians in Anesthesia and Analgesia certification. She was recognized for her positive attitude and organizational skills, providing excellent patient care, and for the role she plays in helping educate DVM and veterinary technology students.

"Lanette is a solid employee who is extremely organized and who has a positive influence on those around her. She does an outstanding job handling our supplies and equipment, as well as serving as course co-coordinator for the VMT students," MSU CVM Professor and Anesthesiology Service Chief Dr. Simone Hinz said. "Her skills, knowledge, willingness to help others, and dedication to the college and university make her an invaluable employee and a very worthy recipient of the Louis and Doris Wise Support Staff Award."

Congratulations to these two outstanding members of the CVM family. We truly appreciate your commitment and hard work!

REICHLEY NAMED 2021 WAVMA PRESIDENT



Dr. Stephen Reichley, who joined the CVM faculty in August as an assistant clinical professor for the Global Center for Aquatic Food Security & the Department of Pathobiology and Population Medicine, has been elected the 2021 president of the World Aquatic Veterinary Medical Association (WAVMA).

A global resource for aquatic veterinarians, WAVMA is committed to enhancing aquatic animal health and welfare, public health, and seafood safety in support of the veterinary profession, aquatic animal owners and industries, and other stakeholders. It is the largest international aquatic animal health organization

and administers the globally recognized Certified Aquatic Veterinarian (CertAqV) credentialing program.

A certified aquatic veterinarian, Dr. Reichley earned his DVM from The Ohio State University in 2013 and his PhD in veterinary medical science from MSU in 2017. He specializes in aquatic animal and population health and is actively involved with the College's ever-expanding aquatic animal medicine program, which in recent years has expanded from predominantly freshwater aquatics to include marine animal medicine, as well.

Dr. Reichley and eight other veterinarians representing countries across the globe comprise the WAVMA Executive Board. He has been a WAVMA member since 2010, served on numerous committees, and has been a member of the Executive Board since 2016. His term as president began January 1.

COLLEGE LAUNCHES NEW ENHANCED CLINICAL PRACTICUM PROGRAM

MSU CVM has long prided itself on the outstanding curriculum provided its students, which is routinely praised for preparing them to be practice-ready on day one. And now, College leaders are pleased to announce the addition of a new program created to further prepare our students as well as to meet some key demands within the veterinary profession.

Officially designated the enhanced clinical practicum program (ECP), this new rotation will include two four-week core clinical practice experiences to third- and fourth-year veterinary students at the College. It will provide opportunities for them to enrich their clinical skills in a private setting, while enhancing other skills such as client communications and business management.

According to MSU CVM Professor and Beef Extension Veterinarian Dr. Carla Huston, director of the ECP program, with a more well-rounded and comprehensive education involving real-world veterinary practice experience, students will be even better prepared as new graduates.

“There is nothing that can replace actual experience in the field,” Dr. Huston said. “It’s been said many times, but actually walking in someone’s shoes is the only real way to fully understand and appreciate what they do. In addition, knowing what to expect may also lead to less stress and anxiety for new grads.”

Dr. Huston noted the ECP program will also allow MSU CVM to expand its professional program by increasing class size without an additional burden on faculty and facility resources.

The program is slated to begin in 2023 with the class of 2025—this year’s incoming class. “We are currently in the pilot stage, enrolling clinics and students to help establish and evaluate program standards,” said Dr. Huston. “We will use the next two years to refine program policies and requirements before it becomes a mandatory component of our veterinary curriculum.”

There are currently 12 practices enrolled in the pilot program, 10 of which are in Mississippi. Most of the practices are mixed



Students in the ECP program will work with veterinary staff in all areas of patient management. Shown here is DVM student Katie Sanford, a participant in the 2021 ECP pilot program, with Dr. Paul Calhoun (DVM 1986).

animal practices, with the College’s intentions being to increase the awareness of rural veterinary practice. Over the next year, plans are to expand into states where the CVM has developed professional veterinary education relationships such as West Virginia, South Carolina, and Arkansas, as well as to increase the number of participating small animal practices.

Dr. Huston said criteria for practice participation is based upon a clinic’s ability to provide a safe and adequate learning experience for the students according to American Veterinary Medical Association Council on Education accreditation standards, and the practice owner(s)/veterinarian(s)’ willingness and ability to devote time and resources to student learning objectives. She noted that most situations will require a multi-doctor practice to meet the time and caseload necessary to successfully

train the assigned student; however, any practice meeting the standards with the ability to mentor and educate students will be considered.

According to MSU CVM Dean Dr. Kent Hoblet, several colleges in the US have adopted this type of distributive veterinary clinical education model, which utilizes off-campus clinical sites in place of a veterinary teaching hospital.

“What is unique about the MSU CVM model is that we will be utilizing a hybrid distributive program through the enhanced clinical practicums, combining our traditional DVM clinical rotations with the new off-site practicums,” Dr. Hoblet said. “This will give our students the best of both worlds by combining our rigorous, on-site training with highly trained and specialized faculty and facilities with the practical and real-world education from the private veterinary practice setting.”

For this new component of the curriculum, students will be matched with practices based on their educational goals and interests, as well as the location of the practice. They will be evaluated in three main categories: professionalism and interpersonal skills, knowledge, and clinical skills.

“It’s been said many times, but actually walking in someone’s shoes is the only real way to fully understand and appreciate what they do.”

– DR. CARLA HUSTON

“We will utilize the RIME (research in medical education) evaluation framework, which evaluates the student’s progression through basic and advanced levels of competency as a clinical reporter, interpreter, manager, and educator,” Dr. Huston said. “This system ensures an objective manner to evaluate each students’ skills, knowledge, and attitude as they matriculate through the curriculum so that third-year students are not graded in a comparative manner to fourth-year students. To ensure consistency and reliability among veterinarians and practices, training on evaluation and assessment will be provided to all practice staff members on a yearly basis or more often if needed.”

Dr. Huston’s knowledge and experience make her an ideal director for this new program, according to Dr. Hoblet. Her background in Extension and rural veterinary practice provides an understanding of the challenges that face communities and their veterinarians regarding the provision of veterinary services. “And, as a faculty member at MSU CVM, she also gets to

“I truly believe this will be beneficial to the students, college, communities, and overall profession.”

– DR. CARLA HUSTON

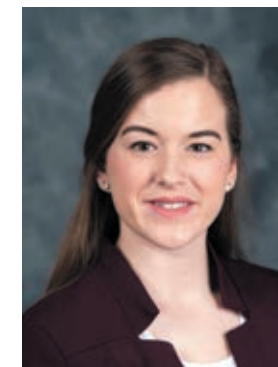
see firsthand the concerns and needs of our students, as well as our faculty and staff,” he said.

“The ECP program is a team endeavor, and I am excited to be able to work with others at the CVM in finding ways to most effectively utilize our personnel and facility resources while providing the best and most well-rounded education possible for our students,” said Dr. Huston. “I truly believe this will be beneficial to the students, college, communities, and overall profession. By graduating more day-one-prepared veterinarians, we are better able to care for animals, people, and the environment.”

TWO CVM STUDENTS NAMED PRESTIGIOUS FFAR VET FELLOWS

Last fall, two MSU CVM students, who are now in their second year of the DVM program, were selected for the Foundation for Food and Agriculture Research (FFAR) summer fellowship program. According to MSU CVM Dean Dr. Kent Hoblet, Cassandra Barber, who is from Morgantown, West Virginia, and Alec Lucas, who is from Center, Texas, have already shown themselves to be excellent students in their short time enrolled at the College. Both participated in the College’s Summer Research Experience, and Hoblet believes they are destined to excel in their careers.

“Cassie and Alec are the type of students we pride ourselves in recruiting to the MSU CVM. They are bright, hard-working, and committed to excellence,” Dr. Hoblet said. “There’s no doubt that they will do very well in whatever area of veterinary medicine they ultimately choose to pursue.”



According to Dr. Amelia Woolums, a professor in the department of pathobiology and population management who is board-certified in both internal medicine and veterinary microbiology and serves as Barber’s mentor, Barber’s research is focused on alternatives for antibiotics for treating bacterial and viral diseases in livestock.

“I am very thankful to the FFAR organization for awarding me this grant,” Barber said. “Dr. Woolums is highly intelligent and an amazing mentor, and I hope to continue to reap the benefits of her mentorship while still at MSU CVM and beyond. I have had a very educational and enjoyable experience in her lab—so much so that I would like to pursue a research-oriented career path!”

Lucas’s research is aimed at developing systems dynamic modeling to reduce antimicrobial use in the cattle industry. His mentor is Dr. David Smith, who is the College’s Mikell and Mary

Cheek Hall Davis Endowed Professor for Beef Cattle Health and Reproduction and currently serves as interim associate dean for research and graduate studies. Dr. Smith is board-certified in veterinary epidemiology.



“It was such an honor to be selected as an FFAR Vet Fellow! Dr. Smith was a fantastic mentor as we created a systems dynamic model of antimicrobial stewardship policies effects in the U.S. cattle industry,” Lucas said. “I am grateful to the FFAR for allowing me to represent MSU CVM in a critical agriculture research organization. I also appreciate MSU CVM administration and the SRE program for enabling us to perform research safely in trying times.”

“Drs. Woolums and Smith are outstanding mentors, as well as fantastic teachers and nationally-recognized researchers,” Dr. Hoblet said. “These two students are fortunate to learn from them and to have their guidance. And, our College is very grateful for all they have done and continue to do to advance our food animal medicine program.”

The FFAR summer fellowship program enables veterinary students to pursue research at the intersection of global food security and sustainable animal production while working with a qualified mentor. Vet Fellows gain valuable experience for their future research and public service careers by working internationally, at academic institutions or with private-sector partners. MSU’s own Dr. Mark Keenum currently serves as chairman of both the FFAR and Board of International Food and Agricultural Development. According to Dr. Keenum, the selection of Barber and Lucas speaks volumes about the quality of education MSU CVM provides.



STONEVILLE LAB BENEFITS CATFISH INDUSTRY

One hundred and thirty-six miles west of Starkville and the Mississippi State University College of Veterinary Medicine sits the small town of Stoneville, Mississippi. Nestled into the Mississippi Delta and its many catfish farms, Stoneville is the perfect location for the Thad Cochran National Warmwater Aquaculture Center and MSU CVM's Aquaculture Research and Diagnostic Laboratory (ARDL).

The state of Mississippi is responsible for more than 55 percent of the nation's commercial catfish industry, and the farms in the Mississippi Delta produce the bulk of that percentage.

Established in 1982, the ARDL is dedicated to the success of Mississippi's commercial catfish industry through service, research, and teaching. Three faculty members who specialize in fish health and their team members strive to support the industry's efforts to produce a high quality, economical and profitable product. The goals of the ARDL are derived from the needs of the industry and aimed at developing management strategies for controlling the impact of diseases that affect profitability.



"The research group at Thad Cochran National Warmwater Aquaculture Center (NWAC) is a collaborative unit between MSU CVM, MAFES, and the USDA-ARS," said ARDL Director and MSU CVM Professor Dr. Lester Khoo. "Researchers at NWAC serve the catfish aquaculture industry, and their work focuses predominantly on management

of important bacterial, parasitic, and viral diseases affecting farm-raised catfish. The majority of fish health management strategies employed by the industry have been developed or validated at Stoneville—from vaccines and medicated feeds to prevent and treat bacterial pathogens, to pond treatments to mitigate snails that transmit damaging parasites, and even molecular tests that can measure the number of parasitic agents present in ponds prior to stocking fish."

Each of the three MSU CVM faculty members operates a laboratory at the ARDL.

Dr. Khoo's lab is responsible for providing diagnostic services for producers and pathology support for research studies. The diagnostic services the Khoo lab provides help producers make informed decisions on the management of diseases on their farms.



The lab of MSU CVM Professor Dr. Patricia Gaunt focuses on aquatic pharmacology and toxicology. Her team helped gain approval for an antibiotic which is now widely used throughout the catfish industry for controlling mortality from bacterial diseases. In collaboration with other members of the Clinical Laboratory Standards Institute, the Gaunt lab is standardizing breakpoints

for antibiotics used in fish throughout the world to help determine whether bacteria are sensitive, intermediate, or resistant to antibiotics. With standardization, there can be

“There are some truly unique characters involved in aquaculture and fish health. There is also tremendous satisfaction working at NWAC, as many of the projects we work on get adopted by Mississippi farmers.”

— DR. MATT GRIFFIN

uniformity throughout the world's diagnostic laboratories in interpreting antibiotic susceptibility results. The Gaunt lab is also working on an FDA project to monitor antibiotic susceptibility of bacteria collected from animals submitted to diagnostic labs in North America. A portion of this project is being coordinated through the CVM's primary reference diagnostic laboratory in Pearl, the Mississippi Veterinary Research and Diagnostic Laboratory, while the Gaunt lab monitors the fish bacteria.



MSU CVM Research Professor Dr. Matt Griffin's lab focuses largely on parasitic and bacterial fish pathogens of significant economic importance in the catfish industry. In addition to the research that occurs daily in his laboratory, his team works closely with scientists at the USDA Warmwater Aquaculture Research Unit on genomic studies of various bacterial and parasitic pathogens.

Through the years, the research group at NWAC has developed a strong collaborative network with many of the most active fish health researchers in the United States.

"We have working partnerships with the University of California-Davis, University of Georgia, Michigan State University, Auburn University, USDA Aquatic Animal Health Research Laboratory, Louisiana State University, University of Florida, University of Prince Edward Island (Canada), United States Fish and Wildlife Service, USDA Cool and Coldwater Agricultural Laboratory, St. George's University (West Indies), Cornell University, University of Minnesota, University of Wisconsin, Montana State University, and many others," Dr. Griffin said. "It's a unique situation because many of the principal investigators at these institutions are former classmates and friends of mine. A group of us that have come through the ranks about the same time have now established programs at our respective institutions, so these relationships and collaborative partnerships have proven beneficial to both the researchers and the regional stakeholders."

"There are some truly unique characters involved in aquaculture and fish health," Dr. Griffin said. "There is also tremendous satisfaction working at NWAC, as many of the projects we work on get adopted by Mississippi farmers. There is an opportunity here to have real impact on an important regional industry."



MSU CVM STRATEGY FOR EXCELLENCE 2020–2025 MISSION STATEMENT:

Our mission is to protect and improve the health and well-being of animals and people . . .

As this statement indicates, our College is committed to not just the health and well-being of animals, but also people, especially our own students, faculty, and staff as well as the extended CVM family of alumni and friends.

Unfortunately, the veterinary profession has had increasing suicide rates for more than 30 years. Based on CDC data, one in six veterinarians have considered suicide. A 2019 *Journal of Veterinary Medical Education (JVME)* article documented that one-third of the veterinary students reported levels of depression and anxiety above clinical cutoffs. Depression and anxiety were associated with non-suicidal self-injury (NSSI), suicidal ideation, and prior suicidal attempts. A 2012 JVME article showed elevated scores of anxiety and depression across all four years, with the third and fourth years being the highest. Contributing factors include perceived physical health, unclear expectations, difficulty fitting in, heavy workloads, and homesickness. Yet another study documented second- and third-year students as having the highest anxiety rates. These numbers are confusing but indicate that mental health is a real concern throughout veterinary school. And these statistics are not limited to only veterinary students; mental health issues are an overwhelming professional concern, as well. Addressing these issues will require broad sweeping cultural change.

MSU CVM is committed to ensuring that our students graduate with not only the best education, but also the self-care skills needed to lead long and happy lives as successful veterinarians. In pursuit of this goal, our wellness initiative is a comprehensive program built on collaboration and woven into every aspect of the College. It is designed to support faculty, staff, and house officers through professional consultation, professional development series, and psychoeducation. It is a preventive, systems-based approach that is inclusive of the



MSU CVM Clinical Psychologist Dr. Pauline Prince

entire CVM community. A multifaceted plan, it addresses needs for teaching and learning, mental and physical health, self-care, communication and interpersonal skills, and disabilities and accommodations.

MSU CVM is an amazing place where miracles happen every day. We have faculty who are passionate about their profession and their students and about sharing their knowledge and expertise. Our students are bright, talented, eager to learn, and passionate about the field. But, like with any medical field or challenging professional career, acquiring the skills and demonstrating them at a consistently high level of professionalism while managing the fragility of life comes with a cost. Often that cost is at the expense of one's own well-being, overall health, and family life.

Acknowledging this challenge is the first step in reaching our goal of successfully managing it. MSU CVM has a vision. Each of us in the College must do our part for it to become a reality, and the support of our extended family is needed, as well. For real change to happen, all of us must be committed to valuing the health and well-being of the people committed to the health and well-being of the animals!

Pauline Prince, Ph.D., ABN

Dr. Pauline Prince
MSU CVM CLINICAL PSYCHOLOGIST

MSU CVM WELLNESS INITIATIVE TAKES SHAPE

When licensed clinical psychologist Dr. Pauline Prince joined the MSU CVM family in the spring of 2019, the College made a commitment to expand its efforts supporting the health and well-being of faculty, staff, and students, as well as to do its part to improve the unsettling mental health statistics within the profession.

Since her arrival, Dr. Prince has worked closely with CVM leaders and faculty to develop what is gradually becoming an outstanding offering of services and facilities specifically for wellness.

“Our wellness initiative is beginning to take shape. I’m really proud of what we’ve accomplished, but I’m even more excited about where we’re headed,” Dr. Prince said.

The College now offers in-house psychological services ranging from individual and group counseling for students to consultation with faculty, staff, and Animal Health Center house officers to psychoeducation and professional development series for students, faculty, staff—and even practicing community veterinarians. A variety of wellness services and programming are offered to promote well-being activities such as mindfulness, meditation, yoga, crisis intervention, and suicide prevention.

“Components for CVM wellness services are designed to be woven into every aspect of the College,” said Dr. Prince. “To be successful, we must develop a comprehensive program that

includes everyone at the College. It must address all areas—from learning and teaching skills, to mental health and physical wellness, to communication and interpersonal skills.”

Thanks to a recent gift (story on page 22), the College will soon have a newly renovated area dedicated to the wellness initiative. The area will feature the offices of Dr. Prince and her interns, as well as a “grab and go” area with high-protein snacks and healthy beverages.

“The space provided by this generous gift is something those seeking our services will benefit from daily. It’s a much-needed and wonderful start to what will ultimately be a fantastic resource for all at MSU CVM,” Dr. Prince said.

Future plans for the area, according to Dr. Prince, include the addition of an activity center and gym, “brain break” room, learning center, and an expanded snack bar. There is also a goal to add green spaces such as a walking trail, butterfly garden, and an area with picnic tables, chairs, gliders, and other outdoor seating on the Wise Center campus. In addition, Dr. Prince hopes to begin a training program for psychology and social work post docs, interns, and graduate assistants who wish to specialize in working in the field of veterinary medicine.

Additional information about the MSU CVM wellness initiative will be provided in the next issue of *Pegasus Press*.

FROGS INVADE CVM TO HELP STUDENTS SUCCESSFULLY COMPLETE FALL SEMESTER

Everyone who has attended college—especially those who have earned an advanced professional degree—understand the impact stress and burnout have on one’s studies as a semester progresses and comes to an end. And, while there are loads of suggestions for stress relief and tons of strategies for avoiding burnout, sometimes just having a little fun turns out to be just what the doctor ordered!

Such was the case when MSU CVM Clinical Psychologist Dr. Pauline Prince initiated a frog invasion in the Wise Center at the end of last semester. After sharing some semester-ending survival techniques with SAVMA, the College’s student chapter of the American Veterinary Medical Association, Dr. Prince decided to lighten things up by using the theme of one of the strategies she provided at that meeting: “Eat that Frog!”

According to Dr. Prince, the concept is from a book written by Brian Tracy that focuses on how to manage procrastination. Dr. Prince said the phrase is attributed to Mark Twain, who supposedly said something like this: “If the worst thing you have to do today is eat a frog, do it first thing in the morning and get it over with—the rest of the tasks for the day will be much easier to accomplish.”

So, as Dr. Prince would have it, the Wise Center was invaded by frogs on a weekly basis during November. She challenged

students with a variety of riddles and rhymes and developed a “frog hunt” for the students that included various types of fidget and novelty frogs hidden throughout the building each week. Frogs could be found near classrooms and labs and in hallways and offices. Then, at the end of each week, certain frogs could be redeemed for a reward from Dr. Prince. Prizes included gift certificates and treats donated by local businesses. All in all, over 750 frogs were hidden, providing a fun distraction—and some much-needed stress relief—for all who participated!



MAGGIE FREEMAN-BISHOP OFFICE FOR HEALTH AND WELLNESS ESTABLISHED

In recognition of World Mental Health Day on October 10, MSU CVM announced the establishment of the Maggie Freeman-Bishop Office for Health and Wellness. The office was created through a gift from Dr. Emily C. Freeman and Ms. Sara J. Bishop to fund the renovation and maintenance of the psychological services office area within the College to support the health and wellness of faculty, students, and staff.

Through the years, Dr. Freeman, who graduated from MSU with a both a Bachelor of Science and Master of Science in geosciences and meteorology, and Ms. Bishop have developed close relationships with the veterinary community and felt it important to help create a safe space for those in the profession dealing with mental health challenges. The two wanted to do so to honor the memory of their pug, Maggie, who passed away in 2019. After learning about MSU CVM's in-



house psychological services, they knew they had found the perfect way to remember their beloved pet.

"We had the privilege of meeting many amazing veterinarians and technicians along Maggie's journey—and each of those encounters has changed us for the better," Dr. Freeman said. "Through Maggie, we have learned and appreciated much about veterinary medicine and



MSU Alumnae and CVM Donor Dr. Emily Freeman and her pug Maggie

the critical importance of empathy and patience. Access to veterinary treatments and medicine—more importantly veterinarians who were incredibly patient-focused—kept Maggie alive for nearly 17 years."

As Maggie aged and her health became complicated, Dr. Freeman and Ms. Bishop found the curiosity, tenacity, and compassion of the numerous teams and specialists that they met with beyond compare. Even though Maggie was one of many complex patients these teams managed, Dr. Freeman said they felt the kindness and compassion of her veterinarians, who agonized, worried, and even cried alongside them.

"We believe veterinarians and clinic staff need a place to take a breath, have a difficult conversation, or have some privacy while dealing with complex information and emotions," said Dr. Freeman. "We hope this gift to MSU CVM will help prepare future veterinarians and staff to handle complex mental health challenges. We cannot think of a better way to honor Maggie's tenacious spirit than to help those that cared for her to take care of themselves."

We cannot think of a better way to honor Maggie's tenacious spirit than to help those that cared for her to take care of themselves.

— DR. EMILY FREEMAN

KHAITSA SELECTED LEAD FOR NEW USDA-FAS GRANT



MSU CVM Professor of Epidemiology Dr. Margaret Khaita has been named the lead for a new United States Department of Agriculture-Foreign Agriculture Service (USDA-FAS) grant. Aimed at facilitating scientific exchanges between Mississippi State University and key players in Africa, the grant will assist in establishing and harmonizing sanitary and phytosanitary (SPS) regulatory measures in Africa for better and safer agricultural trade.

According to Dr. Khaita, the FAS invests in the future of developing countries by helping them strengthen their agricultural institutions and regulatory systems, encouraging compliance with international norms, and fostering an environment conducive to agricultural growth.

The objective of the \$974K grant is to encourage collaboration to create and implement new requirements for secure agricultural commerce throughout the African Union (AU). It will involve a fellowship and exchange program including two dozen African researchers, policymakers, and agricultural specialists who will work alongside their U.S. counterparts, acquiring knowledge and skills to help build their countries' agricultural sectors. The goal is to harmonize SPS framework across Africa in support of The African Continental Free Trade Area that will establish a single market across 54 countries.

"Plans are to host eight Scientific Exchange Fellows here in the CVM and in other units throughout the university this summer, pending the status of the COVID pandemic, of course," Dr. Khaita said. "These individuals will come from universities, research, or policy organizations in Africa across the eight Regional Economic Communities (RECs) of the AU. Over the course of about 36 months, they will collaborate with faculty mentors on food safety, food trade, and other areas directly affecting or influencing SPS research, trade, and conditions. They will also participate in conferences in Washington with governmental leaders, all with a goal of developing a harmonized SPS framework in Africa."

Dr. Khaita said collaboration with African veterinary schools and universities has clear-cut benefits for U.S. academia and trade. African and American scholars are building ties and working together on issues of global importance, such as antibiotic resistance and the prevention of animal diseases like foot-and-mouth disease and avian influenza.

A native of Uganda, Dr. Khaita has been actively involved with a variety of initiatives in Africa, including building human and institutional capacity in veterinary colleges in East Africa to manage transboundary animal diseases and zoonoses.

Watch for the follow up story about this program in the 2021 fall & winter issue of *Pegasus Press*.

BRETT HONORED BY AABP



Dr. Jim Brett, a clinical professor in the MSU CVM Pathobiology and Population Management Department, was honored at the American Association of Bovine Practitioners (AABP) 53rd Annual Conference which was held virtually last fall. Dr. Brett received the Zoetis Distinguished Service Award. The award honors an individual who, through long and continued service, has promoted the goals of the AABP and whose accomplishments have served as a model for service to bovine agriculture through organized veterinary medicine.

A 1983 graduate of MSU CVM, Dr. Brett spent 24 years in private, mixed-animal practice in Montezuma, Georgia. He is a past president of the Georgia Veterinary Medical Association

(GVMA) and served five years on the Georgia State Board of Veterinary Medicine.

Dr. Brett joined the MSU CVM faculty in August 2007 as an assistant clinical professor in the large animal ambulatory service. He also assists in the food animal clinic and teaches courses including Large Animal Ambulatory/Primary Care, Food Animal Medicine, Toxicology, and Population Medicine. He has served on the College's admissions committee for 10 years and is also a member of the CVM's disaster and non-tenure tract promotion committees.

Dr. Brett is a member of the America Veterinary Medical Association, Mississippi Veterinary Medical Association, GVMA, and AABP. He has served on the AVMA Milk Quality, House Advisory, and Convention and Management Program committees and the AABP Board of Directors. Dr. Brett has also been an alternate or delegate to the AVMA House of Delegates for Mississippi since 2009.

GIFTS TO CARE FUND BENEFIT CVM FACULTY AND STUDENTS, PETS AND THEIR OWNERS

For pet owners, the bond they share with their beloved companion is beyond measure. The MSU CVM and its animal hospitals work diligently to preserve those relationships by rendering top-notch, compassionate care for pets while providing a quality education for exceptional students and future veterinarians.

Supporters contribute to the advancement of our College in many ways, and one option is to support the Companion Animals Require Excellence (CARE) Fund. Each gift to the CARE Fund provides vital support and resources for faculty, students, and patients. Every gift makes a difference! In 2020, thanks to contributions ranging from \$10 to \$1,000, the following notable advancements were made.



OLYMPUS GASTROSCOPE

An Olympus gastroscope, which is a flexible endoscopy instrument designed to examine the upper gastrointestinal tract (particularly the stomach) in dogs and cats, was purchased with CARE Fund donations. This piece of equipment is routinely used to evaluate the esophagus, stomach, and colon as well as the small intestine and respiratory tract in bigger dogs. The enormous advantage of endoscopy is that it is non-invasive, enabling clinicians to evaluate these important organs during short periods of anesthesia, without the need for open surgery and prolonged and painful recovery.

HMS ELECTRORETINOGRAM (ERG)

An ERG is most commonly used for pre-cataract surgery evaluations, but it is also used to help diagnose retinal disease as well as rule out retinal disease as a cause for blindness. The machine is an essential part of all pre-cataract evaluations, because cataract surgery cannot be performed without objective information from the ERG that the retina is functioning properly. The HMs ERG the College was recently able to purchase through the CARE Fund is an advanced electroretinogram that can be used for both clinical patients and for clinical research. It is useful for all species—specifically mice, dogs, cats, and horses—and is capable of testing for many more diseases than the AHC's existing ERG equipment.



US VET MODUFLEX OPTIMAX

The US Vet Moduflex Optimax anesthesia machine purchased with donations to the CARE Fund is used daily by the MSU CVM Anesthesia Service. The machine is used to provide inhaled anesthesia to small animals during surgical and diagnostic procedures in the Animal Health Center. This particular machine is currently stationed in Operating Room 5, where it is used for anesthesia of patients undergoing ophthalmic procedures such as cataract removal and conjunctival flap surgeries. It features the latest technology and is a much-welcomed resource by our anesthesia team.



“Having up-to-date equipment is a vital part of providing the highest quality service to our clients. It is also an important factor in preparing our students for the work they will be doing following graduation.”

— JIMMY KIGHT

PORTABLE ULTRASOUND FOR COMMUNITY VETERINARY SERVICES

Until 2020, the many different specialty services in the Animal Health Center shared a single ultrasound unit that has been in use since 2006. However, gifts to the CARE Fund enabled us to purchase a portable ultrasound for the Community Veterinary Service team. This additional ultrasound unit has allowed students more access to using ultrasound as a diagnostic tool, enabling them to learn basic ultrasound skills they will need following graduation. The unit has also provided enhanced capabilities for patient care such as fast scans on emergency patients to assist in procedures such as cystocentesis, as well as in a teaching capacity.



Having up-to-date equipment is a vital part of providing the highest quality service to our clients. It is also an important factor in preparing our students for the work they will be doing following graduation. The College is extremely grateful to its many friends and donors for the role they play in helping us fulfill our mission of improving and protecting the health and quality of animal and human well-being. For information about how you can be a part of our success, please contact MSU CVM Director of Development Jimmy Kight, jkight@foundation.msstate.edu or Advancement Coordinator Melissa Montgomery, mmontgomery@cvm.msstate.edu.

MSU CVM is a leader in graduating well-rounded general practitioners, who are practice-ready upon graduation. Our students receive core instruction in all major domestic species and do not track. We take pride in the fact that our curriculum provides graduates with a strong, multi-species foundation and allows opportunity to focus on species or discipline interests.



DOTTIE'S GUT-WRENCHING STORY

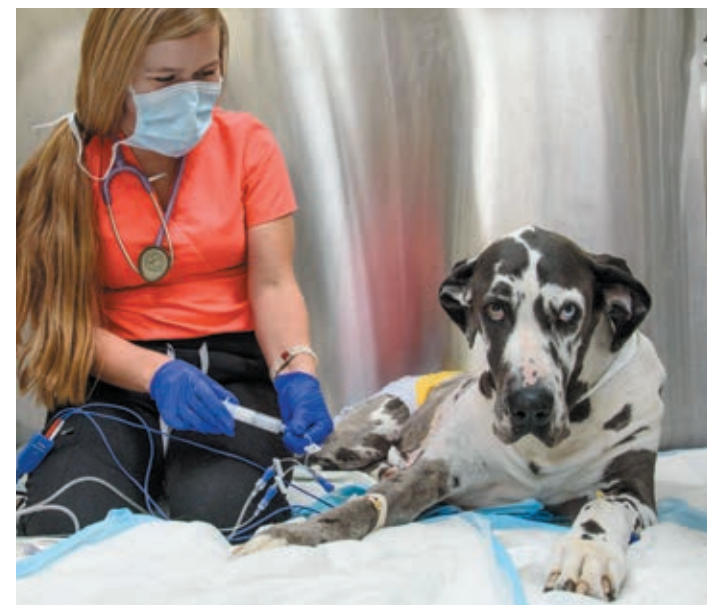
Gastric dilatation-volvulus complex (GDV)—sometimes referred to as bloat—is a condition known all too well by owners of large-breed dogs. When Duston and Erik Price of Lowndes County spotted the symptoms of GDV in their four-and-one-half-year-old Great Dane, Dottie, they knew they needed to get her to the MSU CVM Animal Health Center (AHC) as quickly as possible.

In the early stage of GDV, the dog's stomach fills with gas. Occasionally, the condition progresses no further than bloat; however, if the condition worsens, the gas-filled stomach twists upon itself so that both its entrance and exit become blocked. In this case, GDV becomes a life-threatening emergency that requires surgery to correct.

"Dottie was very lethargic and drooling and her stomach was distended. We knew these were symptoms of bloat, so we got her in the car immediately and headed to Starkville," Duston said.

When Dottie and her family arrived at the Animal Health Center, a quick triage evaluation confirmed their fears, so the surgery team sprung into action, performing the gastric decompression and gastropexy procedure that would ultimately save Dottie's life.

"If left untreated for too long, GDV becomes a life-threatening condition. However, because of the quick recognition and action by the owners and rapid treatment by our team, I am happy to say that Dottie was able to have a successful outcome," said Dr. Michael Jaffe, MSU CVM associate professor and chief of small animal surgery.



Dr. Hayley Gallaher, an assistant clinical professor and small animal surgeon, and small animal surgery resident Dr. Katherine Neal performed the successful surgery, which took about one and a half hours, and then sent Dottie off to recovery with the assistance of DVM student Haley Reichenbach. Dottie remained in the intensive care/recovery area for about several days, because the recovery period for this particular condition and surgery can be tricky.

"Dottie is an excellent example of what can happen with efficient and effective medical intervention," Reichenbach said. "Caring for her was a very rewarding experience. She was such a good patient—even if she did insist on lying down during her bandage changes!"

According to Duston, although a student, Reichenbach was a vital part of Dottie's medical team. "During Dottie's time at MSU CVM, her veterinary student Haley was phenomenal!" he said. "She was so patient with all of our questions and was right by Dottie's side, helping her through a very difficult recovery. She hand-fed her and even offered to cook her some chicken at home to get her to start eating when Dottie was being stubborn."

Statistically, large, deep-chested breeds such as Great Danes, Saint Bernards, and Weimaraners are more prone to GDV. However, Dr. Neal said there are some preventives that owners of these dogs can take to avoid GDV and the emergency surgery it can ultimately require.

"There are things owners can do to reduce the risk, but the best way to prevent your pet from experiencing GDV is to have a prophylactic gastropexy performed," Dr. Neal said. "This procedure involves suturing the stomach to the body wall, preventing it from twisting later in life. It's generally done when your dog is spayed or neutered."

Dottie was excited to get back home to her comfy spot on the sofa and the company of her family and pet siblings. And, according to Duston, he and Erik are hopeful they won't be faced with another pet having a life-threatening surgical condition. However, if they do, they know where to go to receive not just the best quality care, but also the ever-so-important attentiveness and compassion that helps make the experience as pleasant as possible.

COLLEGE CELEBRATES NATIONAL VETERINARY MEDICAL TECHNICIAN WEEK



The MSU CVM Veterinary Medical Technology program celebrated National VMT Week 2020 with a variety of activities. Due to the COVID-19 pandemic, much of this year's celebration was modified; however, fun was still had by all!

National Veterinary Technician Week takes place the third week of October each year to recognize the varied and vital work VMTs do working alongside veterinarians to provide animals—and their owners—a level of care and comfort that wouldn't be possible without their help.

According to clinical instructor Dr. Mandy Kohler, the program had a great week celebrating everything that veterinary medical technologists do for the veterinary profession, with the VMT students taking an active role in planning the activities.

"Students Maggie Walsh and Jacob Carmack spoke with members of the Starkville community, who willingly donated many things to the celebration. Shipley's Donuts sponsored a program with donuts for breakfast and donated two certificates to raffle off to students," Dr. Kohler said. "Domino's Pizza provided lunch for the students, and Maroon & Co., The Lodge, and Applebee's all provided giveaway items throughout the week."

First-year veterinary student Shauna Davee, who serves as the College's Hill's Pet Nutrition Representative, obtained treat bags

filled with candies, decals, and encouraging messages of support for all of the aspiring veterinary technologists compliments of Hill's.

Lane Cress, RVT and outreach and intern coordinator for Charlotte Animal Referral and Emergency (CARE) in Charlotte, North Carolina, donated pizza for the entire program. She also provided a video for VMT students to learn more about their one-year rotating internship at CARE for veterinary technicians.

"All in all, I believe this was the best National VMT Week yet. The students really enjoyed the raffle prizes," Dr. Kohler said. "I liked that our students engaged with members of the community, because it gave us a chance to educate others about NVTW and the veterinary medical technology profession—which is our mission!"

MSU CVM is proud to offer one of less than two dozen four-year VMT programs in the country and be one of the few programs where technologists train alongside the DVM students in the same clinical setting. Our College recognizes that veterinary medical technologists are a vital part of the veterinary services team and is deeply appreciative of their contributions to the veterinary profession.



PUMPKIN DECORATING CONTEST

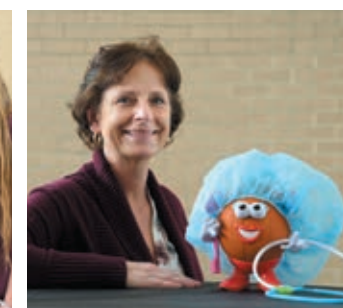
In October, MSU CVM hosted its inaugural pumpkin decorating contest. Participants submitted a decorated pumpkin in one or more of the following five categories: most creative, funniest, animal look-alike, celebrity or character look-alike, and most school spirit.

Submissions were judged by staff members from the MSU Division of Agriculture, Forestry, and Veterinary Medicine and the MSU Office of Public Affairs. All pumpkins were displayed in the CVM Dean's Lobby. The following participants were recognized and received gift cards to Strange Brew Coffeehouse:



1ST PLACE:

Mary Sanderson by the CVS Technicians



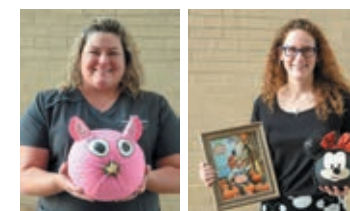
2ND PLACE:

Dr. Pumpkin Head by Julie Burt



3RD PLACE:

"What's This?" by Karrie Files



ANIMAL LOOK-ALIKE: Pretty Pink Piggy by Jamie Burkhardt
FUNNIEST: Shades of Grey by Stacey Wilkinson (NOT PICTURED)
MOST CREATIVE: I Made This by Kaylin McNulty
CHARACTER LOOK-ALIKE: Minnie Mouse by Kaylin McNulty

Congratulations to all of our winners, and thank you to all of our participants!

COLLEGE RENOVATION AND CONSTRUCTION PROJECTS COMPLETED FOR CONTINUED GROWTH

If renovation and construction are signs of progress, then the Wise Center for Veterinary Medicine is making great strides! Several major renovation projects were completed in 2020 to expand and improve DVM and veterinary medical technology (VMT) students' learning environment, improve aesthetics, and provide space for an enlarged DVM class size entering in 2021.

According to MSU CVM Professor and Associate Dean Dr. Ron McLaughlin, projects ranged from clinical areas in the Animal Health Center to teaching laboratories to departmental offices and conference rooms on the fourth floor previously occupied by the MSU Animal and Dairy Science Department.

"A wide variety of improvements were made to the Wise Center over the course of the last year and have benefitted students, staff, and faculty," Dr. McLaughlin said. "Funding for the renovations came primarily from endowment income and cost savings throughout the College."

He outlined the following projects considered to have a significant impact on the College's progress, especially related to a successful AVMA Council on Education accreditation site visit scheduled for later this fall:

- The anatomy laboratory was enlarged to accommodate up to 115 students, and downdraft dissection tables were installed to improve air quality while students work with specimens.
- A 2,200-square-foot clinical skills laboratory was completed on the fourth floor, providing students 24/7 access to teaching models and learning stations.
- A new 3,000-square-foot student learning area was created on the fourth floor for the DVM population medicine rotation, providing both office and laboratory spaces.
- A new 2,160-square-foot space was repurposed on the fourth floor to add two new classrooms and an office suite specifically for the VMT program. A conference room and student exercise area were also added.



- 375 square feet in the Animal Health Center was repurposed to allow for a new oncology treatment room with a viewing window for teaching purposes.
- A new dental and special procedures room was created from 346 square feet of repurposed space in the Animal Health Center.
- 528 square feet in the Animal Health Center was repurposed to create a new anesthesia rounds/learning room.
- Three new exam rooms were added in the Animal Health Center. One is dedicated for feline patients, and another is dedicated for ophthalmology patients. The third is available for general use as needed.
- The AHC Intensive Care Unit was renovated and expanded to 1,755 square feet, providing additional space for an intermediate care ward and treatment area. This additional space has improved workflow and enhanced both patient care and student learning.

In addition to these projects, lockers were installed throughout building for students, and updates and renovations were also completed to add or modernize workspaces and incorporate the College's branding throughout the facility. Technology in all of the College's classrooms was also updated to improve learning and facilitate distance education during the COVID-19 pandemic.

"This work was very needed and has made a real difference in the appearance and functionality of our main campus facilities," Dr. McLaughlin said. "However, we have a number of impressive construction plans on the horizon. MSU CVM is poised for significant growth; the best is yet to come."

ANIMAL EMERGENCY & REFERRAL CENTER TO UNDERGO EXPANSION



MSU CVM's Animal Emergency & Referral Center (AERC) located in the Jackson suburb of Flowood is slated to begin construction on a 12,000-square-foot addition this spring. According to MSU CVM Clinical Professor and Assistant Dean for Clinical Services Dr. Joey Burt, the \$5.6 million project is needed as a result of the continued growth of the practice as well as to better serve its clients and MSU CVM students.

"Expanding the AERC is critical to its continued success; we have simply outgrown our existing facilities," Dr. Burt said. "However, plans include much more than just the much-needed expanded clinical space for our staff and additional students to render

emergency and referral services. The addition will also include shelled space for a future residential area for our students and a conference room for teaching and outreach programs for the local veterinary community."

In addition, the AERC's rehabilitation center, currently located in leased space a few blocks away, will be accommodated onsite through the expansion. "Having all our services in one location will be a benefit to our patients, practitioners, clients and students. It's a win-win for everyone involved," said Dr. Burt.

The project has been designed in a way to allow the AERC to remain fully functional throughout the process, so there is no anticipated interruption of service to referring veterinarians or their clients, while maintaining training for CVM students. "The services provided at AERC are vital to scores of pets and their owners in the region, so our goal is for construction to take place while operations proceed as usual," Dr. Burt said. "We are super excited about this project becoming a reality. It will further MSU CVM's mission of improving the health and well-being of companion animals and providing outstanding, hands-on training for our students."

Watch the College's social media pages for project groundbreaking plans, which will likely take place in April.

PETCO GRANT BENEFITS SHELTER MEDICINE PROGRAM

A \$20,000 grant from the Petco Foundation has enabled the MSU CVM Shelter Medicine Program to extend its efforts in providing spay/neuter services to shelter animals throughout the region.

PROUDLY SUPPORTED BY:



veterinarians who fully appreciate the problems animal shelters face, understand the overpopulation of homeless dogs and cats, and are equipped to go out into local communities and help solve the problem!

This program is of great benefit to animals, shelters, and communities, as well as our students, who have the opportunity to hone their surgical skills prior to graduation.

Since 2007, MSU CVM students have performed more than 93,000 spay/neuter surgeries under the direction of faculty mentors. This has literally moved healthy dogs and cats from euthanasia lists to loving homes by increasing their chances of adoption as well as preventing scores of additional litters of unwanted animals.

In addition, the shelter medicine program has enabled MSU CVM to graduate a new generation of



The Petco Foundation strives to inspire and empower communities to make a difference by investing in adoption and medical care programs, spay and neuter services, pet cancer research, service and therapy animals, and numerous other lifesaving initiatives. They partner with Petco stores and animal welfare organizations across the country to increase pet



adoptions and to date have helped more than 6.5 million pets find their new loving families.

MSU CVM and the shelter medicine program appreciates the funding the Petco Foundation has provided through this generous grant and is thankful for their support, as well as the support of other organizations and individuals whose gifts enable us to offer this invaluable program.



THREE LEGS, ONE STROKE, AND NINE LIVES

Beau the cat has faced his share of challenges, but this laid-back feline has managed to overcome them and is now living the good life.

Soaked and alone in a ditch on the side of the road, Beau was only a kitten when he was found and taken in by Deborah McGehee in June of 2013. “My dad and I stopped in the road so I could take a picture of a beautiful rainbow following a storm, and when I got out, I heard the most pitiful crying,” McGehee said. “I looked around and saw the sweetest little face peeking out of the weeds. I don’t know if he jumped out of a vehicle or was thrown out, but I couldn’t leave him.”

Later that evening, as Beau began to settle in, McGehee noticed that something was wrong with his right front leg. “This was on the weekend, so I took him to my vet at All Creatures Animal Clinic in Madison first thing Monday morning. Turns out, he had a dislocated shoulder and a fractured elbow,” McGehee said. “Unfortunately, trying to reset the shoulder didn’t work, and after consulting with MSU CVM, Drs. Filgo, Camp, and Thrash helped me understand that amputation would be best. Thankfully, Beau did fine with the procedure, and everyone at All Creatures fell in love with him through the process.”

For the next couple of months, McGehee dropped her three-legged baby off at All Creatures daily for their daycare program during the work week. Beau grew and played normally, and because he was so young at amputation, he never really missed

his fourth leg. “Beau slept in a large kennel at the foot of my bed for a while. I took care to make sure he didn’t try and jump from high places,” she said. “I had steps so he could get on and off the bed easily. I was sort of a helicopter ‘fur mom’ at first, but he quickly learned and accepted his limitations.”

Life moved along, and all was normal for Beau and the other pets in the McGehee household—who were also rescues—for the next several years. Then in 2019, just after Christmas, McGehee noticed something wasn’t right. Beau was just laying around and not acting like himself. “Once again, I took Beau to All Creatures first thing on a Monday morning. After an initial assessment, they thought maybe he was having a reaction to his flea prevention medicine, so they treated him with steroids,” she said. “They kept him for several days, but there was no change, so they referred him to MSU. We got word the doctors at MSU’s Veterinary Specialty Center could see him that same day if we could be there before 4, and that was the fastest trip I ever made to Starkville!”

At Veterinary Specialty Center (VSC), MSU CVM Associate Clinical Professor of Neurology and Neurosurgery Dr. Michaela Beasley and neurology specialty intern Dr. Martin Kwan received and evaluated Beau. A presumptive diagnosis of C1-C5 myelopathy was made, and he was scheduled to return in one week for an MRI to rule out a feline ischemic event and other potential causes of his immobility.

“Upon arrival for his neurological recheck, Beau was quiet, alert, and responsive, but he was still non-ambulatory. His head and neck were dropped toward the ground, and he had moderate muscular atrophy in his hind limbs; he couldn’t hold himself up,” Dr. Beasley said. “An MRI ruled out common causes of his immobility leaving a diagnosis of nutritional deficiency, myasthenia gravis, or a spinal stroke. He was prescribed a vitamin supplement and a trial medication treatment for myasthenia gravis, an acquired neuromuscular disease.”

McGehee spent the next few weeks—then months—carefully following the doctors’ orders. “I made sure he was eating the right food, getting his supplement, and taking his medicine. Early on, when he wouldn’t eat or drink, I fed him chicken broth and water by syringe,” she said. “He slept right beside me on a pad, just in case he had an accident, but he never had a single one. He always let me know when he had to go, and I’d get up and hold him up in his cat box so he could take care of his business.”

McGehee also made sure Beau spent an equal amount of time laying on each side just like the doctors’ said. She had buffers to prevent him from falling off the bed. “I spent a lot of time caring for him and lost a lot of sleep during those months,” she said. “But Beau trusted me to care for him since the day I found him, and I wasn’t going to let him down.”

When medications didn’t quickly relieve Beau’s symptoms, he was diagnosed with feline ischemic myelopathy, commonly called a spinal stroke, and he was referred to Dr. Wendy Byrd, a veterinarian and certified animal rehabilitation therapist at MSU CVM’s Animal Rehabilitation Center in Flowood, for

therapy. The goal was to try and improve limb function and his quality of life.

“Beau had adapted to three legs without rehab, but he was now facing a more challenging situation as a much older cat, so when we received the referral, I was just glad there was an option,” McGehee said. “Turns out, Dr. Byrd and her staff were absolutely amazing! Beau had therapy three days per week beginning at the end of January and through April, and he went for follow up in May.”

“When Beau first arrived, he had lost a great deal of muscle and could only move his neck slightly, so we had to start slowly; however, he continually improved over the next several months. His rehab included a variety of land exercises as well as the underwater treadmill,” Dr. Byrd said. “We would have to change his exercises every time he came because he would figure us out. When we put on our waders to get in the treadmill, he knew what was coming, but he was such a good patient!”

Beau also received laser therapy and soft tissue work at the Animal Rehabilitation Center, and a Flowood-area veterinarian that performs electroacupuncture treated him, as well. On the days he didn’t have therapy, he went to day care at All Creatures while McGehee was at work.

“Beau never gave up; he kept his ‘cattitude’ through the whole process,” McGehee said. “It was amazing to see him get back to scampering around like his old three-legged self after witnessing how very helpless he was. I think his easy-going spirit really helped him get through this, but without the outstanding medical care and therapy he received, it certainly wouldn’t have been possible!”



HUSTON APPOINTED TO ADVISORY COUNCIL ON COMBATING ANTIBIOTIC RESISTANT BACTERIA



MSU CVM Professor and MSU Beef Extension Veterinarian Dr. Carla Huston, who also oversees the College's new Enhanced Clinical Practicums (ECP) Program, has been appointed to the Presidential Advisory Council on Combating Antibiotic Resistant Bacteria (PACCARB).

The PACCARB was established in 2014 and serves to provide advice, information, and recommendations

to the U.S. Secretary of Health and Human Services regarding programs and policies intended to support and evaluate the implementation of U.S. government activities related to combating antibiotic-resistant bacteria. The council is comprised of government employees and liaison representative members from various organizations.

Dr. Huston, who was nominated by the American Association of Extension Veterinarians (AAEV), will serve a two-year term as their representative to the council. The AAEV is an organization of public and private veterinarians involved in extension, education, and outreach. It is dedicated to protecting the health and well-being of food animals and to contributing to public health through the education of the public and the profession in many areas such as animal welfare and judicious antimicrobial use.

Huston obtained her DVM from The Ohio State University in 1994 and spent several years in private mixed-animal practice, before pursuing a PhD in epidemiology focusing on *Salmonella* and antimicrobial resistance in dairy cattle. She joined the MSU CVM faculty in 2001. With over 25 years of experience in livestock health and emergency management, she teaches classes focusing on preventive veterinary medicine, epidemiology, population medicine and disaster management.

As an extension veterinarian, Huston develops and administers veterinarian, producer, and youth educational programs focusing on livestock quality assurance and health management. She applies the latest research findings and technologies to the field while serving as a liaison between private, public, and regulatory entities.

In her duties as director of the College's ECP program, she works with local veterinary practitioners and CVM students to help facilitate educational opportunities in those settings. For more on this program, see page 16.

Huston's two-year appointment to PACCARB began on September 9. Dr. Locke Karriker, currently Dr. Douglas and Ann Gustafson Professor for Teaching Excellence in Veterinary Medicine at Iowa State University, who earned his DVM (1999) and MS (2000) from MSU CVM, also serves on the Council.

CVM CAREER EXPO GOES VIRTUAL TO CONNECT GRADS AND EMPLOYERS

Last fall, the College hosted its annual career expo, providing MSU CVM Doctor of Veterinary Medicine and veterinary medical technology students the opportunity to connect with potential employers from across the country. Due to the COVID-19 pandemic, the event connected students and potential employers virtually. Nearly 30 employers participated and hosted 165 chats with CVM students. Pictured below



is Marjorie Powers, visiting fourth-year student from St. Matthew's University CVM, and pictured above is fourth-year student Mimi Pelanne, both of whom participated in the event. The 2021 expo will be held in October. Visit our website or follow us on social media for updates or contact Animal Health Center Referral Coordinator Julie Burt at (662) 325-7016 for additional details.

ANNUAL RESEARCH DAY 2020

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. Contributions from Nutramax Laboratories help make the event possible.

According to Dr. Todd Henderson, a 1992 MSU CVM graduate and president of Nutramax Laboratories, which is a leader in researching quality veterinary supplements, annual research day is a wonderful opportunity to showcase some of the amazing things that are being done at the College. Henderson noted that it also provides graduate students and veterinary students valuable experience in presenting and defending their research, as well as giving them some well-deserved recognition.

Due to the COVID-19 pandemic, 2020's event was conducted via WebEx to ensure the safety of all participants.

Students are recognized in three categories at the annual event: Summer Research Student, Graduate Student Posters, and Graduate Student Oral presentations. This year's winners included:

SUMMER RESEARCH WINNERS

- FIRST PLACE:** Caroline Coussens
- SECOND PLACE:** Courtney Baugher
- THIRD PLACE:** Caleb Glover

GRADUATE STUDENT POSTER WINNERS

- FIRST PLACE:** Darby Stanford
- SECOND PLACE:** Brittany Szafran
- THIRD PLACE:** Jamie Rutter

GRADUATE STUDENT ORAL PRESENTATION WINNERS

- FIRST PLACE:** Matt Scott
- SECOND PLACE:** Alexis Thompson
- THIRD PLACE:** Moses Ayoola

This event is sponsored annually by



SUMMER RESEARCH STUDENT ORAL PRESENTATION
Caroline Coussens (1st place), Courtney Baugher (2nd place), Caleb Glover (3rd place)



GRADUATE STUDENT POSTER PRESENTATION
Darby Stanford (1st place), Brittany Szafran (2nd place), Jamie Rutter (3rd place)



GRADUATE STUDENT ORAL PRESENTATION
Matt Scott (1st place), Alexis Thompson (2nd place), Moses Ayoola (3rd place)



LONG LIVE THE TURTLES...with the Help of MSU CVM

Sea turtles are considered a symbol of longevity, and MSU CVM is doing its part to help ensure the turtles themselves are around for a long time! This is especially true for a group of juvenile Kemp's ridley sea turtles that were part of a mass "cold stunning" event in the Northeast last December.

Through a partnership with the Institute for Marine Mammal Studies (IMMS) in Gulfport, MSU CVM veterinarians and veterinary students are playing a key role in the care and rehabilitation of these amazing marine animals, which are not only the smallest, but the most endangered of all species of sea turtles.

According to MSU CVM Assistant Clinical Professor of Pathobiology and Population Medicine Dr. Stephen Reichley, who is a certified aquatic veterinarian, Kemp's ridley sea turtles are ectotherms; therefore, their body temperature is regulated by the temperature of their surroundings.

"As water temperatures start to decline in the Northeast, sea turtles begin to migrate south to warmer waters. A number of turtles that do not migrate quickly enough—mainly juveniles—will be exposed to these cold waters causing them to become hypothermic-like, which is commonly referred to as 'cold-stunned,'" he said. "This is the case for the turtles currently being cared for by our faculty at IMMS."

This type of stunning event occurs every year; however, this year included a near-record number of turtles, and coupled with COVID-19 safety guidelines for volunteers, they were sent

to many facilities across the country. A non-profit organization that coordinates and facilitates the use of general aviation to transport endangered species, critical response teams, and educates the community on conservation of marine life, Turtles Fly Too, Inc., is routinely involved with this situation and flew the turtles to Mississippi, where they were met by the MSU CVM and IMMS response team. MSU CVM sent two residents and five students to assist the team with the initial intake process.

"The turtles were triaged at the facilities in the Northeast and provided continued care on the plane. Upon arrival at IMMS, they were admitted to the turtle hospital where a team of experts, including MSU CVM Clinical Instructor Dr. Christa Barrett, a certified aquatic veterinarian stationed at IMMS, performed an assessment of each turtle, including radiographs, an ultrasound, and blood work," said Dr. Reichley. "Drs. Hannah Urig and Alexis Thompson, who are completing their residencies with the College's population medicine service, also participated, as did five CVM DVM students, giving them the opportunity to get hands-on experience dealing with a large-scale rescue effort."

According to Dr. Barrett, cold-stunned turtles often have skin and shell lesions, poor body condition, dehydration, bacterial or fungal pneumonia, gastrointestinal issues and other medical problems. Their prognosis and duration of rehabilitation is variable and often depends on development of secondary conditions. For example, three of the 20 sea turtles received succumbed to severe pneumonia; however, the other 17 continue to improve.



"Cold-stunned turtles typically have reduced heart rates and respiration rates and are not eating. They often also suffer with secondary infections such as pneumonia," she said. "The turtles we received have required treatments such as fluid therapy, antibiotics, topical therapies, and individually planned diets. They are being kept in individual tubs of varying water levels depending on their swimming abilities. The water is heated, and the tubs are in a temperature-controlled environment."

Board-certified veterinary specialists from the College's main campus are assisting with the extensive care and treatment of the turtles as needed. For instance, MSU CVM Associate Clinical Professor Dr. Caroline Betbeze, who is a veterinary ophthalmologist, was called on to perform eye exams to check for eye abnormalities caused when the turtles fail to blink or shut their eyes normally following cold stunning. Dr. Allison Lee, assistant professor and veterinary radiologist, and Dr. John Thomason, associate professor, veterinary internist, and Luran and Dean Wingo Faculty Fellow, are also assisting with the care and rehabilitation of these turtles.

MSU CVM second-year DVM student Amanda Rowe was one of the students who assisted with the turtles' initial intake. "The recent invitation to participate in the rescue and treatment of cold stunned Kemp's ridley sea turtles was a once-in-a-lifetime experience," Rowe said. "Evaluating and assisting in treatments for these endangered animals exemplified how the education I'm receiving here at State can be adapted to any species and situation. I am very grateful to the College and the team at IMMS for affording me this incredible opportunity."

Several more DVM students have since volunteered to help provide ongoing care for the turtles. They assist with husbandry activities and providing medical treatment and rehabilitation efforts.

"The student volunteers have been an important part of the caregiving team for the turtles, and they are learning a great deal in the process," Dr. Barrett said. "For instance, some of the turtles require fluid administration, and the students have been very helpful with that. They also get to watch—and frequently, actively participate in—different assessments and procedures being conducted on the turtles."

Ashley Beyer, a first-year DVM student, helped with the turtles over the winter break. She had the opportunity to spend two days caring for them and said it was a wonderful learning opportunity that she thoroughly enjoyed.

"This whole experience was super cool," Beyer said. "We kept the turtles' pools clean, helped administer medications to them, helped prepare their food—which involved hacking away at a huge shrimp ice block—and helped feed them. It was an amazing opportunity!"

According to Dr. Barrett, the turtles are progressing well. "There is a range of care needed, with some requiring more intensive care than others, but overall, they're progressing as expected. However, there is still a long road ahead for medical care and rehabilitation before they can be released," she said.

MSU CVM Assistant Clinical Professor Dr. Debra Moore, who serves as attending veterinarian at IMMS, said a hatchling sea turtle has only a one in 10,000 chance of becoming an adult, so it's critically important to save as many of the turtles as possible.

"The rehabilitation—and ultimately the release—of these 17 Kemp's ridley sea turtles is vital for species conservation," Dr. Moore said. "And the experience these students are gaining is invaluable. For some, it might just lead to a career path in marine animal medicine, but for all, it will provide the opportunity to share with the public—for example future clients—the plight of endangered species. Education of the public is critically important if we are to make a difference for our planet."

According to MSU CVM Professor and Director of MSU's Global Center for Aquatic Food Security Dr. Mark Lawrence, who is a veterinary microbiologist specializing in aquatic animal health, the ultimate goal is to rehabilitate these turtles back to health with the intent to release them.

"MSU CVM has a team of highly dedicated veterinarians committed to providing optimal clinical care for these sea turtles, and the opportunity for our veterinary students to get hands-on experience in their rehabilitation is truly unique," Dr. Lawrence said. "I feel honored to work with Drs. Moore and Barrett, who have tremendous knowledge and skills to provide medical care for these animals. When the turtles are medically cleared, they will be released into the Mississippi Sound, where with a little luck, they'll grow to adulthood and reproduce, helping ensure the future of this critically endangered species."



IMMS EARNS IMPRESSIVE DISTINCTION, PROVIDES CVM STUDENTS INVALUABLE LEARNING EXPERIENCE

The partnership MSU CVM maintains with the Institute for Marine Mammal Studies (IMMS) in Gulfport, Mississippi, is a mutually beneficial one. The Institute and College both have access to resources and opportunities they wouldn't otherwise have, and the learning experience the relationship affords our students is one available at only one other US college of veterinary medicine.



fresh water incursion issue. We have taken a leadership role in these situations that have had a tremendous impact on marine life, and the partnership we have with Mississippi State University College of Veterinary Medicine has been a significant part of our success.”

IMMS has been a lifeline for stranded and sick or injured marine life—especially endangered and protected dolphins, sea turtles, and manatees—for decades, and now the well-respected animal care and research facility has landed top honors and a special designation for its commitment to caring for animals. According to IMMS President Dr. Moby Solangi, the Institute has garnered the prestigious American Humane Certified Seal, which recognizes the highest standard of animal care.

“This is a hard-earned, world-wide distinction, and we are delighted to have obtained it. It’s a first for Mississippi and the Gulf States region,” Dr. Solangi said. “This prestigious organization accredits and certifies animal welfare standards in the United States and worldwide.”

Dr. Solangi explained that the certification required a visit from an audit team, which included biologists and veterinarians, who spent two full days reviewing and evaluating virtually every aspect related to animal welfare at the facility.

“We work daily to raise the bar when it comes to research and the care of these animals,” Dr. Solangi said. “We were involved with the BP oil spill and now the Bonnet Carre Spillway

According to MSU CVM Dean Dr. Kent Hoblet, the College has two full-time veterinarians stationed at IMMS and considers the partnership it has with Dr. Solangi and the institute an important asset. “These two faculty members are actively involved with the stranding, rehabilitation, and research efforts of IMMS, and they provide veterinary care to the animals at IMMS. Their work there and the opportunity this relationship offers our College and our students is definitely a point of pride for us,” Dr. Hoblet said. “To be able to say that we are one of only two colleges of veterinary medicine in the United States that provides all students with marine animal medicine training is a feather in our hat. We know not all of our students will go on to work directly in this field, but the experience they gain is important for all of them; it helps foster an appreciation for ocean life and equip them to effectively serve as ambassadors for protecting our oceans and the amazing creatures within them.”

The Institute for Marine Mammal Studies and MSU College of Veterinary Medicine began working together in an official capacity the winter of 2018. Since that time, several hundred MSU CVM students have had the opportunity to gain hands-on training with marine animals. For more information, see the story on page 34, which provides a summary of the most recent learning experience this partnership has afforded our students.



To be able to say that we are one of only two colleges of veterinary medicine in the United States that provides all students with marine animal medicine training is a feather in our hat.

— DR. KENT HOBLET



CVM VOLUNTEERS PARTICIPATE IN MSU SERVICE DAWGS DAY



To kick off the fall semester each year, Mississippi State University’s Maroon Volunteer Center holds a “Service Dawgs Day” each August. This annual event offers MSU students, faculty, and staff an opportunity to give back to the Starkville community.

This past August, MSU CVM Class of 2024 student Ian Evans organized a team of volunteers from MSU CVM to participate in the community service day. The MSU CVM team consisted of 30 students and faculty members and completed projects at the Starkville Sportsplex and Odd Fellows Cemetery. The MSU CVM teams received their own specific locations in order to remain socially distant from other members of the community and reduce risk of COVID-19 transmission.

“For me, this day was about getting students and professors outside to socialize in a different setting,” Evans said. “Especially the setting we have right now at the Wise Center where we’re trying not to overstep the boundaries for the pandemic. When we’re outside in nature and doing a little community service, I feel you’re able to connect in a different way.”

As a thank you for their time and commitment, the Dean’s office provided MSU CVM volunteers with snacks and water to help beat the August heat.

“It’s important that we foster our relationship between the College, the University, and the Starkville community,” MSU CVM Dean Dr. Kent Hoblet said. “We’re very proud of these students and faculty for taking time out of their Saturday to give back to the Starkville community.”





2020 ALL COLLEGE AWARDS DAY

PRESIDENT'S PEGASUS AWARD
Mike McCormick

ZOETIS AWARD FOR VETERINARY RESEARCH EXCELLENCE
Dr. Attila Karsi

VICE PRESIDENT'S PEGASUS AWARD
Dr. George Seiler

E. WYNN JONES AWARD
Kevin Moore

DEAN'S PEGASUS AWARD
Drs. Jim and Gail Anderson

STAFF AWARDS
Missy Bolin
Cynthia Ware
Lanette Jordan

PEGASUS FACULTY AWARDS
Dr. Sharon Grace | Award for Teaching
Dr. Hossam Abdelhamed | Award for Research
Dr. Caroline Betbeze Ivy | Award for Service

PRESIDENT'S PEGASUS AWARD



Presented by MSU CVM Dean Dr. Kent Hoblet

Each year the President's Pegasus Award is presented to an individual who has demonstrated outstanding contributions to the various missions of the MSU College of Veterinary Medicine, the University, and the veterinary medical profession.

The Mississippi State University College of Veterinary Medicine has no greater friend—or supporter—than the Mississippi Farm Bureau Federation (MFBF), and the University and College understand and appreciate the important part **MFBF PRESIDENT MIKE MCCORMICK** plays in this invaluable friendship. McCormick's knowledge and expertise, passion, and commitment, diplomacy, and collaboration have led him to become an outstanding and respected leader that means much to the state and to the college of veterinary medicine. In addition, McCormick's contributions to the success of MSU CVM have only increased through his role as a trusted advisor as an inaugural member of the CVM Dean's Council.

McCormick is a graduate of the University of Southern Mississippi with a Bachelor of Science degree in business administration. In addition to serving as MFBF president, he is a cattle and timber farmer in Jefferson County, where he has one of the longest continuing operating farms in the state.

Prior to being elected the tenth president of the MFBF in 2015, McCormick served for seven years as president of the Jefferson County Farm Bureau and was a member of the MFBF Board of Directors for four years. He also served as a chair of the MFBF Beef and Forestry Advisory Committees and as a member of the American Farm Bureau Federation Beef and Forestry Advisory Committees. He is a founding member of the Farm

Families of Mississippi ag promotion campaign and served as the committee's vice chair.

McCormick has been a longtime supporter of MSU CVM. He was involved with establishing the College, lobbying for it in the 1970s. Through the years he has remained a friend, as has MFBF-- even through some difficult years in the 80s and early 90s. MSU CVM is fortunate that their support never wavered.

Each year MSU CVM leadership must prepare and submit a budget to the Mississippi Legislature for their consideration for the upcoming fiscal year. From the time this budget is submitted, then debated and eventually leads to an appropriation bill signed by the governor, a great deal of work is done by MSU and our friends—such as MFBF—for the benefit of the College. McCormick plays an integral role in these efforts,

routinely meeting with legislative leaders and other elected officials to explain the College's needs and answer questions. His goal is always that we are treated fairly and equitably, and he is both tireless and very effective in this effort.

In addition, McCormick led MFBF in contributing two scholarships per year to students entering practice in Mississippi rural communities where they would provide at least 30% farm animal care. This act is typical of McCormick's leadership and is just one example of his support, diplomacy, and collaborative efforts to benefit the state's farmers and MSU CVM. There are countless others.

MSU CVM is very grateful for Mike McCormick's ongoing friendship and support and is pleased to recognize him with the College's 2020 President's Pegasus Award.

VICE PRESIDENT'S PEGASUS AWARD



Dr. George Seiler

The Vice President's Pegasus Award is presented to a person or persons not currently employed by Mississippi State University who have made significant contributions to the veterinary medical profession and have benefitted the MSU College of Veterinary Medicine.

The 2020 Vice President's Pegasus Award was presented to **DR. GEORGE SEILER**, a veterinarian from Morgantown, WV. Dr. Seiler currently serves as the immediate past president of the West Virginia Veterinary Medical Association, having completed a two-year term as president.

Originally from Maryland, Dr. Seiler received his Doctor of Veterinary Medicine degree in 1983 from the University of Florida College of Veterinary Medicine. In 1985, he established what became a multi-doctor small animal practice in Morgantown, WV, where he still practices today. Over the years, his clinic has employed many pre-veterinary students.

After interacting with Dr. Seiler for any amount of time, his heartfelt interest in veterinary students is apparent. In addition to his private practice, he serves as an adjunct professor in the department of animal and nutritional sciences at West Virginia University where he has taught the very popular course "Companion Animal Pathology" for more than 20 years.

Dr. Seiler is a member of the oversight committee of the Davis-Michael Scholarship, originally an \$18M endowed scholarship that continues to benefit pre-veterinary and veterinary students (including those that attend MSU). In FY 2019-2020, this endowed fund awarded scholarships to 79 undergraduate students and 59 veterinary students.

In 2008, Dr. Seiler accompanied WVU Animal Science faculty members to Starkville to explore possibilities and work on an arrangement that resulted in a contract between the West Virginia Higher Education Policy Commission and MSU CVM to provide contract seats in our college for West Virginia residents. The first contract students arrived in Starkville in 2009 to become members of the class of 2013. To date, at least 85 West Virginia residents have benefitted from this relationship, and many others will do so in the years to come.

Dr. Seiler's interest in veterinary students achieving their life goals is evident. Because he wanted students to be aware of educational opportunities at MSU CVM but realized many couldn't afford to fly to Starkville, he organized and still accompanies pre-veterinary students on a long weekend bus trip to visit the veterinary colleges at Virginia Tech, Lincoln Memorial University, and Mississippi State each year. This occurs in conjunction with the interview process for MSU CVM, and Dr. Seiler also participates in the admissions interviews for the West Virginia students.

Dr. George Seiler has dedicated his career to advancing the veterinary medical profession through the establishment of his multi-doctor practice, service to the WVVMA, and active involvement as an instructor and mentor to students through the years. MSU CVM is most appreciative of Dr. Seiler's support and pleased to honor him with the Vice President's Pegasus Award for which he is most deserving.

DEAN'S PEGASUS AWARD



presented by MSU CVM Dean Dr. Kent Hoblet

The 2020 Dean's Pegasus Award was presented to two veterinarians, both of whom have demonstrated outstanding achievements in their careers, as well as in their support of MSU CVM.

After undergraduate studies at MSU, **DRS. JIM AND GAIL ANDERSON** attended Auburn University CVM where they earned their DVM degrees in 1978. After receiving their DVMs, they established Crossgates Veterinary Clinic in Pearl, MS, where they practiced high-quality veterinary medicine for 40 years.

Both Drs. Jim and Gail have been active in the veterinary profession. Dr. Gail served on AVMA Council on Education for six years and currently serves as a member of the Mississippi Licensing Board of Veterinary Medicine. Dr. Jim has been active in leadership of the local and state Veterinary Medical Association and has served as

president of the Mississippi Cattlemen's Association. Both doctors have willingly provided assistance to our CVM on numerous occasions. In 2007, they both were involved in preparation for and conduction of our AVMA COE site visit.

Also, in 2007, Dr. Jim led a group of Jackson area practitioners as they worked with a group from the CVM led by Dr. Lee Tyner to establish the relationship and build a new facility to house the Animal Emergency & Referral Center in the Jackson suburb of Flowood. The College opened that facility on Treetops Avenue in 2010. In 2011, the AERC became a required core rotation for all fourth-year veterinary students, and more than 830 MSU CVM graduates-- not counting VMT students-- have now completed rotations there. This rotation is routinely rated by students as one of their most valuable learning experiences. The value of this rotation has also been recognized by others in the veterinary profession. At the College's last COE accreditation site visit in 2014, the Council gave this rotation a coveted "commendation."

Expanded services and caseload have led to plans for building a 12,000 sq. ft. addition to the existing facility to both enlarge it and add living space, enabling more students to spend more time there. Groundbreaking is planned for later this spring.

Without the leadership of Drs. Jim and Gail Anderson, MSU CVM would not have this invaluable teaching rotation that provides incomparable learning experiences in the state's major metropolitan area. MSU CVM is proud to recognize them as the recipients of the 2020 Dean's Pegasus Award.

DEAN'S PEGASUS AWARD FOR TEACHING



presented by MSU CVM Professor and Department of Clinical Sciences Head Dr. Andrew Mackin

This year's Dean's Pegasus Award for Teaching could not have been presented to a more deserving individual. Not only is **DR. SHARON GRACE** known as an exceptional teacher among CVM students, but she is also a teaching mentor for a significant number of CVM faculty--and she is considered the teaching "engine" for the College's Department of Clinical Sciences.

Dr. Grace has been a constant and dependable leader for the

College's professional development courses and the NAVLE prep course over the years. Her expansive knowledge of and passion for feline medicine has led to her CVM feline patient elective course being one of the most sought out and positively reviewed courses in the curriculum. Dr. Grace has also served as the long-term course leader for the small animal and surgery course; this is a huge task requiring coordination of scheduling of numerous faculty members for lectures and labs, but Dr. Grace always does it with a smile and makes it look easy.

She has positively impacted hundreds of MSU CVM students from the beginning of their academic careers until the time of their graduation and continues to have an impact on many as a respected mentor and friend. Her time spent assisting young faculty members and her ongoing work as co-founder and coordinator of the Safe

Haven for Pets program are examples of an ongoing commitment to teaching and service outside of her own classroom.

Dr. Grace's contributions to MSU CVM are far too many to name, but comments such as the following from her nominations for this award sum up her approach to her work:

- Students know they will leave Dr. Grace's classes better prepared for the NAVLE and for real-world practice.
- She truly cares about the students, staff, and other faculty members here at the CVM; she is dedicated to our College.
- I have always considered Dr. Grace an excellent teacher and a role model for the professor that I hope to grow into. I feel honored to have had the opportunity to learn from her as a student and to now work alongside her as a faculty member.

Before handing off the professional development courses to new leaders this year, Dr. Grace took the time to make changes to improve the course design. She could have left this task to the new instructors, but, as always, her diligence and commitment shined through.

Dr. Grace has had a long-standing impact over the entire DVM curriculum. It is fitting that she be recognized for her many contributions to teaching in this year's challenging COVID environment as she always rises to the challenge to help ensure we are providing the very best instruction possible for MSU CVM students. It is a pleasure for the College to honor Dr. Sharon Grace with the 2020 Pegasus Faculty Award for Teaching.

DEAN'S PEGASUS AWARD FOR RESEARCH/ CREATIVE ACHIEVEMENT



presented by MSU CVM Professor and Department of Comparative Biomedical Sciences Head Dr. Robert Wills

DR. HOSSAM ABDELHAMED was the recipient of the 2020 Dean's Pegasus Award for Research/Creative Achievement. He joined the MSU CVM Department of Comparative Biomedical Sciences in 2010 as a visiting student to conduct his doctoral research, and following his graduation in 2012 from Benha University in Egypt, he returned to MSU CVM to re-join the research

team of Dr. Mark Lawrence and Dr. Atilla Karsi as a postdoctoral fellow in July 2013.

Since January 2017, Dr. Abdelhamed has been an assistant research professor, and he is currently also a junior investigator with the MSU Center for Biomedical Research Excellence (NIH-COBRE). His research focuses on characterization and control of pathogens of catfish, antimicrobial resistance, and virulence factors of *Listeria monocytogenes*.

Since 2017, Dr. Abdelhamed's scholarly activities have included publishing 32 research articles in prestigious peer-reviewed

journals, including the Journal of Bacteriology, PLOS One, and Frontiers in Microbiology. He has also published a book chapter and presented more than 40 conference abstracts. In the last three years, Dr. Abdelhamed served as PI or Co-PI in 22 internal and external grants with a total value of \$10.85M, with \$1.6 million of this awarded to him as P.I. His research has resulted in two patent applications.

In addition to his PhD, Dr. Abdelhamed earned his DVM degree from Alexandria University and his Master of Science degree from Benha University, both in Egypt. He is an active member of the American Society for Microbiology and the American Fisheries Society as well as professional societies in Egypt.

Dr. Abdelhamed is also a capable mentor and teacher. Since 2017, he has mentored two postdocs, two PhD students, a research associate, and a visiting scientist. He has also mentored a student participating in the College's Summer Research Experience and is currently a mentor for a first-year DVM student. In addition, he teaches in the Infectious Agents I professional course.

Dr. Abdelhamed is extremely committed to his work, spending long hours on weekdays and many weekends in his office or lab. He is also always willing to help others. Dr. Abdelhamed is a talented researcher and a true asset to MSU CVM, and the College is pleased to present him with the 2020 Pegasus Faculty Award for Research/Creative Achievement.

DEAN'S PEGASUS AWARD FOR SERVICE



presented by MSU CVM Professor and Department of Clinical Sciences Head Dr. Andrew Mackin

DR. CAROLINE BETBEZE, the recipient of the 2020 Dean's Pegasus Award for Service, joined the MSU CVM Family in February 2013 with the goal of developing a complete ophthalmology referral and teaching service. However, as fate would have it, she ended up single-handedly shouldering the responsibility of running the service for about six years with the help of only one technician and one

intern. Finally, as a result of her hard work and determination, Dr. Betbeze's initial goal was realized, and the MSU CVM Ophthalmology Service now boasts two faculty ophthalmologists, an ophthalmology resident and two technicians as well as serves as a respected referral destination for scores of animals in need of ophthalmic care throughout the Southeast.

In addition to the monumental task of building the CVM's ophthalmology program, Dr. Betbeze has also represented MSU CVM nationally through numerous committee assignments with the American College of Veterinary Ophthalmology, and she has taken an active role in a range of committees such as scholarship, diversity, strategic planning and non-tenure track promotion at the College. She has also found time to participate and represent the College in a variety of community service and outreach programs.

It would be an oversight not to mention Dr. Betbeze's commitment to teaching and scholarly activities. She is an enthusiastic educator, having originated and/or served as course leader or co-course leader for a number of CVM core and elective courses and clinical rotations, as well as providing numerous ophthalmology lectures and labs to various level classes every year. Despite not having an official FTE devoted to research and scholarly activities and a challenging clinical schedule, she also somehow finds time for scholarly work, as well.

Dr. Betbeze's service to MSU CVM is evident to many. Peer comments in support of her nomination for this award included:

- She is one of the most hard-working, talented, caring, and compassionate clinicians at our College.
- She is service-oriented and client-focused.
- She works tirelessly to make important connections with referring veterinarians and to maintain important relationships with previous students. These connections have served our CVM well, as our ophthalmology service is as busy as ever and receives referrals from all over the Southeast.
- Her desire to make MSU CVM the best it can be is unmatched.

MSU CVM Associate Clinical Professor of Veterinary Ophthalmology Dr. Caroline Betbeze has established a first-class ophthalmology program for our College. She is dedicated, hard-working, professional and collegial. She sets an example for all, and the MSU College of Veterinary Medicine is better because of her. She is most deserving of the 2020 Dean's Pegasus Award for Service.

ZOETIS AWARD FOR EXCELLENCE IN ANIMAL RESEARCH



presented by MSU CVM Professor and Interim Associate Dean for Research and Graduate Studies
Dr. David Smith

The Zoetis Award for Research Excellence is awarded annually to an MSU CVM faculty member. Nominees for the award must have served as the principal investigator in research conducted within the past three years that has attained or is likely to attain national or international recognition. The award is supported by Zoetis and includes a congratulatory letter, an engraved plaque, and a cash award of \$1,000.

DR. ATTILA KARSI, the recipient of the 2020 Zoetis Award for Research Excellence has an extremely productive research program. He has been a tenure-track associate professor since 2015, and during that period, he has managed 37 competitive grants (\$3,908,953). In the last five years, he has published 53 peer-reviewed articles and co-authored three book chapters.

Dr. Karsi's research resulted in three full patents on live attenuated vaccine development for the control of *Edwardsiella ictaluri*, a significant pathogen in commercial catfish. Two

patent applications in live vaccine development are pending. Recently, he submitted two invention disclosures for new *E. ictaluri* vaccine strains that are more efficacious than the currently available commercial vaccine for *E. ictaluri*, and he is working with private companies for licensing his vaccines.

In addition to Dr. Karsi's extraordinary research productivity, he teaches an important graduate course in scientific writing and contributes to other graduate courses, as well as the CVM Summer Research Experience program.

Over the past five years, Dr. Karsi has advised one research associate, one visiting scientist, three postdocs, eleven graduate students, two veterinary students, two visiting students, and four undergraduate students. He has also served as a committee member for seven graduate students.

Dr. Karsi is also active in service to our College and MSU. He is currently serving his second term on the CVM Admissions Committee and has been our undergraduate research coordinator since 2018. Dr. Karsi has served on MSU's Institutional Biosafety and Review Entity Committees since 2015. He also represents our College on the University Faculty Research Advisory Committee.

Congratulations to Dr. Atilla Karsi, the 2020 recipient of the Zoetis Award for Research Excellence.

E. WYNN JONES AWARD



presented by MSU CVM Dean
Dr. Kent Hoblet

The Dr. E. Wynn Jones Award for Exceptional Service recognizes individuals who have provided exceptional service to the MSU College of Veterinary Medicine. Dr. Wynn Jones was among the first faculty in our College, and even after he retired, he worked tirelessly on behalf of the CVM. In fact, even in his early 90s, Dr. Jones worked so much that many faculty and staff didn't even realize he was officially retired.

The 2020 E. Wynn Jones Award was presented to MSU CVM Manager of Building Services **KEVIN MOORE**, who joined the CVM family in 2013 and through the years has demonstrated a firm commitment to the College. Moore is recognized as a valuable member of the CVM team. The following are just a few of the comments noted about him by faculty and staff:

- Kevin rolls up his sleeves and jumps right into a project or situation; you might even say he jumps in with both feet! He is a great problem-solver and is completely reliable. When I give him a project, I know that it will be done and done right!

- Kevin can sustain a level of friendship while maintaining the role of a great boss!

- He is fully committed to his duties at CVM. It is common to see him here nights, weekends, and holidays, working to complete projects on time. He has put in countless hours to make our College a better place for all of us.

- Kevin is pulled in many different directions and is frequently not done for the day at 5:00 p.m. One example of his exceptional service would be his commitment to ensuring the College's mobile surgery unit is up and running and that those traveling in it are safe. From unexpected breakdowns to tire issues—which always seem to happen at 5:15 p.m. on Fridays—he puts on a smile and does whatever is needed to get students and faculty off the side of the road and back to the CVM safely!

- Kevin is instrumental in organizing, scheduling, and overseeing many large projects at CVM and works with a talented crew to provide maintenance, make building improvements, and prepare for accreditation site visits. He is a pleasure to work with, is always willing to help, and seems to always be there when you need him!

MSU CVM is very appreciative of the exceptional work manager of building services Kevin Moore has done to make our college the best it can be. He is most deserving of the 2020 Dr. E. Wynn Jones Award.

DISTINGUISHED STAFF AWARDS



presented by MSU CVM Professor and Department of Pathobiology and Population Medicine Head
Dr. Bill Epperson

MISSY BOLIN – Senior Medical Technologist, CVM Diagnostic and Aquatic Lab

When MSU CVM laboratories began processing COVID-19 PCR tests, Missy Bolin was instrumental in helping develop and implement new standard operating procedures so the University would be in compliance with the strict human medical diagnostic testing requirements. This was no surprise to her coworkers because that's just what Bolin does. Responsible for supervising laboratory personnel, Bolin also interacts with clients who are submitting samples and supports the faculty in the College's Pathobiology and Population Medicine Service. She has worked in almost every area of the laboratory, making her a valuable asset to all. During the COVID-19 pandemic, Bolin came to work every day and willingly took on additional duties and shifts in lab areas that were experiencing personnel shortages. She is considered reliable, competent, patient, and fair as well as dedicated to her coworkers and our College. Congratulations to MSU CVM Senior Medical Technologist Missy Bolin for being selected a 2020 CVM Distinguished Staff Award recipient.



presented by MSU CVM Professor and Department of Pathobiology and Population Medicine Head
Dr. Bill Epperson

CYNTHIA WARE – Senior Research Associate, Aquaculture Research and Diagnostic Lab

Considered the "go-to person" for graduate students, externs, interns, and summer research students in all aspects of their work, Cynthia Ware has played a significant role in the dissertation and thesis projects of every graduate student to go through the Griffin laboratory at the Thad Cochran National Warmwater Aquaculture Center—all while keeping the laboratory organized and stocked with resources and supplies! Ware, who has also co-authored at least 25 of Dr. Matt Griffin's publications, is known to go above and beyond the call of duty for all employees and students at NWAC; she even went as far as to help one past graduate student obtain a car when he was living in the Mississippi Delta. In addition, Ware routinely collaborates with researchers at the Wise Center and other institutions, which demonstrates her dedication to advancing the mission of the College and MSU. Congratulations to Aquaculture Research and Diagnostic Lab Senior Research Associate Cyndi Ware for being selected a 2020 CVM Distinguished Staff Award recipient.



presented by MSU CVM Assistant Dean for Clinical Services and Animal Health Center Director
Dr. Joey Burt

LANETTE JORDAN – Anesthesia Technician, Animal Health Center

The role of an anesthesia technician is very busy, but Lanette Jordan excels at giving great patient care and remains extremely organized. As senior technician for the College's Animal Health Center Anesthesia Service, Jordan works with patients daily, supervises staff, and manages the upkeep and ordering of equipment; she does so while juggling the schedules of neurology, surgery, internal medicine, equine, food animal, ophthalmology, and community veterinary services. Although her primary job is to work as an anesthesia technician, Jordan is highly involved in teaching DVM and VMT students. She coordinates the in-clinic rotation for VMT students and has successfully re-structured the anesthesia portion of the VMT program to give those students hands-on experience in a comfortable setting. In addition to her many duties and responsibilities, Jordan took it upon herself to become exceptionally qualified in the practice of anesthesia by becoming Academy of Veterinary Technician in Anesthesia and Analgesia certified in 2019. Congratulations to MSU CVM Senior Anesthesia Technician Lanette Jordan for being selected a 2020 CVM Distinguished Staff Award recipient.

GRANTS & CONTRACTS

AWARDED TO CVM FACULTY

EXTERNAL GRANTS

Amelia Woolums (PI), Cyprianna Swiderski (CoPI), Andy Perkins (CoPI). USDA NIFA. Whole blood biomarker discovery in high-risk stocker cattle at-arrival: differentiating respiratory health and disease risk. \$200,000

David R. Smith (PI), Alicia Olivier (CoPI). University of Missouri (NIH – Prime). Impact of repeated vaccination on the effectiveness of seasonal influenza vaccines. \$49,057

Stephen Pruett (PI), Barbara Kaplan (CoPI). National Institutes of Health (NIH). Summer Research Experience for Veterinary Students. \$104,167

Lanny Pace (PI), Martha Pulido Landinez (CoPI). United States Food and Drug Administration (FDA). Using MVRDL to increase the FDA Vet-LRN Sample analysis capacity during animal food/feed emergency events. \$43,650 (Year 4 funds)

Margaret Khaita (PI), Thomas Tabler (CoPI). HUSDA Foreign Agriculture Service (FAS). Strengthening Agricultural Production and Regional Trade among Women Smallholder Farmers in East Africa – Phase 2. \$50,000

Lester Khoo, Larry Hanson (CoPIs). USDA NIFA (Child account under Delta Research & Extension Center). Channel Catfish Virus (CCV) targeted management approaches in catfish aquaculture. \$16,965.

Lester Khoo (PI). USDA ARS. Catfish Health Initiative. \$397,798 (FY 2021 Funds Addition)

Cooper Brookshire (PI), Keun Seok Seo (CoPI). Aerus. Pilot study to assess airborne bacteria typically present in a veterinary teaching hospital. \$25,017 (Budget addition and extension)

Janice E. Chambers (PI), Matthew K Ross (CoPI), Robert W. Wills (CoPI). National Institutes of Health (NIH). Identification of Novel Brain-penetrating Phenoxyalkyl Pyridinium Oxime Countermeasures. \$462,093 (year 3 funding)

Lanny W. Pace (PI). Animal & Plant Health Inspection Service (USDA APHIS). National Animal Health Laboratory Network (NAHLN) Level 2: MS 2020. \$131,000

Lifang Yan (PI), Lanny W. Pace (CoPI). University of GA (USDA APHIS). United Front to Develop Harmonized NGS Training and Procedures to Increase the Capabilities and Capacity of NAHLN Laboratories in Response to Antimicrobial Resistance (AMR). \$15,400

Graham Rosser (PI), Matthew Griffin (CoPI), David Wise (CoPI), Charles Mischke (CoPI). USDA ARS. Optimization of molluscicidal treatment strategies to disrupt trematode life cycles in catfish aquaculture ponds. \$45,346

Amelia Woolums (PI), Cassandra Barber (CoPI). Association of American Veterinary Medical Colleges (AAVMC). Veterinary Student Research Fellowships to Address Global Challenges in Food and Agriculture Summer 2020. \$16,000

David R. Smith (PI), Alec Lucas (CoPI). Association of American Veterinary Medical Colleges (AAVMC). Veterinary Student Research Fellowships to Address Global Challenges in Food and Agriculture Summer 2020. \$16,000

Amelia Woolums (PI), Alicia Olivier (CoPI). Boehringer Ingelheim. Master Study Agreement: Confirmation of BRSV Challenge Isolate Virulence. \$16,412

Matthew J. Griffin (PI), David Wise (CoPI). USDA NIFA SRAC. Increasing the Understanding of and Developing Management Strategies for Edwardsiella ictaluri in the Ornamental Fish Industry (year 2 funding). \$40,488

Gregory T. Pharr (PI). USDA-ARS. Identification of the Molecular Determinants of Pathogenesis, Strain Variation, and Tissue Tropism of Different E. coli Strains. \$150,000 (Year 2 funds)

George E. Howell (PI), Keun Seok Seo (CoPI), Elizabeth A. Swanson (CoPI). National Institutes of Health (NIH). Ogranochlorine compound-induced alterations in adipocyte/macrophage crosstalk and effects on wound healing. \$181,875 (Year 2 funds)

Keun Seok Seo (CoPI). National Institutes of Health (NIH). Rational design of an adhesin-based pneumococcal Vaccine targeting colonization. \$218,641 (Child with Biological Sciences, Justin Thornton, PI)

Patricia S. Gaunt (PI). Phibro Animal Health. Florfenicol use in channel catfish (Lctalurus punctatus): a pharmacokinetic study. \$31,022 (Additional Funds)

Larry A. Hanson (PI), Graham Rosser (CoPI). Alberta Conservation Association (ACA). Evaluation of potential pathogens present in channel catfish that may impact fish in Alberta. \$5,173

Bindumadhavi Nanduri (PI), David R. Smith (CoPI). USDA Agricultural Research Service (ARS). Advancing Agricultural Research through High Performance Computing. \$760,010

Bindumadhavi Nanduri (Co-PI), Jonas King (PI), Florencia Saizar Meyer. (CVM Child, Nanduri). National Institutes of Health (NIH). EMCC-MSU Bridges to Baccalaureate Degree Program. \$8,907 (Year 3 child funds)

Hossam Abdelhamed (PI), Larry A. Hanson (Co-PI). USDA NIFA. Transfer and Persistence of Multi-drug Resistance Plasmids in the Intestinal Microbiota of Catfish. \$199,994

INTERNAL GRANTS

Ashley Coll (PI), John Thomason (Mentor), Andrew Mackin (CoPI). CVM ORGS House Officer Program. Effects of Washing Units of Canine Red Blood Cells on Storage Lesions. \$2,000

Cooper Brookshire (PI), Keun Seok Seo (CoPI), Cory Langston (CoPI). CVM ORGS. Development of evidence

based antibiotic stewardship recommendations using a canine staphylococcal pyoderma empiric therapy regional antibiogram and a One Health analysis of resistance patterns. \$10,000

Barbara Kaplan (PI), Matthew Ross (CoPI). CVM ORGS. Investigation of Additive or synergistic Anti-Inflammatory and Analgesic Effects Between Cannabidiol (CBD) and Lipoxin A4 (LXA4). \$10,000

Graham Rosser (PI), Matthew Griffin (CoPI), David Wise (CoPI). CVM ORGS. Investigations into the life cycle and pathogenesis of an emerging trematode of the genus Echinochasmus infecting pond-raised ictalurid catfish in Mississippi. \$10,000

John Thomason (PI), Paige Hafner (CoPI), Andrew Mackin (CoPI). CVM ORGS. Anticoagulant Effects of Prednisolone and Rivaroxaban, Alone and in Combination, in Healthy Dogs. \$10,000

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

Attila Karsi (PI), Adef Kordon (CoPI). CVM ORGS. Development of attenuated Edwardsiella ictalurid vaccines with deficient efflux pumps. \$5,000

Hossam Abdelhamed (PI). CVM ORGS. Development of live attenuated vaccine for prevention of Edwardsiella piscicida disease in catfish. \$5,000

Larry Hanson (PI). CVM ORGS. Use of clay or mineral additives to prevent bacterial disease in channel catfish. \$5,000

Amelia Woolums (PI), Merrilee Thoresen (CoPI). CVM ORGS. Messenger RNA treatment to induce expression of

bovine cathelicidins and NK lysin for antimicrobial effect against bovine respiratory disease pathogens. \$5,000

Skyler Caldwell (PI), John Thomason (CoPI), Andrew Mackin (CoPI). CVM ORGS House Officer. Impact of Three Different Wash Solutions on Canine Erythrocytes in Units of Stored Whole Blood. \$2,000

W. Isaac Jumper (PI), David R. Smith (CoPI), Carla L. Huston (CoPI). CVM ORGS House Officer. Case-control study to identify herd-level risk factors for illness and death due to bovine anaplasmosis on cow-calf operations in Mississippi. \$1,997

Katherine M. Neal (PI), Hayley Gallaher (CoPI). CVM ORGS House Officer. The Effect of an Aiming Device on the Accuracy of Humeral Transcondylar Screw Placement. \$2,000

Kira Noordwijk (PI), Cyprianna Swiderski (CoPI). CVM ORGS House Officer. Optimizing cyclooxygenase-2 (COX-2) detection in equine squamous cell carcinoma to improve directed therapies. \$2,000

Stephanie Steuri (PI), Claudio Natalini (CoPI), Andrew Mackin (CoPI). CVM ORGS House Officer. Prospective Study Evaluating the Comparative Effects of Dexmedetomidine and Acepromazine in Combination with Hydromorphone on the Heart and Respiratory Rate during Routine Castration and Ovariohysterectomy Procedures. \$692

Alexis C. Thompson (PI), David R. Smith (CoPI). CVM ORGS House Officer. Variance in Calculated Serum Immunoglobulin G Measured Using a Commercial Radial Immunodiffusion for Beef Calves. \$2,000

Hannah E. Urig (PI), Kimberly Woodruff (CoPI), David R. Smith (CoPI). CVM ORGS House Officer. Seroprevalence of Feline Leukemia Virus and Feline Immunodeficiency Virus in northern Mississippi Shelter Cats. \$2,000

CVM NOTES & NEWS

ALUMNI NEWS

Adam P. Patterson (DVM 2001) and wife Carly welcomed their son, Jack Walter, April 2, 2020. During the same month, Dr. Patterson became president of the American College of Veterinary Dermatology. Both parents are faculty at the Texas A&M College of Veterinary Medicine & Biomedical Sciences.

Joseph Pierce Sullivan (DVM 2012) and wife Sam welcomed their first child, Harris Henry, July 1, 2020. Dr. Pierce currently serves as program veterinarian with the University of Wisconsin Research Animal Resources and Compliance Department.

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 this information 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/alumnimsucvm](https://www.facebook.com/alumnimsucvm).

HELP US STAY IN TOUCH!

Update your contact info quickly and easily by visiting vetmed.msstate.edu/alumni-friends/update-information and filling out the short form!



CVM OFFICE OF DEVELOPMENT NEWS

WHY GIFT DOCUMENTATION Is Important

Private gifts are a significant part of the success of the MSU College of Veterinary Medicine. Gifts from donors support scholarships, faculty, facilities, programs, and the overall function of the college.

One of the primary responsibilities of individuals such as I in the development profession is to help pair donors with projects they feel passionate about. We are also charged with ensuring gifts are used as donors intend.

For most gifts over \$1,000, we like to have a gift agreement on file. This agreement acts as a statement of donor intent and establishes or directs the money to the project specified by the donor. An example is a named scholarship where the donor might like for certain criteria to be included, such as the student's hometown, county or state, GPA, or financial need.

In the instance of a planned gift and in addition to a gift agreement, we always like to have a copy of the portion of the will or trust that directly relates to the MSU Foundation, Inc.

(the official charitable fundraising organization for Mississippi State University) along with a reference to the gift agreement on file. We ask for a copy of the beneficiary designation with an IRA, CD, mutual fund, or other investment account.

Why do we want all of this? To make sure that the donor's wishes are carried out in the manner expected. We are incredibly grateful for all the private gifts that have created an endowment of nearly \$25,000,000 in the CVM and total around \$5,000,000 on average to the college.

Please contact me, jkight@foundation.msstate.edu, or Melissa Montgomery, mmontgomery@cvm.msstate.edu, with any questions about how to make an investment in veterinary medicine. We stand ready to assist you however needed!

Thank you,

Jimmy Kight
Director of Development

Your savings, your legacy

You have worked hard and saved for retirement. Now use your savings to create your legacy by making an IRA charitable rollover gift to the Mississippi State University Foundation. If you are 70½ or older, you can:

- avoid taxes on IRA transfers up to \$100,000;
- may satisfy some or all of your required minimum distribution for the year;
- reduce your taxable income, even if you don't itemize deductions;
- make a gift that is not subject to charitable contribution deduction limits; and
- use your rollover to make payments on an existing pledge to MSU.

For more information on IRA charitable rollover giving, contact the MSU Foundation Office of Gift Planning.

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



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