

Stepping Up

Over the last year our faculty, staff, and students have spectacularly fought and navigated the myriad of challenges brought about by the pandemic. In this issue, we celebrate our veterinary nurses, who are absolute heroes and heroines in the delivery of veterinary medical care. They have been the constant force in our veterinary medical center. They are the heart of our profession, and we are grateful for them.

To help maintain a sense of community and well-being during this time of social distancing, our college has embraced activities ranging from zoom cooking lessons to a Route 66 step challenge. Throughout our magazine, you can enjoy photographs our faculty, staff, and students submitted while answering the challenge to step-up.

The pandemic hasn't slowed our resolve to advance animal, human, and environmental health. I hope you enjoy reading about the development of the Webb Family Center for Feline Health, our newly established Veterinary Obesity Center, updates on our Teaching and Learning Center, and the work our shelter medicine team does each day to make a difference in our communities. I'm also pleased to share some of the work we are doing to cultivate an environment of inclusivity for all our faculty, staff, and students, where individuality is welcomed, respected, and embraced.

I am grateful for your support. You help us bring positive change to the lives of people and animals.

Sincerely,

James P. Thompson UTCVM Dean



# THE UNIVERSITY OF TENNESSEE COLLEGE OF VETERINARY MEDICINE

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**SPECIAL THANKS** to the faculty, staff, students, and clients of the UT College of Veterinary Medicine for letting us share their stories.

VOLVet Vision is an annual publication of the UT College of Veterinary Medicine. Comments, suggestions, or requests to be added to the mailing list may be emailed to <a href="https://docs.org/linearings/br/>UTCVMnews@utk.edu">UTCVMnews@utk.edu</a>.

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# SECTION DIVIDERS:

The images featured on the Knowledge, Compassion, Discovery, and Family divider pages in this issue of VOLVet Vision were chosen from the beautiful photos taken by the students, faculty, and staff of UTCVM during the Spring 2021 Walking Challenge (see pages 30-33).

# **A Viral Chat**

# Catching up with Dr. Melissa Kennedy

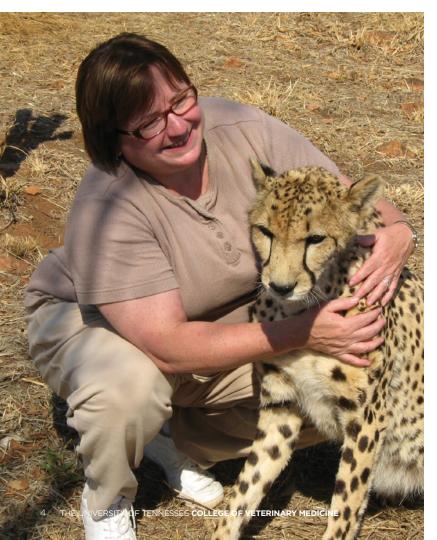
A humorous, boisterous Irish lass — if you've met **Dr. Melissa Kennedy**, then you know the best way to make her day is by telling her a good joke. She has been at UT as a student (UTCVM '83), resident (Microbiology), instructor, assistant professor, and she recently retired as an associate professor of virology. During that time, she and her lab helped identify herpes virus in Asian elephants, were the first to publish that equine herpes could affect gazelles, and were the first to diagnose influenza in giant anteaters.

### Why did you become a veterinarian?

Good question, not sure I have a short answer. Of course I love animals, and read all the James Herriot books. But I didn't have a moment of revelation, just knew I always wanted to be a vet. Glad I did.

### What has been the most challenging?

I guess that would be convincing students that—immunology, virology, infectious diseases — while not always sexy and fun, is always important regardless of where in the profession they end up. Sometimes it can seem a bit esoteric — who really cares about how lymphocytes work or whether a virus has an envelope or not, after all? But I think it's fascinating AND useful.



### Why UTCVM?

It was close! Waaaaay back in 1980 when I started vet school, I was a member of just the 5th class. UT was home – I did undergrad work in 3 years AND finished vet school in 3 years, just a baby at 24!

### Why virology?

Serendipity. At that time, I had practiced small animal medicine with a rather broad spectrum of experience, from very rural ("are you studying to be vet nurse?"), to urban (average client charge was



important), to finally practice with a good friend and classmate, Darlene White. It was mainly a decision of, as my mom would say, knowing what you don't want to do.

UT had a newly designed graduate program to attract DVMs. At that time, Dr. Potgieter had an opening, I applied, and the rest is history. Best thing that ever happened to me - I loved virology and Dr. P was a great mentor. I finished my PhD in 1991 and stayed on at UT like a bad habit, first as an instructor, to tenure track, to tenured. They couldn't get rid of me!

The thing that most attracted me is not magical – it was home. But as time went by, I realized it was the familial feel – from the lab, to the department and College, we were "all for one and one for all" as they say. There was a feeling of advocacy and support from the beginning.

### How has it changed and what do you see in the future?

Well, there's the obvious – technology, capabilities, specialization, and advances. But the core missions of education of future vets and taking care of animals hasn't changed. Certainly, methodologies and measures of success have improved. But the collegial attitude, the focus on our mission, the caring and concern for patients, clients, customers, faculty, staff, and students haven't changed and I hope they never do.

While receiving chemotherapy for breast cancer, Dr. Kennedy developed Parkinson's plus syndrome. She says she has a great family and friends who have and continue to support her through it all. She doesn't let that keep her down and continues to provide online consulting for Veterinary Information Network, serves on the scientific advisory board for Winn Feline Foundation, and is in the process of editing the fourth edition of a microbiology textbook. "I still talk to vets on the phone and help where I can. Above all, I am ok, still rely on my faith, family, and friends. I also am very grateful for the wonderful people I got to meet and know through my many years at UTCVM." "

# LEDG: Ozone Falls, Cumberland County, May 2021 photo by Amber Macdonald, Comparative & Experimental Medicine

# Focus Forward

"Three words continue to frame my vision for veterinary students and veterinarians of the future: elevate – do everything with excellence in mind and to elevate the profession, yourself and those around you; empower – empower students and practitioners to solve problems and manage conflict; and everyone – include everybody in the program and educational mission as well as in making contributions to the profession."

Dr. India Lane first joined UTCVM in 1998 as a small animal internal medicine specialist and was director of educational enhancement before serving the UT statewide system for seven years as associate vice president for Academic Affairs and Student Success. She returned to the college in 2018 and was named associate dean for academic and student affairs in 2020. Fiercely committed to the advancement of students and the profession, Dr. Lane has helped transform academic veterinary medical education by guiding the implementation of applied, problem-based education courses, co-founding the college's Master Teacher Program in 2008, and being heavily involved with the AAVMC Veterinary Educator Collaborative, the Southeastern Veterinary Education Constortium, and other groups on national and international levels.



As Associate dean, Dr. Lane focuses on professionalism and nontechnical competencies of veterinary students, clinical teaching and learning, and student support. With veterinary medicine continually advancing, educating students to become life-long learners and exposing them to the inquiry and evidence behind the medicine remains a constant. In surveys, employers consistently comment on the excellent preparation of recent UTCVM graduates, their professionalism, and their effective client communication skills. Dr. Lane believes the UTCVM graduate should be "not only prepared as an excellent biomedical scientist and veterinarian, but also an excellent communicator, talented problem-solver and conflict manager, and committed to making a difference in their work, community, and profession."

Since the college's beginning, teaching has been job number one, and that includes teaching the teachers; Dr. Lane says the college has always created a supportive atmosphere for students and has developed a better understanding of the learning process. "We know students appreciate having access to different resources and tools to figure out what works best for them. We hope our instructors are approachable and are continually trying innovative methods for delivery." Though technology has progressed from carousel slides and overhead projectors to sophisticated models, animations, and virtual reality, nothing is as impactful as the rapport and purposeful connections that are cultivated between the students, content, and instructor.

With curricular modifications and elective options, the college has incorporated not only more instruction on business acumen but also placed more of an emphasis on self-care and mental health. This year, the college added a full-time position, the assistant dean for students, to lead student life and wellness initiatives as well as advance diversity, equity, and inclusion efforts. The Class of 2025 is UTCVM's most multi-culturally diverse class yet. "Diversity is incredibly important so that veterinarians reflect and understand the communities they serve, but we also know a diversity of opinions and perspectives—a diversity of people—in a team improves teamwork and innovation."

ShaRonda Cooper, PhD, MEd, LPC, is the first assistant dean for students at the University of Tennessee College of Veterinary Medicine (UTCVM). Dr. Cooper will be leading student life and wellness initiatives, as well as efforts to advance diversity, equity, and inclusion.

"Dr. Cooper has impressed everyone with her energy, positivity, and new ideas for veterinary students and will bring her unique skill set to this new position," says Dr. India Lane, the college's associate dean academic and student affairs. "She will provide much-needed ongoing attention to the nonacademic and wellness needs of all our veterinary students."

Dr. Cooper is a licensed professional counselor and has led numerous student affairs and multicultural programs at the University of Georgia and other universities, including working with high-risk veterinary students in the Department of Health Promotion at UGA. "I am excited to join the UTCVM team and honored by the opportunity to serve in this role," says Dr. Cooper. "Our students recognize the need for diversity initiatives. They are hungry for the engagement that comes from such a rich and diverse environment, including the diversity of thought." Dr. Cooper says she looks forward to supporting the academic excellence at UTCVM and supporting the needs of the students.



# Teaching & Learning Center Construction Update

As you may have heard, the UT College of Veterinary Medicine is building an addition onto the north face of our facility. The Teaching and Learning Center (TLC) is a 20,000 square-feet addition that includes a simulation skills teaching lab, a 130-seat lecture hall, two teaching laboratories, gathering spaces, and a new entrance to the Pendergrass Agriculture and Veterinary Medicine Library. Construction is expected to be completed in 2022.

The TLC will create a welcoming environment that enhances the educational experiences for students using innovation, technology, and flexibility. The simulation laboratory is an innovative teaching tool that offers UTCVM students the opportunity to become proficient and confident in performing technical skills before and during their clinical years. We are very excited about this long-anticipated addition to our college!



Want to support student education? Call 865-974-4379 or visit vetmed.tennessee.edu/give

# **Answers, Big and Small**

# UTCVM Faculty Answer Questions on The Conversation

The Conversation is a nonprofit, independent news organization dedicated to unlocking the knowledge of experts for the public good. They publish trustworthy and informative articles written by academic experts for the general public and edited by their team of journalists.

In the last year, two UTCVM faculty were asked to answer questions as a part of The Conversation's Curious Kids section. Curious Kids features interesting answers from experts to questions children have from all around the world.

### Why do tigers have stripes?

- Vidit M., age 8, New Delhi, India

When tigers stalk their prey, usually in the murky light of dusk or dawn, they are nearly invisible. Whether they live in grasslands, forests or jungles, wild tigers have deep orange coats with dark stripes. So how does such a brightly colored animal stay concealed well enough to hunt successfully? The answer: camouflage!

### **Green tigers?**

In my work as a zoological veterinarian, I've seen up close how various animals' coats. feathers, colors, spots and stripes have evolved to either help them attract a mate or disguise them. Camouflage - or "cryptic coloration" allows them to hide, undetected. Since tigers are apex predators at the top of the food chain, they don't need to hide from animals that might eat them. They are carnivores – they eat meat – and they rely on stealth to hunt successfully. They're helped by the limited vision of their preferred prey. Deer and other hoofed animals can't see the full range of colors, much like a colorblind human. It helps them see better in dim light, but it also makes them vulnerable. To their eyes, the tiger's fur isn't bright orange: it looks green and matches the background.

### Hidden in plain sight

The tiger's markings also play an important role. Their vertical stripes, which range from brown to black, are an example of what biologists call disruptive coloration. They help break up the cat's shape and size so it blends in with trees and tall grasses. That's important because these predators don't hunt in groups, like a lion, or have the speed of a cheetah. Tigers are solitary cats that rely on stealth and

camouflage to survive. Stripes even vary among the six tiger subspecies. The Sumatran tiger subspecies has much narrower stripes than the others and has more of them. This helps it stay hidden in its dense jungle home.

### Unique as a fingerprint

When you look at different tigers up close, as I do in my work, you'll see that each of their stripe patterns is unique, just like a zebra's. No two are the same. They're as distinct as human fingerprints. This allows researchers who study them in the wild to identify and count individual tigers. They use remote cameras to take pictures of the animals when they walk by. Using this method, tiger experts estimate that only about 3,400 wild tigers remain across their Asian homeland. It's not just their fur that's inked with black stripes. When we have to sedate a tiger to treat an injury or do dental work, we shave their fur. It's always surprising to see that their skin almost looks like it's been tattooed: It has the same striped pattern as its fur!

### White tigers

So if stripes camouflage tigers from potential prey, why are some of them white? Don't they stand out in the jungle, even with their stripes?

Yes, they do! Because we've seen them on TV or in wildlife tourist attractions, we may think they're common, but they're not. A genetic mutation in Bengal tigers gives them their milky white fur. Both parents must carry the same very rare gene to produce white cubs. White tigers are bred to relatives in captivity to attract tourists – and inbreeding produces unhealthy offspring. There were never more than a few white tigers in the wild. The last one was spotted more than 60 years ago. That makes sense in terms of evolution. A white and black tiger is easier to spot than an orange tiger, so it would have a harder time catching its dinner. Tigers' distinctive striped coats help them hunt successfully, but it's also one reason why they're endangered. People kill them for their beautiful pelts, which command high prices in the illegal international wildlife trade, mostly in Asia. Park guards and conservation groups are working to protect this iconic animal, the largest of all the big cats. -

> - Dr. Andrew Cushing, UTCVM Zoological Medicine

https://theconversation.com/why-do-tigershave-stripes-145223



# THE CONVERSATION

# Why do cats like to pat their paws on a soft blanket?

- Anonymous

Do you ever see your cat shifting his front paws back and forth just before settling down for a nap? Have you heard some cat lovers talk about their feline friends "making biscuits" or "kneading dough"? Scientists who study cat behavior call this distinctive paw action "kneading" and believe it to be a sign of a relaxed cat. My own cats knead before taking a nap near me. While they are kneading, they purr — one of them gets so relaxed, he sometimes drools. Kneading usually occurs near a favorite person. As a veterinarian, I think it's important to recognize the little moments your cat is telling you she's happy to be near you.

### **Kneading in kittens**

If you're ever around newborn kittens, you will see kneading pretty quickly after birth. A kitten kneads on his mother's abdomen as a way of telling her he is hungry and ready for her milk. At the same time, the kitten usually purrs, which is a sound created by rapid vibrations of certain throat muscles. Purring is a signal for

attention. Using these two behaviors, kittens are asking their moms, also known as queens, to remain still so they can continue suckling. Young kittens usually fall asleep while suckling. Kittens stop drinking their mother's milk by about two months of age. So why do cats continue to knead as adults?

### Ready to relax

Kneading seems to be more common in some cats than others. If your cat doesn't knead, it could mean he is a little stressed – or it could just be that your cat doesn't display relaxation or affection in that manner. But many cats do continue kneading into adulthood. It's pretty safe to assume a cat who is kneading is feeling calm, content and ready to settle down, just like a kitten settling in to suckle and sleep.

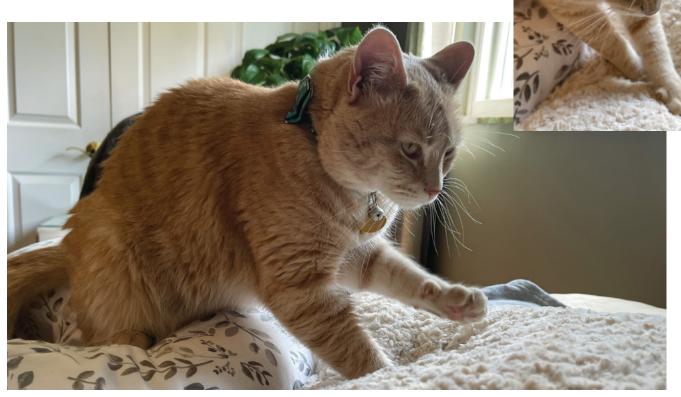
You may already know that when your cat bunts, or butts his head and rubs his cheek, head and body against your leg or an object near you, he is putting his scent in these locations. Cats also have scent glands between their toes, prompting some people to suggest that cats are also putting a familiar, comforting scent on their sleeping area when they knead. Don't bother to look for these glands on your own cat. They are not easily visible.

### **Subtle signals**

Kneading may also be a form of communication between cats and their people. If you've been around dogs, you know most are quite obvious in letting humans know they want something or like someone. For thousands of years, people have purposely bred dogs to be fun companions, as well as to have useful behaviors such as herding, tracking or guarding. Cats and people have also lived together for thousands of years - and humans have appreciated their amazing natural mousing skills. Only recently have people tried to breed cats, but mostly for their appearance, not for specific behaviors. The result is that cats are a little more subtle than dogs in their ways of telling a person, "I like you." Kneading is one of those clues. 🤜

> – Dr. Julia Albright, UTCVM Behavior

https://theconversation.com/why-do-catsknead-with-their-paws-156254





# **Veterinary Obesity Center**

# **UTCVM VETERINARY MEDICAL CENTER**

In partnership with



If you find yourself wondering what the University of Tennessee College of Veterinary Medicine (UTCVM) is up to in terms of small animal nutrition, you should meet Drs. Maryanne Murphy and Angela Rollins.

In addition to serving as faculty members here at UTCVM, Drs. Rollins and Murphy hold positions within two national organizations. Dr. Murphy is currently president of The American College of Veterinary Nutrition, and Dr. Rollins is the president of The American Academy of Veterinary Nutrition. Drs. Rollins and Murphy also lead The University of Tennessee's Veterinary Nutrition Service, which treats patients with a variety of nutrition-related medical problems through fee-based consultations with pet owners.

Recently, Drs. Murphy and Rollins received a grant through Royal Canin, which allowed them to begin the Veterinary Obesity Center (VOC) program. The VOC program is able to provide weight loss plans for client-owned pets at little to no cost to pet owners thanks to a Royal Canin grant. Patients receive a full health screening and body composition assessment with a DEXA scan. Throughout the weight loss program, the VOC supports patients to increase the chances of success in treatment. In addition to helping overweight dogs and cats live longer, healthier lives, the center is also conducting research to better understand obesity treatment and prevention.

When asked to speak about what first sparked her interest in a career in small animal nutrition, Dr. Rollins said her interest began after caring for her overweight, diabetic cat named Millie. After earning her DVM degree from UTCVM and working in a private practice setting, Dr. Rollins returned to the University of Tennessee to earn her PhD, which focused on diabetes and obesity in cats. This degree then led to a nutrition residency opportunity within UTCVM.

Dr. Murphy's interest in small animal nutrition began when she was a third-year veterinary student at Iowa State University. She was in the process of planning her future after graduation and had a conversation with one of her advisors who then pointed out that it was possible for Dr. Murphy to expand on her interest in her own nutrition through the field of











Dr. Angela Rollins

Dr. Maryanne Murphy

Tammy Moyers

Ashley Self

veterinary nutrition. Her advisor was instrumental in helping Dr. Murphy set up a clinical externship with a board certified veterinary nutritionist, which is the experience that solidified her plans to pursue a career in veterinary nutrition.

In terms of research, Dr. Murphy's most recent projects involve looking into the effects of various treatment modalities on acute gastroenteritis in dogs and dietary management of chronic enteropathy in cats. Dr. Rollins's research focuses on obesity treatment and prevention using novel feeding methods such as meal feeding from toys and automatic feeders.

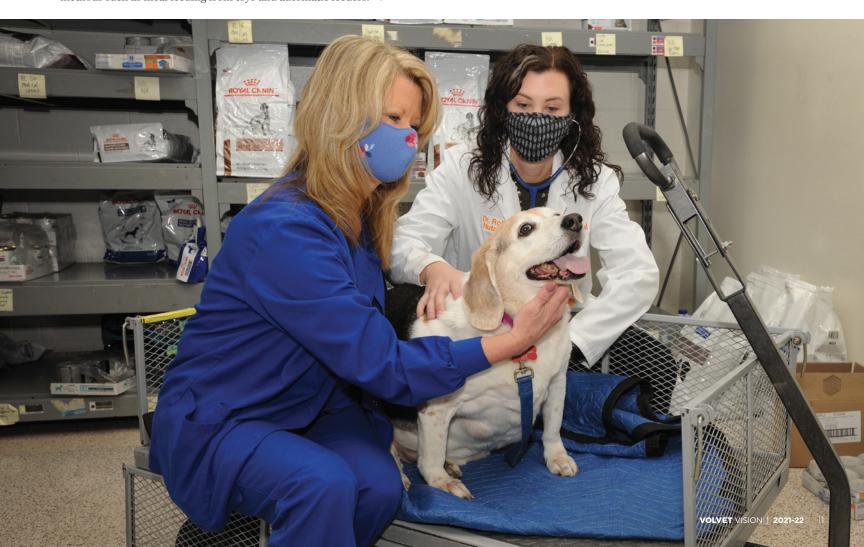
### Hungry for more? Get in touch with us!

Veterinary Obesity Center at UTCVM

<u>tiny.utk.edu/VeterinaryObesity</u>

Tammy Moyers | 865-974-8387 | <u>utvoc@utk.edu</u>

UTCVM Veterinary Nutrition Service
tiny.utk.edu/UTCVMNutrition
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# Weaving a Webb of Care

# The Webb Family Center for Feline Health

Exciting changes are on the way for our lovable felines with the development of the Webb Family Center for Feline Health. The center is supported by a generous bequest from Jim and Josephine Webb in honor of their son and many feline friends. The Webbs, along with family friend Debbie Arp, have a long history of care and love for their feline companions. Their vision was to improve the life of cats by improving access to exceptional health care and education of veterinarians and cat parents alike.

The center's mission is to elevate the wellbeing and health of all cats through advanced medical care, education, new discoveries, and collaboration with all who love and care for cats, big and small. The center will be a feline care collaborative of dedicated health professionals within our college and allied organizations. Program development includes a new feline clinical hospital, advanced medical and surgical care, and a house-call practice. Educational programs will include feline-focused content for veterinary students, interns, residents, veterinarians, and the cat-loving public.

The Webb Center for Feline health is currently under architectural design. All faculty with feline interests will have access to the specially designed space as a co-op relationship. The center will include a feline-only entrance, four examination rooms, and feline-friendly housing, treatment, and procedure areas. To avoid unnecessary movement of patients—a major source of stress for many hospitalized cats—a dedicated procedure



Dr. Claudia Kirk, a board-certified veterinary internal medicine specialist and nutritionist leading a new initiative, provides an update on the Webb Family Center for Feline Health.



Debbie Arp, family friend of the Webbs.

Jim and Joesphine Webb, pictured with their beloved cats under a portrait of their son.



room will allow a majority of nonsurgical procedures to be completed within the center. Medical, surgical, and behavior patients will enjoy a well-appointed clinic specifically designed with a fear-free feline focus in mind. A director and doctors specializing in feline medicine will oversee the center. We are delighted that Dr. Jillian Smith will be joining the medicine and feline practice in the summer of 2022. When the center opens, she will be joined by a veterinary nurse and assistant dedicated to the care of our feline patients with an emphasis on fear-free handling and care. The feline-focused housing includes "kitty condos" with two apartment areas to separate resting areas from a private litter box area. For those patients that just don't like a car trip to the veterinarian, a house-call service is on the horizon. This service will allow examinations and follow-ups on medical, surgical, and behavior cases where the use of specialized hospital equipment and testing will not be required.

The Webb Family Center for Feline Health will offer a feline-specific rotation for students interested in gaining targeted feline experience. Students caring for feline cases from other specialty services will engage with the center staff to learn optimal handling, treatment, and feline case management. Expansion of the professional curriculum and outreach to veterinarians and those with a feline interest are on the agenda. Stay tuned as we grow. A list of resources will include a Feline Health Symposium for veterinarians, web-based content, and e-newsletters for feline fanciers.

# COMPASSION





# of Veterinary Medicine

At UTCVM Veterinary Medical Center, veterinary technicians provide continuity of care. As clinicians' schedules change and senior veterinary students rotate through medical services every two weeks, veterinary technicians are the constant on the service.

In the intensive care unit, they attend cage-side rounds with the criticalists and conduct rounds at every shift change to ensure a full understanding of each patient's condition and medical plan. Throughout the pandemic, veterinary technicians changed their work schedules and worked on different services to allow for social distancing and to ensure no one would have to work without a break.

Veterinary technicians do more than hold animals and walk dogs. They provide patient care and perform the same medical procedures as human nurses—except they work with multiple species. In addition to providing medical care, veterinary technicians' duties are as varied as their patients. Among other things, they collect and analyze diagnostic samples such as blood, urine and aspirates, run lab tests, anesthetize, and monitor patients, work in surgery, plus provide client communication and education.

According to a recent national survey conducted by Atomik Research on behalf of the North American Veterinary Community (NAVC), as many as forty-seven percent of the pet owners surveyed were unaware of the role veterinary technicians have in performing medical tasks and procedures; over half were unaware that they can monitor and manage anesthetics during surgery and perform diagnostic imaging. The survey also revealed most pet owners were unaware of the extensive educational requirements and professional training required to become a veterinary technician and sixty-three percent did not realize that veterinary technicians are the animal healthcare equivalent of registered nurses.

According to the National Association of Veterinary Technicians in America (NAVTA), credentialed veterinary technicians must obtain an associate or bachelor degree in veterinary technology from an institution





Janet Jones, Hospital Clinical Director, has been at UTCVM since 1986 and has been a veterinary technician since 1976. Throughout her career, Janet has served on the Tennessee State Board of Veterinary Medical Examiners as vice-president and was president of the state veterinary technician programs in Georgia and Tennessee. She says it takes more than a love for animals to be a veterinary technician. "You have to have perseverance and learn the science. You provide veterinary care and need to understand disease processes, how the body works-and not just one body, but many from the mouse to the dog, cat, horse, llama, cow, goat and sheep to name a few," explains Jones. The curriculum includes anatomy and physiology, medical terminology, medical dosage calculations, animal handling, pharmacology, anesthesia, radiology, laboratory skills, animal nursing, and surgical nursing. In most states, including Tennessee, those who have not obtained a veterinary technician credential are considered veterinary assistants. Both are integral members of the veterinary healthcare team.

Veterinary technicians can also obtain specialty status in various specialties such as emergency and critical care, dentistry, anesthesia, zoological medicine, clinical practice, behavior, laboratory animal, clinical pathology, dermatology, equine, physical rehabilitation, nutrition, ophthalmology, surgery, diagnostic imaging, and internal medicine which includes subspecialties such as cardiology, equine internal medicine, neurology, oncology, production animal internal medicine, and small animal internal medicine. At least a dozen of these specialties are represented at UTCVM. In fact, UTCVM veterinary technicians have helped organize several of the specialties. Jones says people are here because they want to learn. "Part of the process of being here and learning is to give new technicians something to aspire to, because it's not a dead-end job at the veterinary college. Our technicians are not only growing in their specialty, but they are getting advanced degrees and mentoring new people."



There is no such thing as "just" a veterinary technician, especially at UTCVM. The veterinary technicians are heavily involved in teaching students in laboratories. "Our technicians spend a lot of time teaching students even before they are on the clinic floor; teaching them how to perform physical exams, how to administer and develop plans and protocols, proper techniques for placing intravenous catheters, wound management techniques, and CPR. I believe our veterinary technicians are the best in the country and can compare and compete with anyone, anywhere."

In addition to knowing the science, it takes compassion to be a veterinary technician. Since animals have a person attached to them, veterinary technicians must have compassion for the patient and compassion for the owners with the ability to sometimes handle profound sadness and grief. Veterinary technicians serve as patient advocates; they celebrate the positive outcomes and mourn each loss. They are the heart of veterinary medicine.



# On the Road



# Expanding Team Awesome's Reach

ith the addition of an amazing, brand new, (donor funded)
Ford Transit outreach van, the shelter medicine and
Companion Animal Initiative of Tennessee, aka "Team
Awesome" at UTCVM, have been expanding their reach in community
engagement and service-learning opportunities for veterinary students
as they help meet the needs of marginalized populations. Long-standing
programs, such as Vets for Pets of Homeless Owners (VPHO), are
benefitting from the outreach van to help transport pet food, vaccines,
parasite preventatives, and other items to serve their patients. VPHO has
provided monthly veterinary care "under the bridge" in Knoxville from
March through December since 2009.

In early spring, the team embarked upon an inaugural journey in the outreach van, alongside eager students from the UTCVM shelter medicine club. They traveled north to the Animal Shelter of Sullivan County to install specialized cage additions into feline housing units. The additions are called portals, and they double a cat's cage space by connecting two previously separated cages which allow the cat to sleep and eat in one cage and pass through the portal to the other cage to use the litter box. "It's a well-established fact in the sheltering world that these portals decrease disease and improve the quality of life for cats in shelters," says Dr. Jenny Weisent, who wrote the grant that funded the portals. "Back in 2018, Dr. Becky DeBolt led the shelter medicine club with a similar project for Sevier County Humane Society, and the majority of our regional shelters still need the improved housing."

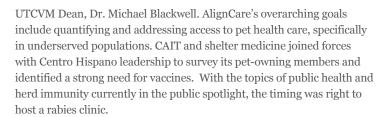
To maximize time and resources, the team tackled a second goal on the visit: training and assisting staff with the installation of the shelter's new surgical unit. After months of consulting and research on design and equipment, the set-up and installation process marked an exhilarating step forward! Access to in-house spay and neuter surgery will be a key factor in addressing the problem of pet overpopulation in the Tri-Cities area.

Another brand new outreach program came to fruition this summer when the team hosted a vaccine clinic for members of Centro Hispano de East Tennessee, an organization that offers resources, training, and development to Knoxville's Latino community. Before the pandemic, Dr. Weisent had devised a plan to reach out to this community and better understand their pet care and veterinary needs. She created a survey modeled after AlignCare, a program initiated and run by former









On a Saturday morning in July, the new outreach van was the first sight families saw as they arrived with their pets at the parking lot next to Young Williams Animal Center, Knoxville's municipal shelter. The clinic included translators, Team Awesome, veterinary students, and Centro Hispano, as well as an inviting information booth from the shelter. Smiles abounded and new friendships formed in a community grateful for the attention from the UTCVM. "Not only were we able to host an outdoor clinic specifically for the community and provide rabies shots and tags, but we also shared pamphlets, written in Spanish, that cover important topics of pet care and disease prevention," said Weisent. "Ultimately, we hope that these new relationships, born of goodwill and mutual understanding, might aid in fostering trust in the university, especially by historically underserved communities."

From helping install portals to hosting rabies clinics, the shelter medicine/ CAIT collaborative outreach efforts are not only critical to animal welfare, but they demonstrate to the communities that UTCVM truly cares. With the new van as a chariot, Team Awesome offers students a service-learning experience that aligns with the mission of what it means to be a Volunteer at UT. "Community engagement, outside of the walls of academia," says Weisent, "fosters real-world perspectives on how veterinary medicine can be a force for positive change in our local community and beyond."









Want to help reach our community? Call 865-974-4379 or visit vetmed.tennessee.edu/give

# **Compassion Fatigue**and Burnout

Q&A with Dr. Tom Favale and Andrew Lufkin, UTCVM Veterinary Social Work Providers

The pandemic created additional stress for staff, students, and pet owners. Two members of our Veterinary Social Work team, Dr. Tom Favale and Andrew Lufkin, answered questions for an article in MWI Animal Health on burnout and ways to support well-being.

# What's the difference between compassion fatigue and burnout?

Compassion fatigue is the over exposure to emotionally unsettling experiences. Burnout is usually derived from continued struggles one faces in a work environment, such as long hours, disagreements with coworkers or supervisors, lack of resources, etc.

# What are the consequences if mental health concerns and burnout are left unchecked?

- Poor performance (e.g. tardiness, apathy, incomplete records).
- · Medical errors.
- · Changes in attitude and tolerance.
- · Decreased coping abilities.
- · Increased symptomology with current mental health issues.
- · Strained ability to maintain a thriving business.

# How can veterinary leaders address mental health concerns and burnout in veterinary practice?

- · Listen compassionately to all employees.
- Implement a "one size does not fit all" philosophy for handling staff concerns (stresses, anxieties, etc.)
- Awareness of/seeking out/encouraging appropriate mental health resources.
- Encourage open dialogue of protocols/policies.
- Stress the importance of maintaining good mental health boundaries.

# How can practice owners/leadership support their team and help with mental health issues?

- · Reinforce lunch breaks.
- · Encourage kind regard for self and others.
- Honor employees' awareness/understanding of personal limits.
- · Communicate among staff with curiosity and an open mind.
- · Provide information about mental health resources.
- Staff a counselor or other mental health professional (even on a part-time basis).
- Lead by example: excellent communication skills, maintaining well-defined boundaries, recognizing the destructive power of stigma around mental health.

# What human resource opportunities could practices offer to help offset stress, burnout, and other issues (bickering, morale, meltdowns)?

- Employee Assistance Programs that may be available through clinic's health insurance program.
- Fun gatherings for clinic employees and their families to help build community.
- Group participation in community volunteer programs and/or projects.



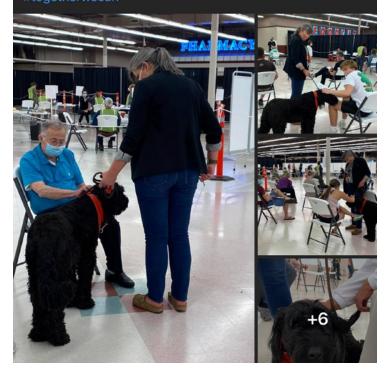
# **HABIT Vaccine Support**

Visits to the Health Department's Vaccine Clinics

Provided by HABIT (Human Animal Bond In Tennessee), an outreach program within the UT College of Veterinary Medicine, are welcomed. Recently, visits have looked a little different than normal, but HABIT volunteers and program administrators came up with new ways to continue to serve their communities. Vaccine clinics have become a new venue for HABIT visits — a perfect opportunity to provide the calming and stress-relieving effects of a visit with an animal. Last spring, Karen Armsey, program director for HABIT, was spotted at a Knox County Health Department vaccine clinic in Knoxville with Shiloh, one of the rock star HABIT dogs. Where there is a will for spreading happiness, there is a way — even during a pandemic.



Did you know that there are over 300 dogs in our Knoxville community that spend one hour each week working with HABIT, a nationally recognized animal-assisted therapy program? Pictured at our vaccination clinic on Broadway this week is none other than Shiloh! We appreciate Human Animal Bond in Tennessee (H.A.B.I.T.) taking the time to visit our vaccine clinic to bring a little happiness and joy to everyone working and those who had just received their COVID-19 vaccine. #thelittlethings #mentalhealth #togetherwecan









# **VOLVet Volunteers**

# Getting InVOLved with UTCVM

hile exploring innovative and safe ways to best teach veterinary students during the pandemic, UTCVM put out a call looking for exceptional veterinarians interested in making a difference in the lives of students and animals. In the first year, 83 licensed veterinarians signed up for the VOLVet Volunteer program and participated in a variety of college-wide activities such as teaching clinical skills, helping with Feral Fixin', reviewing student applications, and assisting with student interviews.

Dr. Allison Smith (UTCVM '08) not only volunteered the most hours in the program's inaugural year, but she also volunteered to participate in a video describing her experience working with the spayneuter clinic. "It's a nice way to feel like you are giving back and being part of the community. I remember how nervous I was doing those surgery labs; it's nice to be there for the students and reassure them they are doing a great job, and we all started at the same place."



Dr. Smith says being around the students and their excitement about veterinary medicine is refreshing.

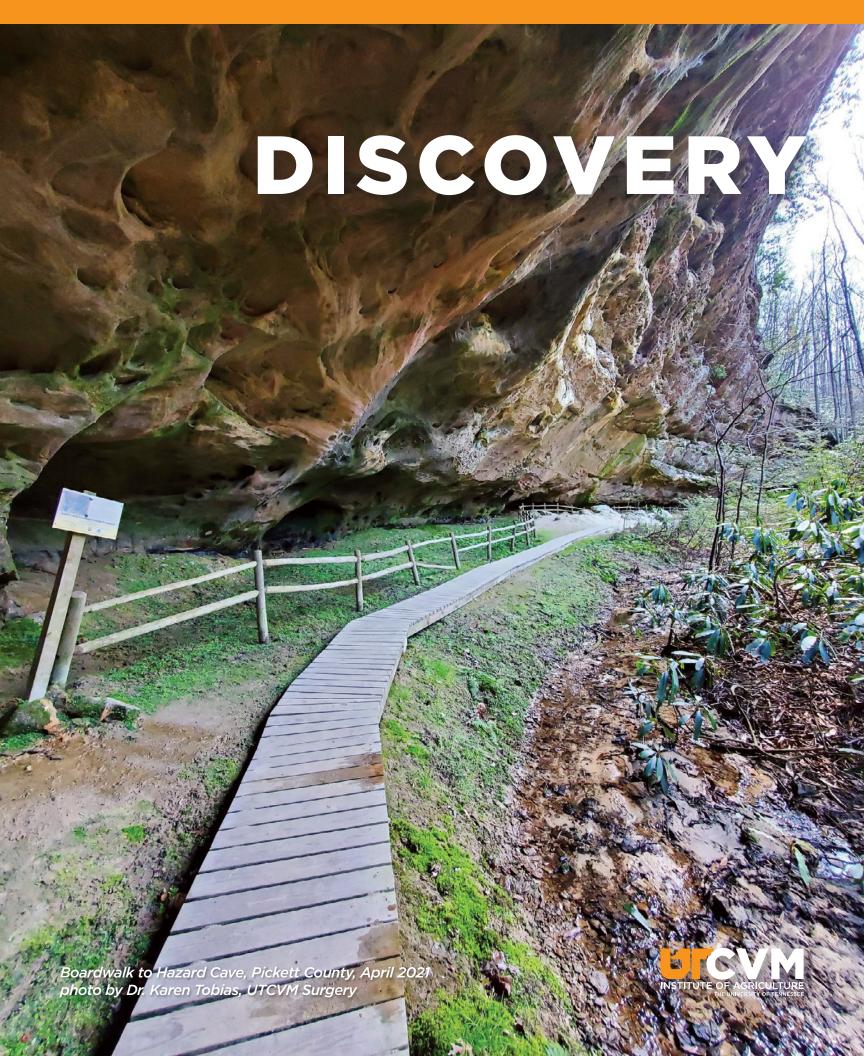
If you are a licensed veterinarian and would like to learn more about this opportunity, scan the QR code here to fill out a quick survey\*, or email the Companion Animal Initiative of Tennessee (CAIT) for more information: **cait@tennessee.edu** 

Veterinarians must be licensed to practice and be able to come to campus or be available via Zoom. Veterinarians do not have to be UTCVM alumni to participate.

\*Filling out this form is not a commitment, just informing the college that you are interested and willing.







# **Take the Pressure Off**

# A Homemade Hygroma Solution for Dog Owners

ave you ever had a dog whose elbows have a rough, wrinkly bump on them? In many instances, they are hygromas, fluid-filled masses that form over bony prominences, most commonly in large and giant breed dogs. Jessica Montoya, a licensed veterinary medical technician at the University of Tennessee College of Veterinary Medicine has devised an inexpensive way for dog owners to help.

Montoya wrote a paper with small animal surgeon Dr. Karen Tobias describing a low-cost, at-home solution easing the pain of non-ulcerated hygromas in dogs. A video featuring Montoya's full explanation and demonstration is available at

### https://tiny.utk.edu/HomeHygromaSolution

The published article detailing the technique for veterinarians is available in Clinician's Brief, a journal accessed by veterinarians worldwide. You can read the article at <a href="https://tiny.utk.edu/HygromaArticle">https://tiny.utk.edu/HygromaArticle</a>.



Above is an example of a non-ulcerated hygroma on a dog's elbow.



 Step 1: Measure dog's arm from just under the hygroma to just above the ankle.



Step 2: Cut a piece of pool noodle to the length needed, then slice the noodle lengthwise so it will slip over the dog's arm.



Step 3: Cut and fit a sock, stocking, or child's legging to fit over the dog's arm where the pool noodle will go.



→ Step 4: Use

Velcro or elastic

tape to secure

the pool noodle

in place.



Step 5: Check the fit of the noodle so that it is secure, but not too tight.

Always be sure to talk to your veterinarian about your animal's health.

# **Bushmeat Hunters**

# Does Zoonotic Disease Play Into Their Decisions?

'n the tropics and subtropics, families and communities frequently rely on bushmeat for food security as well as basic income. So, while the harvest and trade of wildlife are illegal in many locales, the practice is commonplace, and with it comes the potential for transmission of a zoonotic disease among human populations.

Even before the emergence of COVID-19, public health experts have been on alert for more information about the attitudes and practices of those who trade in and consume bushmeat. Depending on the wildlife species involved-baboons, bats, hippopotamus, various monkeys, and more—hunting, preparing and consuming bushmeat can carry with it the potential to contract and spread diseases such as the widely feared Ebola virus or the more widespread, and perhaps more economically devastating, bacterial infections caused by Escherichia coli (E. coli), Salmonella, Staphylococcus and others. The scientists theorize that if we can help bushmeat traders and consumers keep themselves safe, perhaps we can keep their communities safe, too.

To do that, you have to understand the practitioners.

A recent paper published in the PLOS ONE journal outlines how researchers with the University of Tennessee College of Veterinary Medicine and Department of Forestry, Wildlife and Fisheries measured the attitudes, practices, and zoonoses awareness among community members associated with the bushmeat trade in northern Uganda. The authors, Drs. BreeAnna Dell and Marcy Souza, both DVMs and public health experts, along with Dr. Adam Willcox, a research associate professor who specializes in the human dimensions associated with natural resources, interviewed 292 women from the region who cook for their households and 180 self-identified hunters from 21 villages bordering Uganda's Murchison Falls National Park. The scientists were working to gain insights into bushmeat preferences, opportunities for pathogen transmission and awareness of common wildlife-associated zoonoses.

Among their findings, they report that both hunters and, traditionally, the women who cook the meat consider primates to be the most likely wildlife species to carry diseases that humans can catch. Among common zoonotic pathogens, both groups believe that pathogens causing stomach ache or diarrhea and monkeypox can be transmitted by wildlife. Neither the women who cook nor the hunters report being frequently injured during cooking, butchering or hunting, and few report taking precautions while handling bushmeat.

"Based on responses to our questions about diseases that wildlife carry, almost all respondents were aware that there is a real and present risk of disease spillover from wildlife to people," the authors conclude. Further, they write, "Epidemics in recent years may contribute to this knowledge, but for hunters this awareness does not appear to influence or motivate any precautionary behaviors during the harvest of wildlife, as virtually no respondents reported taking precautions." In fact, financial gain was the

hunters' primary motivation.

In an unexpected twist, the survey results reveal that the majority of women who cook believe that hunters and dealers never or rarely disguise primate meat as another kind of meat in the marketing process. However, the majority of hunters report that they usually disguise primate meat as another kind of meat. The women overwhelmingly report they prefer to avoid purchasing primate meat. "Primates, rodents, and bats have long been investigated as important groups in zoonotic spillover events," says Dell. "While rodents and bats demonstrate



high species diversity within their groups that contributes to their high microbial diversity, primates are closely related to humans and are believed to share many pathogens with humans, facilitating transmission. These findings raise concerns, as the ability of cooks to know and assess the risks of handing primate meat is subverted through the disguise of these species in the market."

These data, and more outlined in the paper including perceptions of disease prevalence and transmission as well as hunting and marketing practices, help clarify where hunters and cooks are most susceptible to injury and exposure to infectious agents. "Expanding our knowledge of awareness, perceptions and risks enables us to identify opportunities to mitigate infections and injury risk and promote safe handling practices," comments Dell. What's more, Souza says advancing the knowledge of community practices may assist public health officials as they work to help communities and individuals mitigate their own disease risk.

Willcox adds that the data may ultimately lead to the development of more successful and appropriate conservation tactics for wildlife species in general and specifically in Uganda's Murchison Falls National Park.

The survey was conducted in cooperation with partners at Makerere University and the private secretary in charge of veterinary affairs in the State House of Uganda. The article, "Attitudes, practices, and zoonoses awareness of community members involved in the bushmeat trade near Murchison Falls National Park, northern Uganda", was published online September 28 in PLOS ONE and is freely available to all through this open-access journal. Funding for the effort was provided by the UT Smith Center for International Sustainable Agriculture, the UT Center for Wildlife Health, the McClure Scholarship for the Study of World Affairs, the UT College of Veterinary Medicine BDS FEAR Fund, and the UT Graduate School Faculty-Student Fund. Publication support was made through the UT Knoxville Open Publishing Support Fund. 🤜



The word RESEARCH can be intimidating, especially to faculty who have been trained primarily in teaching and clinical practice. Research implies a rigid, controlled process far removed from the classroom or hospital. In reality, the teaching and service missions are completely intertwined and entirely dependent on one another. Research has limited value if it cannot be taught and applied. In fact, the full potential of research is often not realized until it is put into practice in the classroom and in the community.

My philosophy is simple – research is for everyone. Sometimes we forget scholarship and discovery are equally as valuable as traditional research. Research, in one form or fashion, occurs every day - not just in the laboratories but in the classroom, in teaching labs, in the clinics, in the field, and in our daily lives. We all are constantly gathering information that informs our perception, requires interpretation, and results in conclusions that allow us to formulate decisions and translate those into action.

The quality and value of the data are variable based on what type of information is being gathered, how it is analyzed, and how it is applied. Data can lead you down blind alleys, result in false interpretations, reach incorrect conclusions, and make mistakes. Personal memory and experience are often the least reliable data. We are either optimistic or pessimistic about our experiences and outcomes - which makes the data fallible. That is why carefully controlled methods

have been developed to minimize those risks. The best data is gathered by doing research that is well-founded, thoroughly planned, hypothesisdriven, intentionally designed, properly conducted, objectively analyzed, and interpreted without bias. This applies to all of us regardless of our field of study or the ultimate application of the knowledge gained.

At the heart of great research are creativity and curiosity. An inquisitive mind is the most powerful tool in existence to drive research. All of the computers, machinery, equipment, and facilities are merely tools to enable the mind to transfer thought into reality. In teaching institutions, students are often the drivers of discovery – they benefit from fresh perspectives, inquisitiveness, eagerness to learn, and imagination all of which create curiosity and creativity.



Our continuing challenge is to overcome obstacles: time, infrastructure, personnel, funding, access, and, perhaps most importantly, the will to succeed. Extramural funding through the competitive grant process is the foundation of biomedical research. As our lives become increasingly busy, time devoted to research often is sacrificed to serve the needs and demands of other matters seemingly more urgent and seemingly more controllable.

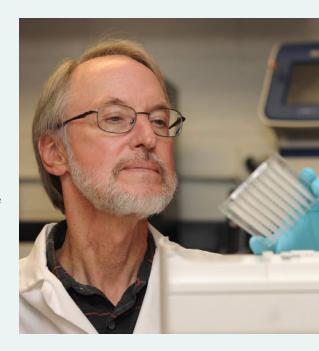
My vision for research at UTCVM is to work to create opportunities for everyone to engage in scholarship. We must have the flexibility and creativity to tailor research opportunities that match the individual interests and passions in context with the overall mission of improving human and animal health through discovery, education, and service. Working as a team, we will achieve great things and achieve much more than the sum of our individual efforts. «

# Dr. Stephen Kania, New Assistant Dean for Research & Graduate Studies

Dr. Stephen Kania has spent his career as a researcher studying microorganisms and developing ways to help animals fight infections and prevent the spread of antibiotic resistance. He also serves as the director of the UTCVM Immunology laboratory and has overseen the COE Summer Student Research Program for veterinary students for 14 years, which further demonstrates his ability to effectively engage students.

Dr. Kania reflects on his career and the experiences and mentors he has had along the way. "Those encounters and the guidance provided by my mentors shaped my career. They introduced me to the culture of scientific research at its best. I learned about the importance of mentoring, respect for people at all positions and to value their contributions, and most of all to appreciate the network of people that make up the research community and how important it is to support each other."

"The volunteer spirit is all about discovery and developing within our students the capability to explore and advance their fields of interest. I have had the good fortune to learn from others and to help train our next generation of explorers to carry on this tradition. I cannot imagine a more rewarding career."



# THE CONVERSATION

# **Saving Ocelots**

The female ocelot lay anesthetized on the exam table, behind the scenes at the Albuquerque Biopark Zoo. As a veterinarian on the team preparing to artificially inseminate this animal, my palms were sweating at the thought of missing a step, dropping the sperm sample, or finding out our sample did not survive freezing. Any of these possibilities would end the procedure.

It was the first time anyone was trying to produce a pregnancy in a zoo-born female ocelot using sperm recovered from a deceased wild male ocelot. If the July 2021 operation worked, it would give his genes a way to live on past his death. This procedure was an important step in efforts to conserve endangered cat species so they can persist into the future.

Ocelots are medium-sized felines weighing around 20 to 30 pounds (9 to 13 kilograms) with sleek spotted coats. Their diet consists of small mammals, rodents, amphibians, reptiles and birds. Ocelots are primarily solitary cats, most active in the evening from dusk to dawn. While people manage zoo-housed ocelots' reproduction to maintain genetic diversity, it's a different story for their wild relatives. There are currently only 50 to 80 ocelots (Leopardus pardalis) known to exist in the wild in the U.S., and that population is too small to be sustainable long term. These endangered animals face ongoing threats of habitat loss and fragmentation, and vehicle strikes. And because of their diminished numbers, they are at risk of inbreeding.

Over the past 25 years, scientists at the Center for Conservation and Research of Endangered Wildlife, or CREW, led by veterinarian Bill Swanson, have been working on technologies that may eventually help add some more genetic diversity to the wild ocelot population. They've developed and refined techniques for sperm collection, frozen storage and artificial insemination of ocelots and other endangered cat species. These innovations have played a key role in sustaining the genetic diversity of cat populations within zoos. Now, we're trying to go a step further and apply these techniques in wild ocelots. By creating gene flow among zoo-based ocelots and wild ocelots in different regions, we can increase the genetic diversity of both populations. With wild ocelots, we hope to combat their declining ability to produce offspring, fight infection and maintain adequate numbers in the wild for conservation of the species in the U.S.

As a recently graduated veterinarian, I joined my mentor, Debra Miller, at the University of Tennessee's Comparative and Experimental Medicine (CEM) program and in her work at UT's Center for Wildlife Health. From there, my interests in wildlife conservation led me to this multi-institutional collaboration focusing on the conservation of wild Texas ocelots. This project relies on the routine collection and freezing of semen from wild ocelots in the field – usually living animals, but sometimes ones that have been found dead. Our semen stockpile lets us preserve genetic material even if these cats are killed by disease, natural disasters or road collisions.

For the artificial insemination procedure this past summer, the sperm donor was a Texas ocelot that died after being hit by a car. While this male's death was a tragedy, there is a chance his genes may live on in future offspring thanks to the quick report of his death and the retrieval, shipping and processing of his gonads.

Back at CREW in Cincinnati, Bill Swanson worked to recover the cat's sperm for future artificial insemination procedures. He froze 20 plastic straws, each containing about 8 million viable sperm. In addition to this deceased male, I have collected and cryopreserved semen from several living wild males for future use. By testing thawed semen, our team has found that many of these sperm samples were capable of fertilizing cat eggs in vitro. The next step is figuring out whether the frozen wild ocelot semen really can produce kittens via artificial insemination. So Swanson packed up three frozen straws to ship to Albuquerque in a liquid nitrogen dry shipper tank to make sure they remain at -320 F (-196 C) throughout the journey.

Ocelots are induced ovulators, meaning a female must mate in order to release an egg into her reproductive tract. The female we were working with was treated with hormones to help her ovulate at the proper time relative to the insemination procedure. The relief was overwhelming when we confirmed, by

laparoscopically looking at the surface of the ovary, that the female had ovulated multiple eggs. After thawing the semen straws, my excitement began to increase because we could see the deceased ocelot's sperm swimming rapidly across a slide under the microscope. The sperm had survived the freezing and thawing process and was still in great shape. I took multiple deep breaths to steady my hands as my smile spread from ear to ear. Bill Swanson positioned the insemination needle within each oviduct, I injected the sperm into both sides of the female's reproductive tract, and the procedure was complete.

Unfortunately, although the female responded well to the ovulation synchronization protocol, and the artificial insemination procedure was performed without a hitch, she did not conceive. That's not an uncommon outcome when using frozen semen. However, we are optimistic that future procedures — using semen samples from this specific male and other frozen samples from living, wild ocelots — will successfully produce pregnancies. By the end of 2021, we plan to conduct two additional artificial insemination procedures with zoo-managed ocelots, followed by three or four more in 2022.

If any of these artificial insemination procedures result in the birth of offspring, it will be the first time kittens have been produced with frozen semen from a wild ocelot. They'll add greater diversity to the ocelot population managed in North American zoos, while improving our understanding of possibilities for increasing genetic diversity within wild ocelot populations. This success would help demonstrate the feasibility of producing kittens using frozen semen from the endangered Texas ocelot population. Further refinement of the knowledge and techniques to create genetic exchange between wild and zoo-managed ocelot populations or among wild ocelot populations living in fragmented habitats will help ensure that these animals survive into the future. «

Dr. Ashley Reeves,UT CEM PhD Candidate

# **Fatal Rabbit Virus**

# Vaccine Now Available for Rabbit Hemorrhagic Disease

abbit hemorrhagic disease (RHD) is a highly contagious emerging virus that threatens pet and wild rabbits. It was first reported in the United States in 2018 and has spread to multiple states in the Southwest; Florida and Georgia have each reported a case. The virus was detected in Tennessee this January. Many times, the only signs of the disease are sudden death and bloodstained noses caused by internal bleeding. Symptoms can also include fever, hesitancy to eat, and respiratory or neurologic signs.

Dr. Cheryl Greenacre, an exotic companion mammal specialist at the University of Tennessee College of Veterinary Medicine, says rabbits are dealing with their own pandemic right now. RHD is classified by the USDA as a foreign animal disease in the United States, and this is the first time it has been found to kill wild rabbit species such as our Eastern cotton tails as well as our pet rabbit species. This virus has been described as 'Bunny Ebola' because it is so contagious and fatal, almost 100% fatal to all rabbits," says Greenacre. It causes acute liver disease, and the incubation period is one to five days. RHD does not affect humans.

The virus that causes RHD is very stable and can live in the environment for about eight months. It can be transmitted through direct and indirect contact. It is excreted from all orifices and can be in the rabbit's fur, cages, floors, bedding, or brought into the home inadvertently. It is not contagious to humans.

The FDA has given emergency approval for a U.S.-manufactured vaccine. Greenacre says there is no way animals can get the disease from the vaccine, and it has proven 100% protective with none to minimal side effects. "Even if you keep your rabbit indoors, it needs to be vaccinated because of the hardiness of this virus," explains Greenacre. "This vaccine presents a wonderful opportunity to prevent this almost always fatal disease before it reaches Tennessee and threatens not only our owned rabbits, but the wild ones, as well."

The vaccine requires a booster three weeks after the initial dose. If you are interested in your rabbit receiving the vaccine, contact your local veterinarian (availability varies by state). You can also call the Avian and Exotic Animal, and Zoological Medicine Hospital at the UTCVM Veterinary Medical Center to schedule an appointment.

# Following biosafety measures can help prevent the spread of RHD:

- Wash hands before and after handling rabbits
- Do not allow your rabbits on the ground outdoors
- House outdoor pet rabbits off the ground
- Do not handle wild rabbits
- Follow insect and rodent control measures
- Buy feed and forage from unaffected states



Want to help animals in need? Call 865-974-4379 or visit vetmed.tennessee.edu/give

# **Sharing Our Stories**

# Hearing from the people of UTCVM

This past summer, the University of Tennessee College of Veterinary Medicine initiated a new podcast, which is geared toward telling the stories of Knowledge, Compassion, and Discovery from the College and Veterinary Medical Center.

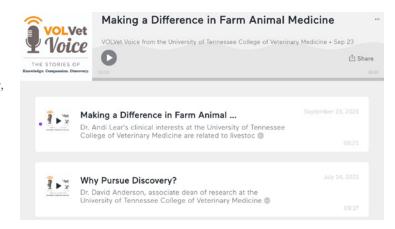
In the first, episode which aired July 14th, Dr. David Anderson, associate dean of research and graduate studies at UTCVM, talks about the importance of research and the role the college plays in making new discoveries.

The second episode aired September 23rd and featured Dr. Andi Lear, who is an assistant professor in the Department of Large Animal Clinical Sciences. Her clinical interests at UTCVM are related to livestock medicine and surgery including infectious diseases, herd outbreak investigation, backyard milk quality, neonatology, along with small ruminant and camelid herd health. In this episode of VOLVet Voice, the assistant professor discusses her research focus: maternal-fetal interactions including placental immunology and reproductive physiology, compromised pregnancies associated with infectious disease, assessment of fetal viability and well-being, and neonatal outcomes following compromised pregnancies. A transcript is available.





Find the podcast at <a href="https://anchor.fm/volvetvoice">https://anchor.fm/volvetvoice</a>.



Last October, Dr. Jenny Weisent and the UTCVM Shelter Medicine team was featured in a story that played on the jumbotron during the Tennessee Volunteers football game and included in the game program.

Dr. Jenny Weisent's passion for animal welfare brought her to the University of Tennessee.

An assistant professor of shelter medicine in the College of Veterinary Medicine, Dr. Weisent serves as part of the college's spay-neuter mobile service. The team answers the needs of animal shelters throughout East Tennessee by spaying and neutering more than 2,300 homeless cats and dogs a year. Veterinary students receive hands-on training in surgery and anesthesia while addressing overpopulation—and helping to bring animals a step closer to their forever home.

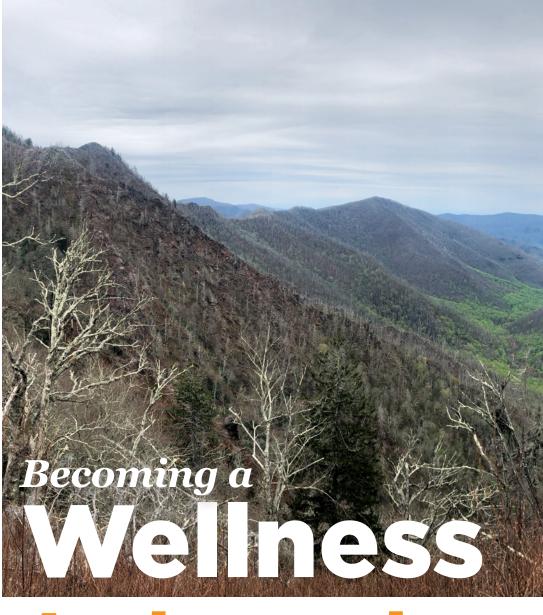
"Every single surgery that our clinic and students do, gets an animal on the adoption floor. That's huge."

But their work doesn't stop there. The team is growing the program to address other unmet needs in the region.

"We've been able to develop deep partnerships with organizations in our local community," Dr. Weisent explains. "We want to know how we can improve animal welfare in East Tennessee, whether that be breaking down language barriers for people to find bilingual veterinarians, offering spay and neuter services to pet owners who may be homeless, or working with shelters to set up surgical suites."







# **Ambassador**

written by Dr. Luca Giori, UTCVM Associate Professor

Dr. Luca Giori, originally from Brescia, Italy, is an associate professor and the assistant director of the UTCVM diagnostic endocrinology service. Last year, he was nominated as a wellness champion by UT Be Well, an initiative of the Center for Health Education and Wellness. These champions have a passion for personal health and wellness, a desire to help others, and an enthusiasm for wellness programming. He shares his story here.



Team sports, especially soccer, have always been a big part of my life. I have played soccer since I was six years old, and I am still kicking some soccer balls around, although more carefully, since I injured my left ACL and underwent surgery to repair it in 2019. This injury did not stop me from doing something that makes me feel better and cope with the stress of everyday life. Now I road bike, run, and hike the Smoky Mountains, but most importantly, I have some time to cook and bake. My motto has always been "be active, and eat healthy."

My passion for cooking started mostly as a necessity. When I moved to Tennessee from Italy, I soon realized that going out for lunches and dinners would be a bad idea both for my finances and health. I decided to cook my own weekly meals, and later on, I began to invite friends over for dinner. For Italians, food is not just nourishment, it is life. During a meal, you create bonds, friendships, and you communicate and talk about daily life experiences, tell stories, and sometimes tell jokes, particularly after some glasses of wine. Gatherings of family and friends are frequent and often centered around food.

The more I was cooking for myself, the more I wanted to try to prepare new dishes. At this point, I involved my mom who started sharing her recipes with me. At first, I prepared her recipes mostly for myself.













In the spring of 2021, our amazing faculty, staff, and students stepped up to the Route 66 Step Challenge, cumulatively walking 234,611,097.4 steps, which is equivalent to 117,305.5 miles! This challenge also inspired our people into other wellness activities.

However, I soon wanted to share what I was cooking with my American friends. Unfortunately, the pandemic got in the way, and inviting friends over for dinner was not an option anymore — especially when little was known about this virus. It was then that Dr. Claudia Kirk, who was the associate dean of academic and student affairs at the time, approached me with a wonderful idea to start offering online cooking classes for our students during this time of isolation and intense stress. Cooking step-by-step with our students (and also

faculty and staff) was a fun way to provide them with a healthy meal and at least one hour of "happiness" in learning a new skill. Cooking is a relaxing time for me, and it makes me happy when I can share some Italian dishes while having a glass of wine with my friends and colleagues. The cooking classes were well-received from the UTCVM family, and I was able to share eight recipes during the fall semester of 2020 and eight recipes during the spring semester of 2021. I had a hard-core group of 10-12 followers, but occasionally, more than 30 people joined some classes

like the ones on homemade gnocchi and tiramisu. Word of mouth had some consequences: Terri Geiser, manager of the community cooking class and wine dinner events at the University of Tennessee Culinary Institute contacted me, and I ended up doing some online cooking classes for a fun group of food lovers associated with the institute. Since our students were still requesting some of these online classes, we decided to offer four more classes during the fall 2021 semester.





















Step Challenge

Eating healthy was not the only concern during this new reality. The physical activity levels had suddenly dropped for the majority of us. Many of us felt lost and scared. As a consequence, we started isolating and avoiding public places following the CDC recommendation. With a group of UTCVM faculty, supported by the newly-hired Assistant Dean for Academic and Student Affairs, Dr. India Lane, we decided to try to boost the physical activity of all the college's employees and students. We came up with a 16-week step challenge that we called the UTCVM Route 66 Step Challenge. The idea was to create a friendly yet competitive challenge between the teams. Each member would participate in a virtual walk from Chicago, IL to Santa Monica, CA along the famous and historic Route 66 (about 2,300 miles). This was accomplished by simply converting the number of daily steps into miles using an easy formula. Forty-eight teams of five members for a total of 240 participants enrolled the week

before the start of the challenge. At the end of the 16 weeks, more than 220 people were still actively participating and reporting their steps to their captains, contributing to a wildly successful event. Thanks to the organizing faculty group, weekly prizes for best performers and best picture taken during an activity were given along with gift cards for the top three teams.

The last couple of years have surely been a challenge for everyone, including our UTCVM family. We hope that the cooking classes and the Route 66 step challenge helped our little community to bear the weight of isolation brought by the pandemic. We are not yet out of the woods, but we need to stay together and be positive. I am ready again to help my UTCVM family to be active and eat healthy. New wellbeing challenges are on the horizon.

# Climate Changes

Dr. Jean Proctor McNeil (UTCVM '81), the first

African-American to graduate from UTCVM, shares her story.

This has been difficult to write out as I travel down memory lane. At almost, 65, I guess I have a lot to say. I hope it can help someone to lead the life they desire. Mine has been a whirlwind of many changes, but I believe in the end that every step of the way has been worthwhile.

### Dr. McNeil wanted to follow her father's example and work in the medical profession; in high school she decided on becoming a veterinarian.

This was an unusual career for me, as there were no mentors to help me along the way. If you are not a person of color, it is hard to convey the undercurrent of prejudices that are a part of our everyday lives. Unfortunately, these issues continue to this day and may never be fully resolved. My life was no different. I sought employment or even volunteer work at every veterinary hospital in Nashville. No one would hire me, nor would they allow me to volunteer.

### Dr. McNeil's college life was filled with pre-vet requirements and volunteer activity. She was accepted into the UTCVM Class of 1981.

Veterinary school was a difficult time for me. We used to call it "cram and catch up," but you never really seemed to catch up. I personally felt very alone, as I was the sole African American person on that campus – even the janitorial staff was all white. Since I had not attended undergraduate school at Tennessee, I had to learn the city, the various campuses, and keep up with the assault of coursework. Our class was the largest so far, so we had less personal care. At the time, eighty students fast-tracked through three years of year-round schooling was a great challenge. Most of us made it.

### After graduation, Dr. McNeil worked in private practice in North Carolina before shifting into public health, working at the local animal shelter.

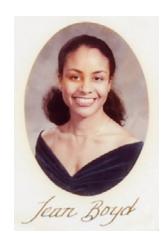
I became the director of Animal Control Services. People used to refer to these places as the "pound" and other not too complimentary titles. In many cases, they were correct; I have personally viewed some very dismal animal shelters that were nothing more than holding spots for unwanted animals, waiting to be exterminated. I knew these animals could use my help and expertise, and I also knew that education was the best way to make long-lasting changes.

Shelter medicine had little voice in veterinary schools or circles back in the early eighties; however, today it is common practice to see it as part of the curriculum. I believe the work that I did from inside animal control helped to highlight the void that shelter animals and workers experienced. We were the forgotten, despised, and discarded group. Today, shelter

medicine is an integral portion of the veterinary curriculum at most universities.

### During Dr. McNeil's tenure, New Hanover County built a new facility and added a spay/neuter hospital.

Another major problem we faced was that the competitive mind-set of our area veterinary community added to the general dislike and poor image of any animal control agency. I used the leverage of my education to bridge this gap. We required pet owners to



purchase pet licenses annually. Initially all of these were renewed in January. You had to have a current rabies vaccination to receive a license. We decided to change renewals to the same time that the pet received its rabies update. We offered discounts for paying ahead for three-year vaccinations. Next, we enlisted the veterinary community to collect the fees, offering them a portion of what was collected.

### Dr. McNeil worked to create a more cohesive and united community for better care for the animal population.

We also started going into the elementary schools to teach the young children about rabies prevention and control. We developed a puppet show, which shared the pertinent information in a format children could readily recall. My former boss – who at first was very against our efforts – became our greatest ally.

### Dr. McNeil gets an opportunity to make an impact on the next generation of veterinarians.

Working with and mentoring these future veterinarians became one of my greatest joys. I was able to advise them about the public health aspect of our profession, and they logged volunteer hours in taking the puppet show to the schools, helping in surgery, and assisting us with various rabies clinics around the county. Many became veterinarians.

I am pleased and proud to have stepped outside my box of dreams to do something to make a lasting difference for many under-served animals in our nation. My hope is that this information will encourage others to step into whatever is placed before them, and use it to better our profession by whatever means come their way.

Find Dr. McNeil's unedited story at https://tiny.utk.edu/mcneil

At its core, veterinary medicine is a service-oriented profession. Its practitioners serve the needs of local, regional, national, and global communities. In order to meet societal needs, the profession must be as diverse as the communities it serves.

However, veterinary medicine is the least diverse of all health-related fields, and the profession faces significant challenges in recruitment of underrepresented minority (URM) students and its ability to create a diverse workforce.

With two recent initiatives at the University of Tennessee College of Veterinary Medicine (UTCVM), we hope to increase the number of URM students pursuing doctor of veterinary medicine (DVM) degrees at the UTCVM, as well create a more inclusive learning environment where all students can thrive. Ultimately, we want to help create a more diverse, innovative, culturally competent, and highly skilled veterinary work force that is better-equipped to meet the needs of animal, public, and environmental health; provide greater access and quality of veterinary care to diverse communities; and meet the needs of 21st-century food and agricultural systems.

A grant from the U.S. Department of Agriculture Multicultural Scholars Program (Dr. Michael Jones, project director) has enabled us to attract and enroll more students from historically under-represented populations. Evidence shows that diversity promotes critical thinking by expanding all

Dr. Mary Alice Teague, a 2017 graduate of the UTCVM, holds a patient before a physical exam. (Photographer: Gabriel Clemons, 2009 UTK graduate)

students' capacity to see issues and problems from multiple perspectives. By increasing the diversity of our student body, we expect to enhance the social development of all our students to prepare them for success in a multicultural professional environment. Research has shown that education in cultural humility enables healthcare professionals to experience higher client satisfaction, especially among populations different from themselves.

Additionally, reports indicate inadequate numbers of veterinary role models in URM populations. Work sponsored by a second grant from the UT Knoxville Office of Diversity and Engagement (Dr. Misty Bailey,



Tamara Roba serves as the Class of 2024
Diversity Chair.

project director) uses photographs of positive role models from diverse backgrounds to encourage youth interested in veterinary medicine as a profession. By increasing the URM applicant pipeline, the college aims to increase future enrollment. Four community veterinarians and five UTCVM veterinarians participated in the photo project. The photos will also be used by the college to develop more inclusive instructional materials and enhance all students' sense of belonging. Providing URM students the opportunity to see and emulate diverse role models has been shown to increase self-efficacy, the belief that they can also be successful in veterinary medicine as a career.

Lastly, as an extension of the photograph project, UTCVM Class of 2024 veterinary student Tamara Roba prepared a list of the contributions of under-represented populations to science and medicine. These contributions will also be shared with faculty to be incorporated into lectures. Ultimately, increasing diversity in professional schools leads to increased access to healthcare where disparities exist. Producing culturally competent veterinarians will help meet broad societal needs. More diversity drives more innovative problem solving. Diverse teams bring with them wide ranges of information, backgrounds, skills, and alternative ways of approaching tasks and/or problems.

Want to help students succeed?

Call 865-974-4379 or visit vetmed.tennessee.edu/give

# Always a VOLVet

# **UTCVM** Distinguished Alumni

In 1994, the UTCVM Distinguished Alumni Awards were created to recognize some of the outstanding graduates of the College.

Nominees are UTCVM graduates who excel in at least one of the five areas of veterinary medicine: private practice, teaching, research, public service, or organized veterinary medicine. In addition to these

two awards, an award for First Decade Achievement is also given to a graduate of UTCVM with a DVM degree within the last ten years. The awards are presented at the graduation and hooding ceremony each spring.

# 2020 FIRST DECADE ACHIEVEMENT AWARD ELIZABETH JOHNSON MILLION, DVM

Dr. Million (Herbert '12, UTCVM '16) grew up riding horses, participating in 4-H, and exploring the mountains of Cocke County, Tennessee. After graduating, she worked in private practice outside Houston, Texas before jumping back into the academic world and serving as the first assistant dean of student success at Lincoln Memorial University College of Veterinary Medicine. As part of her LMU position, Dr. Million also coordinated all NAVLE-related initiatives for the CVM, including the NAVLE Prep Rotation for clinical year students. In 2019, Dr. Million became the assistant sirector of outreach and engagement for the International Council for Veterinary Assessment (ICVA), the organization

responsible for the creation and administration of the North American Veterinary Licensing Exam (NAVLE), located in Atlanta, GA. She also works as an associate veterinarian with Lap of Love, providing in-home end-of-life and veterinary hospice care for families, and enjoys staying involved with the





# 2020 NON-PRIVATE PRACTICE AWARD ROBERT G. MARTIN, DVM

Dr. Martin (UTCVM '00) is a native Tennessean from Lebanon, but he has spent time living everywhere from Los Angeles, California to San Juan, Puerto Rico. After graduation, he served four years in the Air Force as an A-10 mechanic in Myrtle Beach, SC before returning home to Knoxville to pursue his veterinary career. After a small animal internship and a few years of private practice he found himself back in the Air Force with a commission as a Public Health officer. He continued his twenty-year career with assignments in California, Texas, Utah and Florida to include four deployments to Central Asia, Iraq and Afghanistan. Lt Col Martin

served in Iraq as the Multi-Division
North Veterinarian for all of Northern
Iraq and in Afghanistan as the Public
Health Chief for the NATO mission
in Kabul. Since his recent retirement
in 2019, he and his wife, Shannon,
traveled coast to coast in their RV before
returning home to the Smoky Mountains
of East Tennessee.



# 2020 PRIVATE PRACTICE AWARD CARMEN COLITZ, DVM, PhD, MBA

Dr. Colitz (CEM '93, UTCVM '96) became a board-certified veterinary ophthalmologist in 1999. During her residency training, Dr. Colitz completed a one-year post-doctoral research project and successfully competed for a five-year grant from the National Institutes of Health Eye Institute to study the role of telomerase in the lens. She worked for two years at the Louisiana State University School of Veterinary Medicine, and then spent five years at The Ohio State University's veterinary teaching hospital as a clinician and researcher. Dr. Colitz discovered telomerase, a cancer protein, in the normal and cataractous lens and researched the molecular biology of cataractogenesis and posterior capsular opacification.

Dr. Colitz has written or co-written over 70 peer reviewed publications and 22 book chapters and is Past-President of the American College of Veterinary Ophthalmologists. In 2009, she founded Aquatic Animal Eye Care, LLC to understand and improve the ocular diseases that affect marine mammals,

penguins and fishes both under human care and in the wild.  $\blacktriangleleft$ 



# 2021 FIRST DECADE ACHIEVEMENT AWARD WESLEY LYONS, DVM

Dr. Lyons (CASNR '10, UTCVM '14) is making a far-reaching, positive impact in the swine industry. He is currently a veterinarian with Pipestone Veterinary Services in Sycamore, Illinois. The company specializes in health management and consulting service for pig farmers throughout the region who raise approximately six million market hogs annually. Dr. Lyons chose swine medicine because it unites so many aspects of veterinary medicine he loves. Epidemiology, population medicine, and public health intertwine to allow him to help provide a safe and economically sound food supply for the world, while promoting awareness about diseases such as influenza. During Covid-19, Dr. Lyons joined the National Pork Board's Depopulation Task Force to affect

change and research into finding new and humane ways to effectively depopulate large numbers of pigs when it becomes an unfortunate inevitability. Dr. Lyons is a contributing author to the North American Veterinary Licensing Examination (NAVLE) as a subject matter expert in swine



medicine. Dr. Lyons also serves on a veterinary advisory board for a major pharmaceutical company and helps direct the research and implementation of their vaccine and antibiotic portfolio.

# 2021 NON-PRIVATE PRACTICE AWARD LEAH A. COHN, DVM

Dr. Cohn (Herbert '84, UTCVM '86) completed a rotating internship in small animal medicine and surgery, followed by a residency in small animal internal medicine, at North Carolina State University where she also earned a PhD in veterinary microbiology and immunology. After completing a post-doctoral fellowship in cell biology, Dr. Cohn joined the faculty at the University of Missouri College of Veterinary Medicine. Dr. Cohn is currently a professor of veterinary medicine and serves as the director of graduate studies and the associate department chair in veterinary medicine and surgery. Dr. Cohn has served on the Board of Regents of the American College of Veterinary Internal Medicine (ACVIM) including time as the president and chairman. She was awarded the Lee and Inga Pyle Distinguished Service Award from the ACVIM for her

sustained contributions to the college. She has also participated in the founding and leadership of the International Society of Companion Animal Infectious Disease (ISCAID), and has volunteered with the American Veterinary Medical Association and the American Association of Veterinary Clinicians



(AAVC). Dr. Cohn has authored more than 130 scientific manuscripts in peer-reviewed journals and has written dozens of book chapters in leading texts.

# 2021 PRIVATE PRACTICE AWARD JOHN R. CHAMBERS, DVM

Dr. John Chambers (Herbert '77, UTCVM '86) has been serving the veterinary needs of his East Tennessee clients since graduation, currently serving as president and owner at Morristown Animal Hospital in Morristown, TN. He has always been active in the community, currently serving as a member of the University of Tennessee College of Veterinary Medicine Board of Advisors, the Cocke County Department of Health, and the Ben Hooper Vocational School as part of the Cocke County Agricultural Advisory Committee. He also served as the Tennessee Cattleman's Association 9th District Vice-President (Upper East Tennessee) from 2008 to 2016. He was a board member of the UT Institute of Agriculture Alumni Council from 1994 to 1996 and has been recognized extensively for his service and leadership in the Lions Club from 1988 to 1995. Dr. Chambers's professional honors and service include Phi Zeta Honor Society of Veterinary Medicine and the Tennessee

Veterinary Medical Association's Young Veterinarian of the Year (1996). He served as a TVMA Board Member-atlarge for East Tennessee (1993-1995) and President (2003-2004). Dr. Chambers distinguished himself in military service to his country. He was commissioned in 1977 and served until 1985 earning



the Army Commendation Medal, the Meritorious Service Medal, and the Army Parachutist Badge. Dr. Chambers is married to Tammy L. Chambers, who also served on a UTCVM committee. He is proud of his children (Michael, Katie, Courtney, and Matthew) and five grandsons. Dr. Courtney Crowell (UTCVM '20) is carrying on the veterinary tradition of her father.

# Congratulations!

# Awards



Dr. Michael J. Blackwell, who is the former dean of UTCVM and currently serves at the UT College of Social Work, is the recipient of the 2021 Senator John Melcher, DVM Leadership in Public Policy Award from the Association of American Veterinary Medical Colleges (AAVMC). Established in 2007, this award is presented to current or former faculty, staff, or students at an AAVMC member institution to recognize leadership in public policy that advances veterinary medical

education and success in advocating for veterinary medical education on a national or international scale. The award is sponsored by The Animal Policy Group.



Recently retired UTCVM cardiologist,
Dr. Becky Gompf, received the Lee &
Ingle Pyle Service Award from the
American College of Veterinary Internal
Medicine (ACVIM). The national award is
presented annually to an ACVIM Diplomate
in recognition of outstanding and dedicated
volunteer service to the ACVIM for ten
or more years. She was also awarded the
Lifetime Achievement Award from the
Tennessee Veterinary Medical Association.
Dr. Gompf personifies distinguished service

and has set a high standard for that service in the veterinary college, community, and profession.

John and Ann Tickle received the 2021 UT Institute of Agriculture (UTIA) Meritorious Service Award.

The Meritorious Service Award, UTIA's highest recognition for its supporters, publically recognizes distinguished friends and partners of the Institute who have been significant in the Institute's quest for excellence in teaching, research, and/or Extension. Listed among UT's 100 Distinguished Alumni, The Tickles provide support to a number of colleges and programs at the University, including gifts



for the Tickle Athletic Development Suite, Tickle College of Engineering, and the John and Ann Tickle Small Animal Hospital renovation and expansion at UTCVM. Mr. Tickle is president of the Strongwell Corporation in Bristol and a former member of the UT Board of Trustees. Mrs. Tickle launched the first Head Start program in Sullivan County, Tennessee. Their support has enabled UTCVM to continue to provide superior education to its students, serve referral veterinarians with advanced equipment, provide timely compassionate care, and make discoveries to advance the veterinary medical profession.

Dr. Elizabeth Johnson Million
(Herbert '12, UTCVM '16) was
awarded the 2021 UT Institute of
Agriculture Horizon Award. The
award recognizes the recipients' earlycareer accomplishments as well as their
potential as a leaders in agricultural,
natural resources and related professions.
Dr. Million is passionate about being a
volunteer and lives by the philosophy that
Vol is a verb. She works with both animals
and people in a veterinary hospice. She also
serves as the assistant director of outreach



and engagement for the non-profit International Council for Veterinary Assessment in Atlanta. This organization creates and administers the national licensing exams for veterinarians in the U.S. and Canada, and Dr. Million works to improve the NAVLE and assessment-related outreach for all students and stakeholders.



**Dr. Agricola Odoi**, UTCVM professor of epidemiology, was named an honorary diplomate from the American Veterinary Epidemiology Society in recognition of outstanding contributions and distinguished service to improve animal health and human health in the true spirit of One Health.



**Dr. Stephen Kania**, UTCVM professor of immunology and assistant dean for research and graduate studies, has been elected as honorary member of the year by the American College of Veterinary Microbiologists (ACVM).

# Want to Support UTCVM?



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Many companies will match your charitable gift to The University of Tennessee. Please talk to the benefits office at your place of employment to learn more.



The University of Tennessee Institute of Agriculture publicly launched its most ambitious capital campaign ever. "Together We Grow" has a goal of raising \$200 million to extend **Real. Life. Solutions.** to new generations. The ten-year campaign that began its silent phase in 2012 will conclude December 31, 2022.

For more information about these giving options, or to discuss donating to UTCVM in a different way, please get in touch with us!



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