ANNUAL MAGAZINE OF THE UNIVERSITY OF TENNESSEE COLLEGE OF VETERINARY MEDICINE

VOLVet Vision

WORKING FOR THE ADVANCEMENT OF ANIMAL & HUMAN HEALTH

APRIL 2016

Saving Scarlet

The puppy that stole our hearts

Plus:

Prenatal Care Gone Wild
New baby gorillas at Zoo Knoxville

One Step At a Time
Dudley the cow and his new prosthetic foot

Say Hello to Dolly
A posh chicken from Glitterville

UTCVM
INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

Letter from the Dean

DR. JIM THOMPSON, *UTCVM DEAN*

Knowledge, Compassion, Discovery. These words form the driving framework for our everyday mission to educate students, care for animals, and find new ways to better animal and human life. As you explore the pages of our reinvented *VOLVet Vision* magazine, you'll read stories highlighted in each of these categories and a fourth—Family. We are all family members of veterinary medicine: our faculty, our students, our founders, our alumni, our patients, and our donors. Each of us plays a critical role in the veterinary profession, which exists at the intersection of medicine and compassion.

Along with our commitment to animals, their owners, and our referring veterinarians, we strive to provide excellence in community outreach. Our efforts include assisting animal shelters to reduce pet overpopulation, coordinating programs that enhance the human-animal bond, and promoting and protecting the well-being of people.

We research solutions to problems that affect animals, people, and the environment, and we contribute to the process of discovery through a wide range of interests. Within these pages you will learn of just a few of our exciting projects, which span protecting the nation's food supply to inventing a training tool for students and veterinarians.

Our profession faces a growing body of evidence that veterinary students are experiencing excessive levels of stress, anxiety, and depression and that these factors negatively impact productivity, longevity, and professional enjoyment. In this magazine one of our senior students explains the importance of our initiative of integrating wellness into our curriculum.

I hope you enjoy our new *VOLVet Vision*. The stories of Scarlet, Dolly, and Dudley are just a few examples of the Knowledge, Compassion, and Discovery our Family touches every day. I am immensely fortunate to be leading this College and am grateful you are part of our family.

UTCVM HISTORY

Armistead the Architect

"He shaped our profession and guided our college," remarked Dr. Ed Claiborne (CVM '80), as he spoke of the legacy of Dr. Willis William Armistead, founding dean of the UT College of Veterinary Medicine.

Armistead is remembered for his significant impact on the veterinary profession, especially his ability to "think outside the box" regarding currricula and teaching methods. Learn more about one of the most influential veterinary medical educators in the history of the profession here: vetmed.tennessee.edu/armistead

Original CVM faculty: Bottom Row: Dr. Alfred M. Legendre, Dr. E. Wayne Baldwin*, Dr. E. Dean Gage, Dr. Arthur Brown*, Dr. Hyram Kitchen* **Second Row:** Dr. Ronald R. Johnson, Dr. Desmond G. Doyle, Dr. Gerald R. Bratton, Dr. Robert L. Michel*, Dr. Robert G. Scholtens, Dr. David A. Brian* **Third Row:** Dr. Royce E. Roberts, Dr. Ralph F. Hall*, William Grau*, Dr. Jack Oliver*, Dr. Charles F. Reed* **Top Row:** Dr. Delbert J. Krahwinkel, Dr. Anson J. Oden Jr., Dr. Horace T. Barron*, Dr. W. William Armistead*

***deceased**

THE UNIVERSITY OF TENNESSEE
COLLEGE OF VETERINARY MEDICINE
2407 River Drive
Knoxville, TN 37996-4550
Phone: 865-974-8387
Fax: 865-974-4773
vetmed.tennessee.edu

VOLVet Vision is the magazine of the UT College of Veterinary Medicine. It is published in cooperation with the UTIA Marketing and Communications office, 104 Morgan Hall, Knoxville, TN 37996. AG.TENNESSEE.EDU

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E18-1701-00-001-16

Our Stories...

KNOWLEDGE

COMPASSION

DISCOVERY

FAMILY

Fig. 203 Skull, hyoid apparatus, and larynx, lateral view.

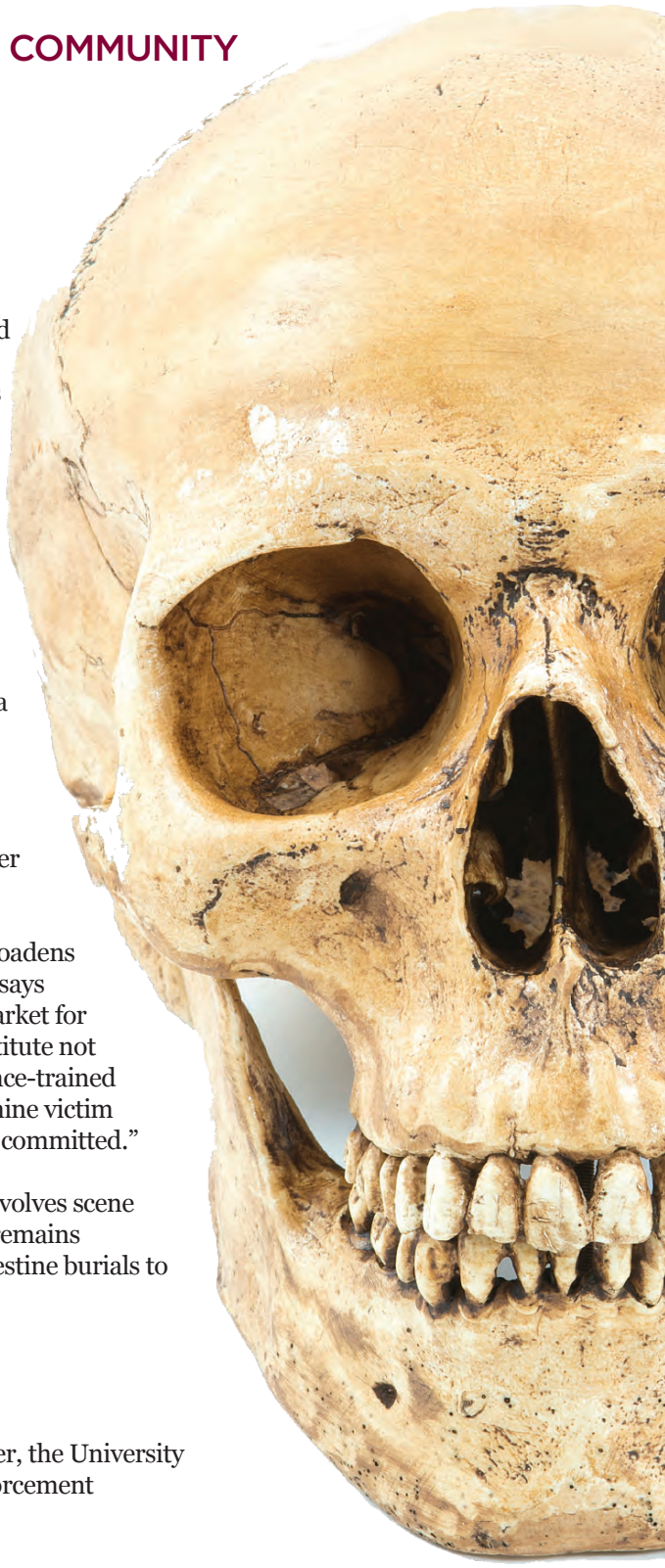
KNOWLEDGE

knowl·edge \'nä-lij\

: information, understanding, or skill that you get from experience or education

Sink Your Teeth **into This**

NEW PROGRAM HELPS FILL THE VOID IN FORENSIC COMMUNITY



University of Tennessee Comparative and Experimental Medicine (CEM), an intercollegiate program between the College of Veterinary Medicine and the Graduate School of Medicine, is at the forefront of fulfilling a large unmet need in the forensic community by launching the first postgraduate degree program in forensic odontology in the United States this fall. The master's program addresses the need for additional professionals—including crime scene investigators, anthropologists, medicolegal death investigators, and detectives—trained to investigate crime scenes to provide positive identifications, and to process dental remains as evidence.

Forensic odontology is the scientific discipline of identifying victims through unique characteristics of their dental and craniofacial anatomy. Dental identification is particularly valuable since teeth, unlike DNA evidence, are virtually indestructible. Forensic odontology also aids in solving criminal cases involving bite marks, as well as assisting mass disaster identifications such as those needed after Hurricane Katrina and the World Trade Center attack.

"We are fortunate to have two of the nation's most credentialed specialists in forensic dental identification," says Dr. Murray Marks, CEM faculty member and program director. "Drs. Mike Tabor and Richard Weems helped identify North and South Tower victims at Ground Zero from the 9-11 attack."

"This new concentration adds unique biomedical experts to the CEM program and broadens the scope of advanced education we can offer professionals to advance their careers," says Dr. Jim Thompson, dean of the veterinary college, adding it will create a better job market for those just beginning their careers. "Creating this course is another example of the Institute not only advancing academic excellence but also serving communities by providing advance-trained professionals the scientific knowledge and skills to investigate death scenes, to determine victim identities, and to collect essential information to document whether a crime has been committed."

Training for this intensive, three-semester, 33 credit-hour master of science degree involves scene search, recovery, identification, and processing of fresh, mutilated, and decomposed remains exposed to many postmortem environments, from surface scattered bones and clandestine burials to aquatic and thermal settings.

To learn more about this graduate program and admission requirements, visit: tiny.utk.edu/forensicOdontology.

Other partners in the concentration include the Knox County Regional Forensic Center, the University of Tennessee Medical Center and Department of General Dentistry, and the Law Enforcement Innovation Center in Oak Ridge.

One Step At a Time

THE STORY OF A RESCUED COW AND HIS NEW PROSTHETIC FOOT

Early in his life, a young Hereford bull suffered a life-threatening injury to his left rear leg and was sold at auction to a farmer in Middle Tennessee who had plans to fatten him up before selling him. The Gentle Barn, an animal sanctuary based in California, rescued the animal, now named Dudley, and turned to the UTCVM Veterinary Medical Center for help.

Dudley's recovery at UT included acupuncture and electrical stimulation (E-stim) to rebuild muscle strength and control. When he was strong enough, underwater treadmill conditioning was added to the regime. Farm animal licensed veterinary technician Mary English discovered Dudley's love for peppermints, and used them to keep the animal motivated.

While the exact nature of Dudley's injury is uncertain, it appears some sort of rope or vine had wrapped around Dudley's foot, strangulating the blood flow to the lower part of his limb, causing the foot to slough off. Since cattle walk on two toes, putting weight on the injured foot caused Dudley severe pain and distress. "If you look at your middle and third finger that is essentially what Dudley lost–the last two bones in his foot," explains Dr. David Anderson, head of Large Animal Clinical Sciences and board-certified large animal surgeon.

Dudley suffered weight loss, muscle mass loss, and was having difficulty walking, so Anderson decided to amputate the limb and have a prosthesis, an artificial limb, made for Dudley. "The limb amputation removed the damaged tissue and we were able to get it back to a fresh walking surface. While we can't regenerate tissue that was lost, we can give him a pain-free walking surface."

Anderson has created dozens of prosthetics for a variety of animals, including llamas, alpacas, cattle, horses, goats, sheep, and even a kangaroo. But not every large animal is a candidate for a prosthesis. As it turns out, Dudley was a perfect candidate. "There are several things we have to evaluate before we suggest limb amputation on an 800-pound animal," says Anderson. Following surgery, which went well, Anderson took careful measurements and built a mold that was sent to a prosthetics company.

Dudley's case adds to the body of knowledge about prosthetics in veterinary medicine. "Every time we do a prosthetic on a patient it allows us to learn something and move forward because each patient presents different challenges. We wouldn't be able to overcome those challenges if we didn't have a strong team—the surgeons, rehabilitators, prosthetists, technicians, students, and the Gentle Barn," says Anderson. "Together, Team Dudley created a success story."

The Gentle Barn has opened a sanctuary in Knoxville, Tennessee, where Dudley and several other rescued animals live full and happy lives. More information about the Gentle Barn can be found at gentlebarn.org/tennessee.

In the Flyway

Preparing for avian influenza

From December 2014 to June 2015, the U.S. Department of Agriculture confirmed several cases of highly pathogenic avian influenza (HPAI) in the Pacific, Central, and Mississippi flyways (migratory bird paths). The most heavily traveled part of the Mississippi Flyway includes the westernmost part of Tennessee. (At the time of writing, HPAI had not been detected in Tennessee.) In the United States the disease has been found in wild birds and falconry birds, as well as a few backyard flocks, and in commercial poultry flocks (chickens and turkeys).

The normal host for influenza is waterfowl, which can shed the virus and spread it to other birds, including poultry. Influenza is a very contagious virus that in birds can cause respiratory disease, gastrointestinal disease, and even neurologic disease.

Dr. Melissa Kennedy, associate professor and director of the Virology Laboratory at the UT College of Veterinary Medicine, answers questions about influenza.

What type of birds does influenza affect? It can affect any group of birds including backyard flocks, but the current outbreak is affecting primarily poultry operations in the Midwest. It has spread to several states, including those that border Tennessee. Infected birds can go off feed, have decreased egg production, and increased time to market for broilers.

Do people who have a few chickens need to worry about HPAI? They should try to minimize or eliminate if possible their contact with wild waterfowl. Potentially birds that are migratory can transmit the virus over long distances, so there is a potential to spread to Tennessee and other neighboring states.

Is avian influenza more prevalent in the winter like human influenza? We don't see seasonality with animals and influenza. People come together in wintertime with shared air space, whether movie theaters, malls, or other enclosed spaces. Animals can potentially have influenza any time of year.

Can other species contract HPAI? It's very uncommon for avian influenza (bird flu) to spread to other species, but there is a potential threat. Influenza has the capability to spread to other species. Luckily, it is not transmitted very efficiently to other species in most cases, in particular with these highly pathogenic strains. We have seen highly pathogenic strains in Asia spread from birds to people, but the occurrence is rare. We haven't seen any evidence of human transmission with the particular strain currently circulating in the Midwest.

Find the CDC's Recommendations for the General Public at: cdc.gov/flu/avianflu/h5

HPAI WARNING SIGNS IN POULTRY

- Sudden increase in bird deaths without any clinical signs
- Lack of energy and appetite
- Decrease in egg production
- Soft- or thin-shelled or misshapen eggs
- Swelling of the head, eyelids, comb, wattles, and hocks
- Purple discoloration of the wattles, comb, and legs
- Gasping for air (difficulty breathing)
- Coughing, sneezing, and/or nasal discharge (runny nose)
- Stumbling or falling down
- Diarrhea

If your birds are sick or dying, report it right away.

CALL:
Your flock or local veterinarian,
The state veterinarian,
The state animal health/poultry diagnostic laboratory,
or USDA toll-free at 1-866-536-7593.

Information from the USDA

Prenatal Care *Gone Wild*

In May 2015, a cute baby was born—ten fingers and ten toes counted. Within a week, same thing again. Mamas and babies are doing fine.

It's not every day that baby gorillas are born in captivity, and this was a first (and second) for Zoo Knoxville.

An endangered species, Western lowland female gorillas Hope and Machi, as well as male Bantu, were brought to the zoo as its first gorilla group to live as a family unit. The moves were made on the recommendation of the Gorilla Species Survival Plan (SSP), which manages the breeding and social placement of gorillas in zoos accredited by the Association of Zoos and Aquariums (AZA). Zoo Knoxville works in conjunction with the Gorilla SSP to meet the needs of the overall gorilla population.

When the females were taken off birth control and introduced to Bantu, a story as old as time began to unfold. But how do you know when a gorilla is with child? Pregnant great apes secrete the same types of hormones as humans, so the females were trained to accept a cup on a stick when they urinated. Using over-the-counter pregnancy tests, a "plus" sign made an early appearance. Twice. Bantu was on the job.

As soon as the pregnancies were confirmed, UT College of Veterinary Medicine's second-year zoological medicine resident Dr. Ryan Sadler and the keepers at the zoo's Gorilla Valley initiated training. Asking a pregnant gorilla to stay still for an ultrasound doesn't just happen; while the pregnant gorillas don't attend Lamaze class, they do go through a birthing class of sorts. Staff began working with the gorillas, using a reward system, to present their bellies for an ultrasound so mom and fetus wouldn't be put through the stress of anesthesia. "Each week, I would go to the zoo four or five mornings and have breakfast with the gorillas, using that as a bridge to desensitize them to veterinary staff and desensitize them to the type of training and behaviors we wanted from them," says Sadler.

Photo courtesy of Amy Smotherman Burgess, ***Knoxville News Sentinel***

Dr. Ryan Sadler monitors the gorillas' pregnancies with portable ultrasound equipment.

The ultrasounds helped the veterinary staff monitor fetal heart rate, size, and development. They also kept an eye on the mothers, looking for changes in mammary development and ensuring they didn't have prepartum issues such as fetal membrane breakage. "We also wanted to make sure they were getting adequate nutrition and continuing to interact with staff. In addition to ultrasound training, the gorillas were learning to present or hand us a baby (stuffed gorilla toy) in the event we would have to do something like that when the babies were born."

Sadler says tracking the pregnancy was a team effort. "All the keepers were able to work with us every day. They took time out of their routine to help us work with both girls. That was huge in terms of developing that trust," says Sadler. "By the time things started heating up and both were in labor, all of us had worked with each other for so long and were on the same page we knew what to expect from each other and knew the routine and the gorillas very well. We all had great team trust effort going on and that was great!"

Asking a pregnant gorilla to stay still for an ultrasound doesn't just happen.

Sadler says that although not all training behaviors were ingrained, by the time babies Obi and Ubuntu were born, both mothers were very calm when staff checked out the babies. "I was able to scratch Hope's baby the second day after she was born, and Hope didn't mind at all. I saw both babies within hours of their birth. The fact the veterinarians were there and they weren't stressed was the main goal of the training—and it was a success." Sadler says the experience taught him much about working with the keeper staff and developing protocols for best and worst case scenarios. "This has made me a better vet and not just with great apes. It has changed how I approach a whole team mentality in terms of animals' care, working with keepers, developing a long-term plan, and setting goals. I will use that to build on the rest of my career."

To Sadler, the babies are a headache he loves. "If you are a worrying dad like me (although these kids will never drive), you think they are never out of the woods. We have passed the neonatal stage, and now comes the fun part. They are developing personalities. As they enter the toddler years they will be curious and investigate. Everyone loves to see the nursing babies, but I think it's more fun to watch the rolling, tumbling little packages of joy the babies are." Sadler will be watching them from a distance; he is finishing the third year of his residency at the San Diego Zoo in California. He says zoo medicine is one of those professions where you learn from others' experiences, and he says he has gained so much from UTCVM's Drs. Ed Ramsay, Juergen Schumacher, and Andrew Cushing during his time at UT. "The vet I am today is because of them, and I owe them everything."

While it was tough to say goodbye, Sadler will follow the babies throughout their lives. "I talked to Dr. Ramsay about this. With long-lived species like gorillas, in thirty years they may be parents and you get this grandfather feel. I'm looking forward to that."

Zoo Knoxville is expecting a third baby gorilla in mid-September.

Learning from Each Other

A positive impact for faculty and students

Veterinary students rarely enter college wanting to teach. For those who decide to take that path, grasping the best way to engage or pass their knowledge on to others can be difficult. Now in its seventh year, the Master Teacher Program (MTP) at UTCVM helps staff and faculty hone their teaching skills. The group meets monthly, with a typical attendance of more than thirty, to discuss topics ranging from using improvisation in the classroom to assessing student performance. Presentations are given by peers, as well as subject experts from UT and beyond.

The vision of MTP, launched in 2008 by Dr. Michael Sims and Dr. India Lane, is to provide leadership and expertise to support and develop quality instruction at the College. "Early on in the College, I always wanted to find ways of gaining from the wisdom of other faculty," says Dr. Sims. "We were all hungry to learn how to teach."

Results from annual surveys of the program indicate that half of UTCVM faculty members have attended at least one MTP event. Faculty rank the program as highly valuable, and it has had a positive impact, especially on recruiting new faculty and students.

"For those of us who started teaching at the veterinary college with the first graduating class, there was really nothing available to help us learn how to teach except what we'd observed in others," says Sims. "I think teaching is now more of a science than it was in 1976 when the school opened."

For more information about the Master Teacher Program, go to vetmed.tennessee.edu/academics/pages/master-teacher-program.aspx

Veterinary pathologist, Dr. Linden Craig, regularly attends MTP meetings.

ACROSS THE GLOBE

UTCVM associate professor awarded prestigious fellowship

Dr. Agricola Odoi, associate professor in Biomedical and Diagnostic Sciences at the University of Tennessee College of Veterinary Medicine, received a 2015 Carnegie African Diaspora Fellowship. Only scholars born in Africa who live in the United States or Canada and work in an accredited college or university are eligible. Odoi was one of sixty African Diaspora scholars chosen to participate.

The fellowship provided Odoi the opportunity to travel to South Africa to work with researchers at the University of South Africa (UNISA) on the spatial epidemiology of *Staphylococcal* infections in horses. He also helped develop a learning program in spatial epidemiology for veterinary and health professionals. Odoi was excited about the current and future opportunities. "It not only helped expand my research program and serve as a gateway to a long-term research collaboration with South African colleagues, but also opened doors for future student exchange between UT and UNISA. Odoi's project investigated geographic disparities of equine *Staphylococcus* infections in South Africa in order to identify areas with high rates of the disease and will provide useful information to guide disease control efforts.

Farm animal field clinicians take advantage of down time on the road by turning trucks into mobile classrooms.

Tricked-out Truck

Education behind the wheel

Climb in the ambulatory truck. Click the seatbelt. Start the engine. Start learning. That's the routine for fourth-year veterinary students on their Farm Animal Field Services clinical rotation. During the required three-week rotation, the veterinary medical team visits farms and other sites throughout the region for preventative medicine, production issues, and emergencies.

Dr. Brian Whitlock, associate professor in the Department of Large Animal Clinical Sciences, board-certified reproduction specialist, and Field Services section chief, enjoys interacting with farmers at the farm and helping them improve their operations so they can become more profitable. He is passionate about preparing students to be practice-ready when they graduate. "It's one thing for our students to have head knowledge and apply it in a hospital setting with all the technical support they need," says Whitlock. "It's a completely different scenario to take students into the field where we don't always know what we are facing until we arrive. At times, it does put students in difficult situations they can't anticipate and forces them to apply knowledge in a unique environment. I think it pushes them further and is the closest thing they will experience to private practice while in vet school."

Whitlock strives to engage students in novel ways to help improve their understanding of all aspects of food animal medicine. Dr. Marc Caldwell, assistant professor, joins Whitlock in that endeavor. Both Farm Animal Field Service clinicians take advantage of the "down time" spent traveling from farm to farm by "tricking out" one of the service's ambulatory trucks. The "tricked-out" truck has touchscreen monitors, computers, clickers, and learning modules. As the "mobile classroom" traverses the roads, the docs are able to determine if the students are comprehending the learning objectives and adjust their teaching as needed as the odometer clicks off the miles.

This fall the clinicians expanded their teaching beyond the confines of the ambulatory truck. Working with Berry College in North Georgia, Whitlock and Caldwell hosted virtual "ride alongs" to better prepare undergraduate students for enrollment in a veterinary college and to expose them to multiple areas of food animal medicine and help them determine if they have an interest in food animal medicine.

"I enjoy taking things that seem complicated and distilling them into what's really important and relevant. For instance, a pregnancy check is sticking your hand in a cow. You can explain the physiology and science behind a pregnancy check, but when I explain how much money a veterinarian can save a farmer by diagnosing open (not pregnant) cows, the students really begin to see the importance of it." Whitlock says the students can become better veterinarians and diagnosticians and be an important part of the farm. "We don't have a system that licenses just small or large animal veterinarians, so it is my responsibility to get them practice-ready, because they are licensed to practice all of it. This tricked-out truck is just one way of helping them reach that destination."

COMPASSION

com·pas·sion \k m-’pa-sh n\

: a feeling of wanting to help someone who is sick, hungry, in trouble, etc.

SAVING SCARLET

The story of a dog left for dead

"People go into this profession for a reason, and it's these types of cases that you take home and say 'Wow, we really made a difference.'"
—Dr. Ashley Hartley

In spring 2015, the Friends of Campbell County Animals (FCCA) received a call about a puppy that had been hit by a car. When FCCA's Michele White and Patricia Simpson arrived at the abandoned trailer in LaFollette, Tennessee, they saw a little three-and-a-half-month-old puppy, skin oozing with infection, left to die in the grass and dirt. "I'd never seen a case like this before—not alive," says White. "Any neglect I'd seen that bad the animal was already dead." They immediately rushed the puppy to the local veterinarian's office where she was stabilized. It was determined she hadn't been hit by a car but was suffering from an extreme case of mange. The group started a Facebook page for the puppy they named Scarlet because of the condition of her skin. Within a short time, donations began pouring in for the mounting medical bills. When Scarlet's condition worsened, the puppy was referred to the intensive care unit at the UTCVM Veterinary Medical Center. Later Simpson recounted the drive to the ICU for *Knoxville News Sentinel* reporter Amy McRary, saying, "We drove it like we stole it!"

Dr. Ashley Hartley, an intern at the UTCVM, was one of the doctors on Scarlet's case. "When she arrived, Scarlet was at death's door. She had a low temperature, low blood pressure, massive infection, was almost completely unresponsive, and wasn't responding to treatment. I think to anyone's untrained eye she looked dead. We didn't know what to expect, and I gave them (Simpson and White) a very guarded prognosis in the beginning. It probably scared them but it was reasonable because at any point she could have turned the corner and we could have lost her." Hartley adds, "If they were willing to give her a chance, we were willing to give her a chance. The Friends of Campbell County Animals were able to raise donations to allow us to treat her with the best options available to us."

With both eyes cloudy and a perforation in one of them, doctors were skeptical that she had vision, but they had bigger problems to deal with. It was the worst case of demodex (mange) Hartley had ever seen. The puppy was infected with four different organisms and her skin was sloughing off. Almost three-quarters of Scarlet's body was ravaged by a secondary infection. She was kept in a special crib in the ICU with round-the-clock care. Even getting a blood sample was a struggle because of her dehydration. "We had to take it slow with her because her fluid therapy and her IV fluids could have made her sicker if we were too aggressive too quickly." She was given antibiotics to help fight the infection and two plasma transfusions because the protein in the blood was so low and her electrolytes

Some photos in the circles are courtesy of Friends of Campbell County Animals

> **"From our point of view, she was one of the most critical cases that was in our ICU."**
> **—Dr. Ashley Hartley**

were abnormal. "From our point of view, she was one of the most critical cases that was in our ICU," says Hartley. When she was able to maintain her body temperature, Scarlet received hyperbaric oxygen therapy to infuse her tissue with oxygen to promote better healing and a faster recovery.

Scarlet's second day in ICU was a fateful day for her and Dr. Luca Giori, an endocrinologist at the veterinary medical center. "The first time I saw her, I fell in love with her immediately because of her sad eyes," says Giori. "It was almost like she was asking for help. That made me think she needed someone, and I was the perfect person because I'm here by myself." Giori, who is from Italy and lives far from family, visited her throughout her two-week stay in ICU. When he expressed a desire to adopt Scarlet, the Friends of Campbell County Animals wholeheartedly agreed. Scarlet is Giori's almost constant companion. "Scarlet means so much to me and has brought joy to my life. She saved me." Giori says before Scarlet he was always working late with little time to enjoy Knoxville and meet people. "Now that I have her, I have to better organize my days and save time for her. She has increased the quality of my life and is my buddy. It is nice having an animal love me in such an unconditional way."

Scarlet had a team working for her. The Friends of Campbell County Animals, the generous public, and several services (ICU, dermatology, internal medicine, ophthalmology, physical rehabilitation, diagnostic laboratories) at the veterinary medical center worked together to save little Scarlet. Treating Scarlet was a learning experience. "Since we are a teaching hospital, as an intern I am one of the many tiers of training that happen here. We learned so much from Scarlet and her progress and realize how much goodwill there is out there. I might be the one talking to you, but there is a huge village that contributed to Scarlet's recovery. People go into this profession for a reason, and it's these types of cases that you take home and say 'Wow, we really made a difference,' " Hartley says.

And Scarlet has restored White's faith in humanity. "When I first saw Scarlet I wanted to lash out. But there are more people that want to do good for animals in the world than people who want to harm them," says White. "Scarlet has brought attention to neglect and abuse. I love that dog. She deserves the perfect person and the perfect home. She deserves everything."

Want to help us make a difference?
Call 865-974-4379 or visit vetmed.tennessee.edu/give

Say Hello to **Dolly**

No backyard for this chick

Stephen Brown, owner of Glitterville, had never been around chickens. Ever. That is until he traveled to Hollywood to be a judge on TLC's *Craft Wars* and met Coco, Tori Spelling's Silkie chicken she had brought to the set. Brown explains it was love at first sight. "I had to hold it. I just had to have one!" It wasn't long before that became a reality. Enter Dolly Poulet. "She is so warm and her feathers are so soft. She cuddles, snuggles, and is much like a dog or a cat. She's very sweet and has never pecked me or shown aggression." Dolly is not a typical backyard chicken. She's been carried from birth and lives a cushy lifestyle. "She lives pretty poshly," Brown explains unabashedly. She sleeps in a poufy bed, travels from place to place in a Ralph Lauren bag, and laid her first egg on a pillow at the Ritz Carlton. She even has her own line of ceramics for sale at Glitterville.com.

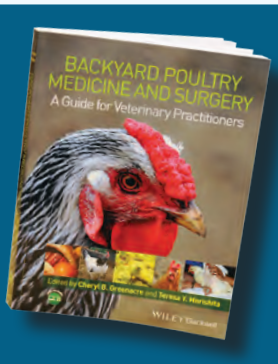
Photo courtesy of Bryan Crabtree

During Dolly's photo shoot for *Oprah* magazine (November 2013 issue), Brown noticed something was wrong. He turned to Dr. Google, and realized the Internet didn't have a lot of reliable information. Then he searched for "avian specialists," and Dr. Cheryl Greenacre's name popped up. Greenacre, board-certified in exotic companion mammal as well as avian medicine, is the immediate past president of the Association of Avian Veterinarians and head of Avian, Exotic Animal and Zoological Medicine at the UTCVM Veterinary Medical Center. Brown made the call and Dolly was at UT the next morning.

Greenacre understands the attachment Brown has with Dolly. "The bond people have with their backyard chickens is beyond the traditional human-animal with other animals like dogs, cats, or parrots. But people are rediscovering the personality of the chicken and enjoy interacting with them." However, finding veterinarians who will treat chickens can be as rare as hen's teeth.

Greenacre diagnosed Dolly with egg yolk-related peritonitis, an inflammation and infection caused by egg material in the bird's abdominal cavity. "Chickens will continue to lay eggs whether they are coming out or not, and if those eggs get backed up into the coelomic cavity or abdomen, it's a perfect medium for growing bacteria and can lead to infection," explains Greenacre. Dolly underwent antibiotic therapy to reduce infection and then surgery to remove more than half a dozen eggs, three whole ones, and then scrambled parts. "I removed as much as I could to keep the infection under control. It was a very difficult surgery and at one point I had to say, 'stop,' and suture her closed. Dolly is very important to Stephen. Every minute a bird is in surgery you are risking its life, because keeping birds under anesthesia for any length of time can be tricky because of their unique anatomy."

Surgery was successful, and Dolly remains on hormone therapy to prevent egg production. "Dolly knows she is the center of attention," Greenacre says with a smile. "She is fantastic. Sweet and calm and just sits there. I think she knows what a camera is. She will be all cute and the instant the camera comes out she plays coy. It takes forever to get a good photo!"



With the popularity of backyard chickens growing, Greenacre recently published a book designed to help veterinarians who don't treat chickens on a regular basis. *Backyard Poultry Medicine and Surgery: A Guide for Veterinary Practitioners* is a practical resource offering guidance on developing diagnostic and treatment plans for individual companion poultry or small flocks.

Seeing Eye to Eye:

SERVICE DOGS RECEIVE EYE EXAMS

Service dogs rely on excellent vision to perform their duties, but dogs can get cataracts, glaucoma, corneal ulcers, and retinal diseases just like people. Unlike people, dogs don't read eye charts to gauge their sight, so veterinarians visually inspect eyes to determine if there is a problem.

In an effort to promote the importance of eye health in animals that we, as a society, depend on every day, the ophthalmology service at the UTCVM Veterinary Medical Center donates its time each May to provide free exams for certified service dogs. It is part of a nationwide initiative sponsored by the American College of Veterinary Ophthalmologists and corporate sponsors.

K-9 officers, military dogs, search and rescue dogs, seeing-eye dogs, and others provide an invaluable service, and the free eye exams are an opportunity for the veterinary medical center to give back to the community. If caught early, many eye conditions can be treated with surgery, medication, or a combination of both.

Over the last two years, in conjunction with the event, the Canine Arthritis, Rehabilitation, Exercise, and Sports Medicine (CARES) service at the veterinary medical center has offered complimentary orthopedic and gait evaluations for service dogs in an effort to try to keep them healthier longer and identify problems earlier to hopefully slow down, or arrest, the progress of conditions.

Snipping Away at Overpopulation

Spay/NeUTer goes mobile

It is hard to miss the UT College of Veterinary Medicine's Mobile Spay/NeUTer Clinic. The 36-foot unit includes three surgery tables, holding cages, and an oxygenizer and was made possible with a $260, 485 grant from PetSmart Charities, Inc. (PCI). The focus area for the mobile unit includes the twenty-nine counties surrounding Knox County. The estimated shelter intake for the area was more than 81,000 animals in 2012. The spay/neuter surgeries performed on the unit will only be offered for unowned animals. Teresa Fisher, with the College's Companion Animal Initiative in Tennessee and driving force behind obtaining the mobile clinic, said, "I want UT to help reduce pet overpopulation in Tennessee, starting now and continuing into the future when our students graduate and become part of the solution in whatever community they choose to practice."

Dr. Jim Thompson, dean of UTCVM, says the mobile unit allows the College to provide its veterinary students with hands-on experience beyond that of the basic required curriculum. "Our students have shown great interest in this opportunity because they know it will help them develop their surgical skills and help save lives in our communities," says Thompson. UTCVM students will receive experience in pediatric spay/neuter, and they will be exposed to animal welfare issues including an understanding of how unplanned and uncontrolled breeding produces millions of homeless animals who will end up in shelters and face euthanasia.

Karen Walsh, LVMT, a field program manager with PCI, says the lifesaving unit will serve the College for many years. "We look forward to a time when a lack of available locations where people can get their pets spayed and neutered is a thing of the past. This mobile spay/neuter clinic, and others like it, are bridging so many gaps by bringing spay/neuter to areas where there are no veterinary hospitals and providing students with hundreds of surgical opportunities where they not only perfect their surgical skills, but save countless lives in the process," says Walsh.

Fisher says the mobile unit is a win-win. "We are serving underfunded animal shelters, and students need the experience. This helps the shelters, helps the students, and it helps the animals."

CAiT
Companion Animal Initiative of Tennessee

The mobile Spay/NeUTer unit is dedicated to the memory of Dr. John New, a UTCVM faculty member who fought tirelessly to keep animals out of shelters and in homes.

The Right to Pet
HABIT dogs go to court


Knox County Juvenile Court Judge Tim Irwin

Photo courtesy of CASA

"Court wasn't so bad today," commented a young boy as he left a Knox County courtroom. He was speaking to a volunteer from HABIT (Human-Animal Bond in Tennessee), the outreach volunteer organization that uses human-animal teams (mostly dogs but cats and rabbits also) to provide animal-assisted interaction. HABIT teams, which in the past have typically used their calming presence in nursing homes, schools, and hospitals, have a new opportunity to help children in a venue that can be scary and unfamiliar. Through a partnership with the Court Appointed Special Advocates (CASA) program in Knox County, HABIT dogs visit children in juvenile court on Wednesday mornings and one Tuesday evening each month.

HABIT volunteers work together to promote the valuable bond between people and animals through animal-assisted interaction. The partnership between the two programs to bring HABIT dogs into courtrooms began when Summer Colbert, who at the time was the CASA volunteer coordinator, had attended a CASA conference where she heard about similar programs in other parts of the country. She returned to Knoxville and learned about HABIT from a UT Veterinary Social Work student. Calls were made, meetings were held, and a partnership was born.

Each Wednesday morning two to three dogs and their human partners spend two hours at the Carey E. Garrett Juvenile Court Building on Division Street in Knoxville, working with children, adults, and even court staff who are all dealing with their own type of stress. What can start out as a stressful situation is often tempered when the dogs walk in the room. They provide a welcome distraction and calming influence for children of all ages in the courtroom itself and also in the lobby. One Tuesday evening each month, HABIT teams also attend foster care review boards. "The kids don't expect to see them (in court)," says Karen Armsey, HABIT program coordinator. "And they get such joy from them."

The dogs are patient and gentle, allowing children to pet them and interact with them. Armsey says, "The dog has to be able to accept the fact there's going to be kids and adults all over him for a couple of minutes. You need a dog that can chill out and enjoy that."

Those special HABIT dogs make the program a success. Armsey says that the court program has renewed her excitement about her job. She witnesses visible results when her dogs act in a certain way that calms fears and eases tension. "It's very affirming."

HABIT
HUMAN-ANIMAL BOND IN TENNESSEE

Why We Do What We Do

An informal thank-you note from a parent

Hello HABIT, I just wanted to send you a fast message to tell you what a difference one of your volunteers and her therapy dog made in my daughter Nataysha's life. She really made Nataysha's day by bringing the dog to her EEG appointment at UT hospital. This was actually the first time Nataysha just laid on the bed and let the nurse place the wires on her head without crying or pulling them off. This was the most successful EEG she has ever had in terms of Nataysha staying calm and cooperating. Nataysha also surprisingly walked calmly side by side with the dog down the halls without stimming or bolting off once the EEG was over. Nataysha has asked for the therapy dog every day since on her communication board. Here is a picture I took in the waiting room when Nataysha first met the dog. Thank you again so much for everything you all do.

Leroy

DISCOVERY

dis·cov·ery \dis-’k -v(-)rē\

: the act of finding or learning something for the first time

Food Fight

AGAINST FOOD-BORNE ILLNESSES

Over the next year, the Center for Agriculture and Food Security and Preparedness (CAFSP) at UTCVM, under the direction of Dr. Sharon Thompson, will develop a produce food safety training program for the nation's food inspectors. The program will support inspections of produce farms to evaluate the adoption of new Food Safety Modernization Act (FSMA) requirements as they are implemented and support the investigations of outbreaks linked to produce farms. The requirements are intended to reduce the occurrence of food-borne outbreaks linked to produce and sprout farms. FSMA aims to ensure the U.S. food supply is safe by shifting the focus of federal regulators from responding to contamination to finding effective prevention methods. The Center will develop several online and in-person courses.

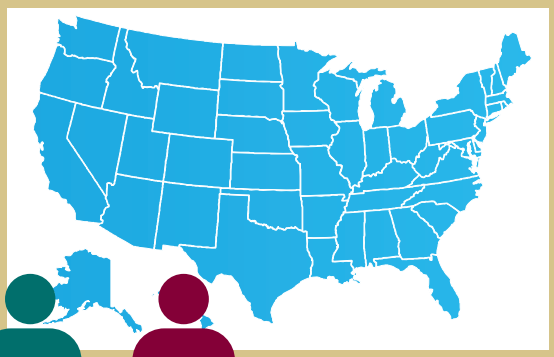
"We are partnering with New Mexico State University on our development of this training program and have assembled a strong team with experience in produce safety, instructional design, and performance assessment," Thompson says. "I am pleased that we have been given the opportunity to support FDA in this critically important endeavor that will enhance food safety in the U.S."

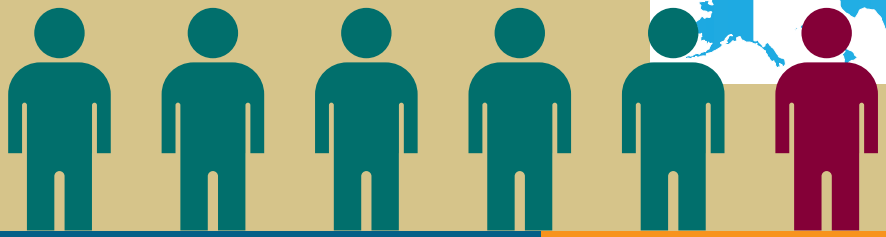
CAFSP has developed a Cultural Foods Safety application (app) for the FDA that provides users with information on food safety issues and control measures associated with culturally based foods. It is available through the Apple App Store, Google Play, and the Windows Store.

This app was created to assist federal, state, local, territorial, and tribal food regulatory officials during inspections where they encounter culturally based foods with which they are unfamiliar. Users have the ability to search for these foods in a variety of ways. They can type the specific name into the search box, or they can search for information in the following categories: Foods by Region of the World, Faith Based Foods, and Type of Process Used (e.g., fermentation, salting, pickling). Links to regulatory guidance are also provided.

When downloaded onto a device, the app will function even if a poor Internet connection exists.

AN ESTIMATED **48 MILLION** PEOPLE
(1 IN 6 AMERICANS)





GET SICK EACH YEAR FROM FOOD-BORNE DISEASES,

ACCORDING TO RECENT DATA FROM THE U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION.

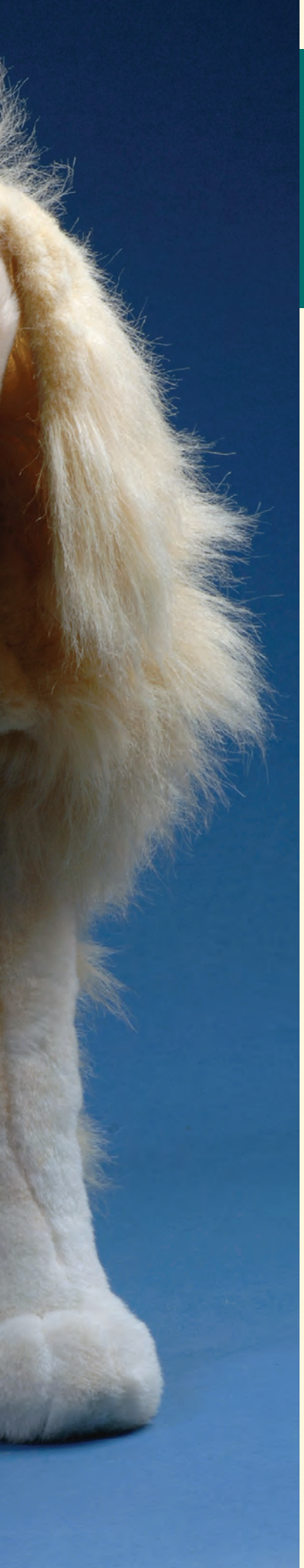
CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

APPROXIMATELY 128,000 ARE HOSPITALIZED, AND 3,000 DIE EACH YEAR.

Mannikins can help veterinarians perform endoscopy more safely and efficiently, saving pet owners money and increasing quality of care.

Meet FRED&Co.

A Dog and Veterinarian's Best Friend



What began as a "construction project" in Jacqui Whittemore's garage is now teaching students and veterinarians.

Solving puzzles is part of Dr. Jacqui Whittemore's job as an associate professor in the College—medical puzzles, that is. Starting out in general practice, Whittemore's area of interest was soft tissue surgery. "Over time I came to realize that, although surgery was fun, the most rewarding thing in my day was putting pieces together to solve the medical puzzles," she says. One puzzle she is solving is how to teach veterinarians minimally-invasive procedures, such as endoscopy, without using live animals.

Endoscopy is used to examine the esophagus, stomach, and intestines. It might be used to retrieve a rock from the stomach of a dog, for example. The procedure consists of advancing a flexible endoscope through the mouth while the dog is under anesthesia. The end of the scope contains a light and a camera to capture images of tissues at its tip. The images are displayed on a monitor for evaluation. Although endoscopy is generally safe, it has a very steep learning curve. Lack of opportunities for practice can result in failure to complete the procedure and achieve a diagnosis, prolonged anesthesia, and an increased risk of complications.

Whittemore and her former student Dr. Katy Kottkamp wanted to create a simple, affordable device to be used for training in endoscopy and to allow private practitioners to continue to hone their endoscopy skills between patients, in order to improve procedural success and decrease patient strain. What began as a "construction" project in Whittemore's garage, using household materials and a stuffed animal from Goodwill, is now available from RescueCritters! as an endoscopic dog mannikin called Mikey. The mannikin has an esophagus and lower esophageal sphincter; stomach with rugal folds, incisura angularis, pylorus, pyloric sphincter; and duodenum with duodenal papilla and Peyer's patches. By allowing ongoing practice at minimal cost, Mikey can help veterinarians perform endoscopy more safely and efficiently, saving pet owners money and allowing veterinarians to perform more procedures.

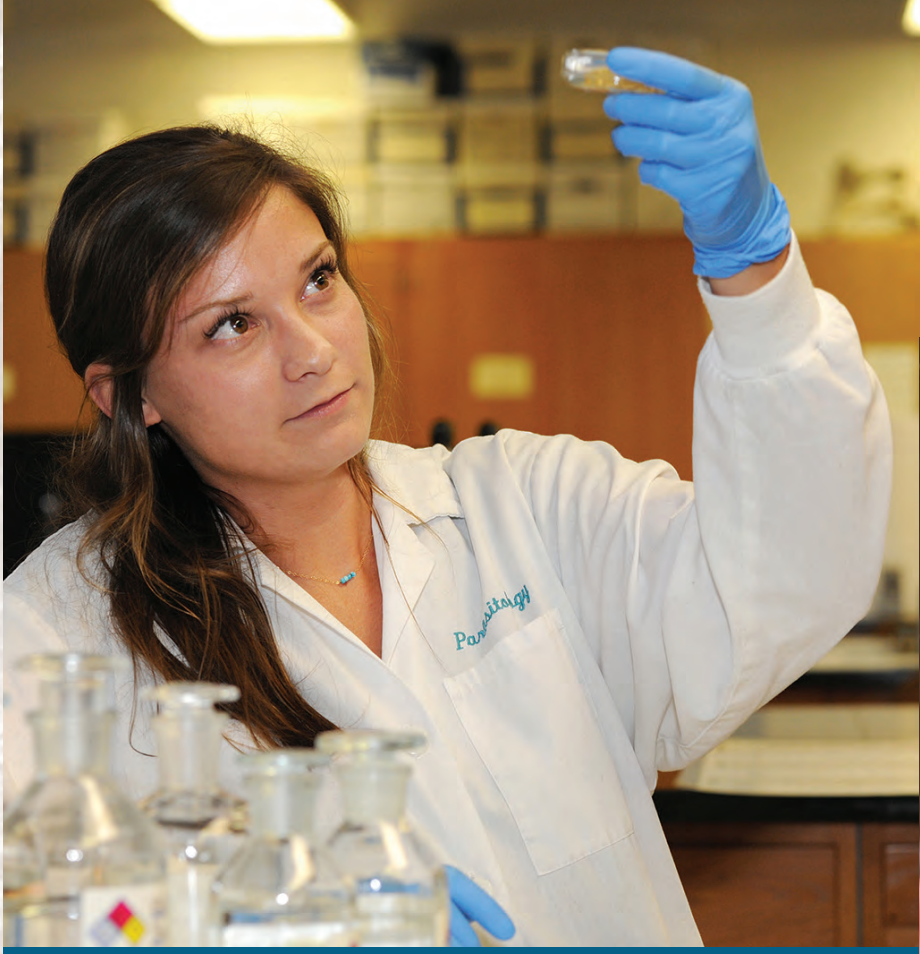
"Pet owners benefit when their family veterinarian can perform procedures in a way that minimizes pain and reduces complication rates and recovery times…quality of care increases as well," say Whittemore and Kottkamp.

Mikey is not only less expensive than other simulators, but he is also more realistic. He is soft and cuddly like a typical dog, and the gastrointestinal tract module inside is so lifelike that the endoscopic images it produces are virtually indistinguishable from the real thing. He accurately simulates the difficulty of performing endoscopy, and his soft gastrointestinal tract will not damage sensitive and expensive endoscopy equipment. Mikey's floppy exterior also gives learners the opportunity to experiment with different patient positions for endoscopy, which can help them problem-solve difficult cases. A resealable closure on Mikey's chest and abdomen allows users to replace the internal modules if they become damaged or wear out. "Wouldn't it be nice if our patients had this feature, and we could just zipper them open and closed?" Whittemore muses. Eventually, she hopes to create additional modules for the respiratory and urinary tracts; these could be purchased as add-on modules for Mikey.

Whittemore has also expanded work with her prototype, FRED, in collaboration with Dr. Lane Anderson to solve another puzzle—how to teach technical skills like venipuncture, cystocentesis, and lymph node aspiration to veterinary students without using live animals. Using a grant from the UT Alliance of Women Philanthropists, they developed a mannikin so realistic that students trained on it had identical proficiency to those trained using a live dog! Results of this project were recently presented at the InVEST Conference in Germany, and the mannikins are now being used in place of dogs to teach these skills in the College's curriculum. Though Whittemore is delighted to see her efforts improve patient care and decrease animal use, she is already working on the next puzzle—a mannikin to teach esophageal feeding tube placement to private practitioners.

A FOWL PROBLEM

Solving Middle Tennessee's wild turkey mystery



When European explorers arrived in North America, they were bewildered by a guinea/pea fowl-type bird they had never seen before–the wild turkey (*Meleagris gallopavo*). It became an important food source for the early North American settlers. By 1920, the wild turkey had disappeared from eighteen of the thirty-nine states it originally inhabited. After World War II, long-term restoration efforts across the United States led to successful re-establishment of wild turkey populations, eventually to all states except Alaska. By 1990, the birds were back in all ninety-five Tennessee counties.

Until recently, wild turkeys have thrived in Tennessee. However, in Middle Tennessee, specifically Lawrence, Giles, and Wayne counties, turkey populations appear to be on the decline. The Tennessee Wildlife Resources Agency (TWRA) has teamed with UTCVM's Dr. Richard Gerhold to investigate possible causes for this decline. Since April 2014, Gerhold and several veterinary students have examined tissues and serum collected from hunter-harvested turkeys. In phase I of the study, they are looking for microscopic lesions suggestive of various bacterial, fungal, viral, and/or parasite infections. Because many of these infections are also seen in domestic poultry, Dr. Gerhold is using phase II of the study to determine a possible transmission link between domestic poultry and wild turkeys. Gerhold says phase II is particularly important. "We are determining if pathogens from domestic poultry may be impacting wild turkey populations and, if so, investigate targeted mitigation steps to minimize the impact."

DISEASES BEING INVESTIGATED IN MIDDLE TENNESSEE WILD TURKEY POPULATIONS:

- Avian poxvirus—Skin and/or oral nodules
- Histomonosis (blackhead)—Liver and intestinal necrosis and hemorrhage. Caused by ***Histomonas meleagridis*** parasite.
- Infectious sinusitis—Swollen head; mucus in the sinus cavity. Caused by ***Mycoplasma gallisepticum*** bacteria.
- Aspergillosis—Nasal membrane inflammation; lung congestion; wing drooping; vomiting. Caused by ***Aspergillus*** fungus.
- Coccidiosis—Loss of appetite; wing drooping. Caused by ***Eimeria*** parasites.
- Blood infections—Necrosis and hemorrhage in the muscle, liver, spleen, and/or lungs. Caused by various protozoal parasites.
- Lymphoproliferative disease—Lymphoid tumors. Caused by a parasitic virus.
- Reticuloendotheliosis—Weight loss; occasional paralysis; abnormal feathering; tumors; depression. Caused by a virus.
- Avian influenza—Drop in egg production; ruffled feathers; respiratory symptoms; internal hemorrhaging. Caused by a virus that has not been reported to spread to humans.
- Newcastle disease—Cold-like symptoms, depression, diarrhea; sudden decrease in egg production or thin-shelled eggs. Caused by a virus that rarely spreads to humans.
- Gastrointestinal parasites—Symptoms vary by parasite: gastrointestinal upset, weight loss, lack of vigor, death.

SCIENCE
Behind the Medicine

Trich or Tweet

BEYOND WATER IN THE BIRDBATH

Trichomonas gallinae is a protozoan parasite of birds; recently, infections with *T. gallinae* have been associated with outbreaks in songbirds throughout the world. The classic lesions are white, oral plaques, and infection can cause widespread die-offs. How the parasite is transmitted from bird to bird is unknown, but the hypothesis is that water contaminated by infected birds may be to blame; therefore, backyard birdbaths are a focus area. Dr. Kate Purple and her PhD mentor, Dr. Richard Gerhold, are examining how long *T. gallinae* can persist in water. Recently, some of their results were published in the *Journal of Wildlife Diseases*. For that study, they examined survival of trichomonads for up to sixty minutes in distilled water, quarry water, birdbath water, and rain barrel water. Trichomonads were still living in all samples by the sixty-minute mark. More preliminary results suggest the parasite may be able to live up to twenty hours in birdbaths and present itself as a potential source of infection for native birds. As part of Purple's dissertation project in Comparative and Experimental Medicine, her next task will be to examine a flock of racing pigeons with regard to *T. gallinae* to help determine possible drug resistance and the most effective treatment options.

Rinse birdbaths daily before refilling and clean them once a week using a solution of one part chlorine bleach to nine parts water and a scrub brush. Rinse thoroughly before refilling.

FAMILY

fam·i·ly \'fam-lē, or 'fa-m -lē\

: a group of people united by certain convictions or a common affiliation

Perseverance Meets Passion

The art of wellness

Veterinarians and veterinary students are gritty people. Grit is where perseverance meets passion. We choose to work in an environment that is often emotionally charged and take on more debt and lower salaries than our professional counterparts. We know that the payoff is in the difference we can make in human and animal lives, as well as in our communities and the world.

While grit is a good thing, in our profession it can manifest as burnout and compassion fatigue. Wellness and self-care have been ignored or set aside, and these trends first take root in veterinary school. During my first year, there was no real balance between school and…everything else. When exam waves were approaching, I would dive in and not re-emerge until it was over. That meant very little sleep, bad eating habits, limited contact with "outside" friends and family, and definitely no exercise. I just assumed it was necessary, a part of the process. In the spring semester, my family experienced two cancer diagnoses, and I was in a tailspin academically and personally. It took that smack in the face with perspective for me to rearrange my priorities. With the help of Dr. Elizabeth Strand, VSW founder and a dear friend, I found balance for the remainder of my veterinary school journey. Self-compassion, wellness, and, most importantly, my faith are now pillars on which I can build my professional career.

Wellness and work-life balance must be considered more than "hot topics" right now. They are essential to our long-term success and viability, which is why I am so thankful that UTCVM is trailblazing for student wellness by integrating it into the curriculum. Our veterinary faculty teaches the most current and relevant medical information available in each course, and now the time has come that we discuss stress management, communication, and self-care with the same level of importance.

I have two challenges for you: first, set aside time for yourself. No laundry, email, or errands—do something you wholeheartedly need and enjoy. For me, that means taking my dog to the mountains for the afternoon, going to a trivia night with friends, or just sleeping in! Second, check in with your veterinary peers. Whether it's a conversation with your clinic staff or reaching out to a UTCVM classmate you've lost touch with, ask them how they are doing *outside* of work. The Tennessee Volunteer veterinary community is strong and full of grit. We belong to each other.

Go Vols!
Elizabeth C. Johnson
UTCVM class of 2016

Photo courtesy of Dixie Pixel Photography

Wellness and work-life balance must be considered more than "hot topics" right now.

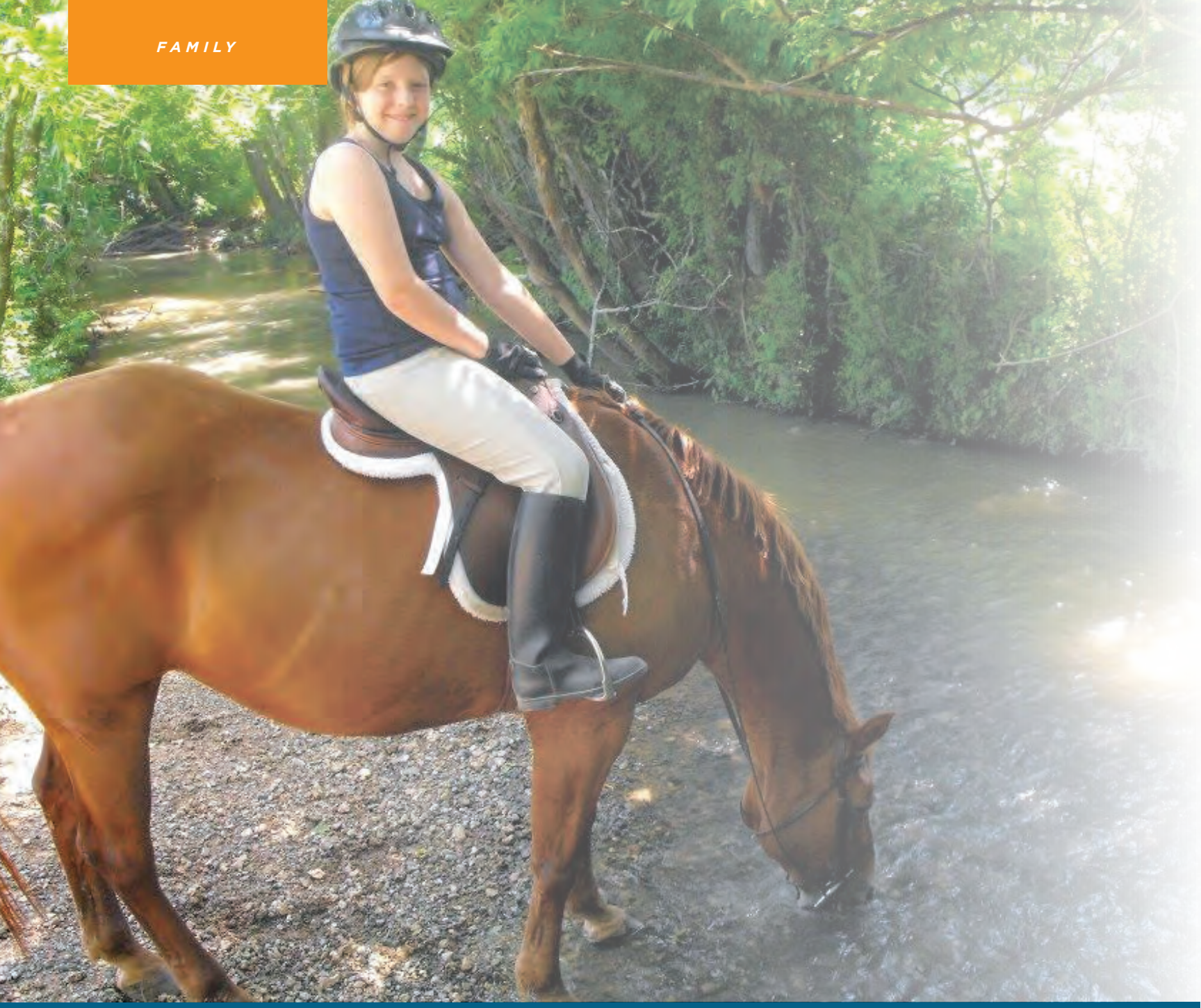


Photo courtesy of Jennifer Boyle

Beyond the Loss

A young girl's legacy lives on

Abby Gibson, pictured with her favorite horse, Summer, before having the opportunity to pursue her dream of becoming a veterinarian. The Abby Gibson Veterinary Medicine Scholarship makes that dream a reality for UTCVM students.

What prompts individuals or companies to create scholarships? Is it an altruistic sense of providing for the next generation of veterinarians, or is there a bigger story behind that financial aid package that helps make a degree possible? For Noelle Herrera (UTCVM '18), receiving the Abby Gibson Veterinary Medicine Scholarship was a glimpse into another little girl's life—one surprisingly similar to her own.

"Her legacy and her dream of becoming a veterinarian is helping me achieve my dream," Herrera says. "I am honored by this scholarship and honored that Abby, a vibrant and loving young girl, has touched my life."

The story of Abby begins about a decade ago with a little girl just starting riding lessons at the ripe age of five. It was evident from an early age that Abby shared a special bond with not just her favorite horse, Summer, but with all animals. The horse barn quickly became her second home. "I too began riding horses at a young age. I spent every possible hour at the barn and loved going to summer riding camps—just like Abby," says Herrera.

Herrera finds reflections of her childhood in little Abby, including a soft spot for boxer dogs and an early desire to pursue veterinary medicine. However, on June 3, 2010, Abby's dream of a life caring for animals was cut short. She passed away from injuries sustained in a horseback riding accident. "I was not aware of the story behind the Abby Gibson scholarship prior to receiving the award," Herrera notes.

It wasn't until later that Herrera would learn how Abby's mother Jennifer Boyle would establish the Abby Gibson Veterinary Medicine Scholarship and the Abby Gibson Memorial Foundation to honor her daughter's unrealized dream to practice veterinary medicine. "Our goal for Abby's scholarship is to help others achieve their dreams of becoming a veterinarian while remembering Abby," Boyle says.

Herrera is the third UT College of Veterinary Medicine student to receive the scholarship. With the help of family, friends, sponsors such as PetSafe, donors, volunteers, and members of the community, the scholarship was successfully endowed in less than three years.

Boyle remembers the moment she decided to create a scholarship in her daughter's memory. Boyle did not have thousands saved to endow a scholarship outright. She knew it would probably take all ten of the required years to raise the $25,000 to create an endowment. "When I first decided to endow Abby's scholarship, I was in the hospital, it was the day she passed away, and we hadn't even seen her yet," Boyle remembers. "An older gentleman suggested I try something smaller because raising that kind of money in ten years can be difficult. Challenge accepted. I will do this for Abby and her memory."

Events such as the annual Walk & Wag Dog Walk held in Abby's memory continue to raise money for the scholarship fund and the Abby Gibson Foundation. Some of the money supports positive or therapeutic interactions by partnering with programs such as HABIT, HALT, and Zoo Knoxville's ZooFund for Kids. "It gave me an outlet, and my way of grieving focused on raising the funds to endow the scholarship," says Boyle.

The scholarship has also connected Boyle to the recipients. These students are able to achieve Abby's dream of pursuing veterinary medicine and give Boyle a glimpse into what might have been. "My family and I have enjoyed building relationships with each of the recipients of Abby's scholarship," Boyle remarks. "It has been very neat to see the similarities they share with Abby. When talking with them and seeing them grow in their careers, it's easy to imagine what Abby might have been doing had she fulfilled her dream of becoming a veterinarian."

Herrera is the first recipient to have been awarded the scholarship during her first year of vet school. The now second-year student provides Boyle an insight into the full vet school experience. "After learning about Abby Gibson from her family and the Abby Gibson Memorial Foundation, I realized what a remarkable and vibrant little girl she was, and I was touched to learn of all our similarities," Herrera says.

The endowed scholarship currently has surpassed $50,000—double Boyle's goal—in five years instead of ten.

Because the foundation has almost reached its long-term monetary goal, this year's Walk & Wag Dogwalk will be the last one. It will be held on June 4, 2016, from 9:00 a.m. to 4:00 p.m. at Victor Ashe Park. For more information on the Abby Gibson Memorial Foundation and how to participate in the walk, visit abbygibson.org. To give directly to the scholarship fund, visit AdvanceUTIA.com/Abby.

Shining Bright *on the* Horizon

Photo courtesy of Dr. Reid Harvey

In Wa, Ghana (July 2014), Dr. Harvey led a WHO team to evaluate Guinea Worm Disease (GWD) surveillance for eradication certification. Ghana was certified GWD free by WHO in December 2014. Village elders told Dr. Harvey no white person had been to this village since the late 1990s. The village doesn't have TV, Internet, or cell phones so the children had never actually seen a white person. Harvey says he will never forget their reaction of intrigue, wonder, and excitement.

Even as a veterinary and master's of public health student, Dr. Reid Harvey (CVM '10) was always concerned about the greater good. Although he understood the importance of an individual animal's health, he knew the impact he could make with his veterinary and public health backgrounds. At last fall's Ag Day, Harvey received the UTIA Horizon Award that recognizes young professionals for the accomplishments they have achieved early in their careers and their potential as leaders in agricultural, natural resources, and related professions.

Following graduation and a small animal clinical internship, Harvey was named one of only three 2011-2012 American Veterinary Medical Association Congressional Fellows. While working for Senator Kirsten Gillibrand (New York), he focused on policy surrounding food safety, animal importation, antimicrobial use in agriculture, and biosecurity. After leaving Capitol Hill, Harvey contracted with the Department of Defense in Washington, DC, on a program aimed to enhance international collaboration to reduce the threat of biological attacks. He was recognized for this work as a 2014 Emerging Leader in Biosecurity by the University of Pittsburgh Medical Center's Center for Health Security.

Harvey then joined the Centers for Disease Control and Prevention (CDC) Epidemic Intelligence Service's (EIS) class of 2013 with the Enteric Diseases Epidemiology Branch in Atlanta, Georgia, where he led food- and water-borne disease outbreak investigations and also participated in the 2014–2015 CDC *Ebola* response in Liberia, Africa. Following EIS, Harvey remained with the CDC and accepted a position as an epidemiologist with the National Institute for Occupational Safety and Health (NIOSH) in Morgantown, West Virginia, where his work centered on respiratory disease in work settings.

Harvey's wife (Becky Leap, CVM '10), who had been practicing at a small animal clinic in the DC area, joined him in West Virginia and is a veterinarian at Cheat Lake Animal Hospital. They moved to a log cabin in the mountains with their four dogs and a cat and are expecting their first human child in April 2016.

Harvey says each and every opportunity has been more eye-opening than the last: "When I began my veterinary training, I had no clue that I would be advising a U.S. senator at a farm bill hearing in Washington, DC; discussing Rinderpest posteradication activities at the Food and Agriculture Organization of the United Nations in Rome; fighting *Ebola* in West Africa; or investigating a chlorine gas release in Washington state. But I've found as my career has drifted further from clinical practice, that there are no boundaries to our profession. We're trained in the classroom a skillset that is reinforced in the field to investigate and solve problems in a practical, economically feasible way. Those abilities more or less sell themselves; we just need to expand the accepted criteria of what it means to practice veterinary medicine."

On the Front Line:
Alumnus Combating Ebola

Army veterinarians provide medical care for military working dogs. But more than half of the approximately 450 active duty Veterinary Corps officers specialize in disciplines outside of small animal medicine—either food and water safety or medical research. Major Chad Black falls into the medical research category—a veterinarian (UTCVM '04) and a microbiologist (CEM '10). Prior to his assignment in Germany with the 21st Theater Sustainment Command (TSC), he worked at Walter Reed Army Institute of Research developing new antibiotics and diagnostic tests for drug-resistant wound pathogens. He moved to Europe in 2013 to take a leadership position with the 64th Medical Detachment (Veterinary Service Support) (MDVSS). The 64th MDVSS deployed to Afghanistan for nine months in 2013-2014 where the mission was a mix of animal medicine, public health, and food and water safety. We had an opportunity to ask him about his work in West Africa during the *Ebola* virus disease outbreak.

Photo courtesy of Dr. Chad Black

What was your role in West Africa?

In mid-September of 2014, President Obama committed up to 4,000 military personnel to assist in combating the *Ebola* virus disease (EVD) outbreak in Liberia. Their job was and continues to be building EVD treatment units, operating EVD testing facilities, training medical personnel, and improving the ports, airfields, and roads that allow medical professionals and materiel to get into Liberia and out to isolated regions.

My parent unit in Germany is the 21st TSC. Our mission is to provide infrastructure for military operations—we move people, equipment, and supplies and establish and maintain facilities and services. Early in the EVD response, the 21st TSC was tasked with operating a logistics hub in Dakar, Senegal. Senegal was a nation without an active outbreak, but it borders the affected region. Dakar has modern air and seaports that can receive larger ships and planes relative to Monrovia, Liberia. Military and medical equipment was to be staged in Dakar and pushed in smaller shipments as needed to Liberia.

The team's mission in Dakar was to provide strategic logistical support to the Joint Forces Command—United Assistance in the form of a Regional Support Element (RSE). The RSE also worked with a small team from U.S. Army Africa. Their goal was to set the conditions in Dakar to receive members from the 101st Sustainment Brigade and a U.S. Air Force C-130 squadron. The first members of the Regional Support Element-United Assistance, referred to as the RSE-UA, arrived in mid-October, tasked with bridging the gap between U.S. Army Africa and the 101st Sustainment Brigade. They were also tasked with establishing a life support area and an intermediate staging base for equipment and personnel.

What training and qualifications made you the right person for this mission?

The 64th MDVSS is a small subunit of the much larger 21st TSC. When I returned to Germany from Afghanistan in August 2014,

(Continued on next page)

the EVD outbreak in West Africa was gaining momentum. I forwarded my resume up the chain of command and offered my services as a microbiologist with an infectious disease background. The group that the 21st TSC was sending to Dakar was composed mostly of logisticians—experts in moving fuel, food, vehicles, and people. They needed a medical person that could interpret and implement the evolving DoD/CDC/host nation guidance concerning movement of personnel out of EVD-affected regions and back to Europe and the United States. I worked with the U.S. Embassy in Dakar and partner military medical personnel in Liberia and Europe to coordinate the safe transport of personnel.

Were you able to make a difference?

Our work was definitely worth it in that we were able to be part of the fight to stop *Ebola* from spreading. In September of 2014, CDC/WHO estimates for the number of new West African EVD cases projected for January 2015 were well over 100,000. That high estimate drove the initial aggressive U.S. military personnel and equipment push which helped reduce the numbers. In January 2015, the total number of cases for the outbreak was close to 22,000 with more than 9,000 deaths. That is a tragic amount of suffering and lost life, but fortunately it is not nearly as bad as the epidemic could have been. As of the end of September 2015, outbreak totals in the region were more than 28,000 with more than 11,000 deaths.

Future ramifications? Lessons learned?

EVD (and other infectious disease) outbreaks will continue to happen in the future. It's important that the communities, governments, international aid organizations, and militaries that responded to this West Africa situation maintain institutional memory and respond more quickly and aggressively when confronted with the next potential outbreak. The 21st TSC learned a lot through this experience, and, as a result, we are better prepared to mobilize for future logistics missions in response to medical emergencies.

What's next for you?

I'm the deputy commander for the 64th MDVSS in Baumholder, Germany. I'll be here for another six months, training to deploy and execute our military veterinary mission on short notice and in austere environments. After that I'm anxious to return to the research world, either within the military system or in academia or industry. My overarching professional goal is to create (or be part of team that creates) a needed medical product such as a new antibiotic for drug-resistant infections or a mechanism to negate drug-resistant mechanisms in pathogens.

Ways to Give to UTCVM

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Establishing a pledge is a popular way to make a specific commitment. To make a pledge, a donor determines his or her total pledge amount, the designation of the gift, the period of time over which the pledge will be paid, and the frequency of payments. The University of Tennessee Foundation will send pledge reminders each time a payment is due.

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There can be significant tax advantages for donors choosing to transfer highly appreciated (long-term) securities to the University as a charitable gift. The value of your gift depends upon the market price of your assets when they are given.

If you have any questions, or would like to discuss your options for giving to the University of Tennessee College of Veterinary Medicine, please get in touch with us!

UTCVM Advancement Office

Blake Hudson
Director of Advancement

865-974-4379
whudson@utfi.org
vetmed.tennessee.edu/give

THE VETERINARIAN'S OATH

American Veterinary Medical Association

"Being admitted to the profession of veterinary medicine,
I solemnly swear to use my scientific knowledge and skills
for the benefit of society through
the protection of animal health and welfare,
the prevention and relief of animal suffering,
the conservation of animal resources,
the promotion of public health,
and the advancement of medical knowledge.

I will practice my profession conscientiously,
with dignity, and in keeping with the principles of
veterinary medical ethics.

I accept as a lifelong obligation the continual improvement
of my professional knowledge and competence."

It was great to see you at the UTCVM Annual Conference. We'll see you next year!

2017 ALUMNI REUNIONS:

Classes of 1982, 1987, 1992, 1997, 2002, 2007, and 2012

Class of 2019 BY THE NUMBERS

40th Incoming Class

87 STUDENTS 17 MALE 70 FEMALE

761 TOTAL APPLICANTS

60% OF CLASS OF 2019 ARE TENNESSEANS

For more UTCVM Academic Statistics, visit
vetmed.tennessee.edu/admissions

VOLVet Connect

Are you receiving our new UTCVM Alumni Newsletter? VOLVet Connect is designed to keep you informed about the latest happenings at the UT College of Veterinary Medicine. It features college and alumni news, announcements, and upcoming events.

New practice? Promotion? Stayed on a bull for eight seconds? Let us know and send us pictures! Send your updates to **ktodd6@utk.edu** or call us so we can put it in our new Class Notes Section!

Class NOTES

UTCVM Alumni Relations

Kippy Todd
Assistant Director of Advancement & Alumni Relations

865-974-4340
ktodd6@utk.edu
Find UTCVMAlumni on Facebook!

INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

The University of Tennessee
College of Veterinary Medicine
2407 River Drive
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865-974-8387
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Mark YOUR Calendar

April 23	UTCVM Open House 2016
May 21	Equine Podiatry Conference
August 20-21	4th CARES Conference
September 24	AG DAY @ UTIA
October 23	Howl-O-Ween Pooch Parade and Pet Expo @ the UT Gardens
October*	Emergency & Critical Care CE Conference
Nov. 29-Dec. 2	Henton Veterinary Conference and UTCVM Alumni Reception
December 3	UTCVM Iron Dog 5K Race
January 2017*	UTCVM Annual Conference and Class Reunions

Some events do not yet have firm dates. Find current list of all event dates at
vetmed.tennessee.edu/News/Pages/Calendar_Events.aspx

KNOWLEDGE • COMPASSION • DISCOVERY

Comments or suggestions?
Want to be added to our mailing list?
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UTCVM VETERINARY MEDICAL CENTER