

Animal **LIFE**

VETERINARY MEDICAL TEACHING HOSPITAL



Inside

Dog Becomes
Wildcat After
Surgery

Feline's Canine
Needs Repair

Filly's Mom is
Mother Superior

Alpaca Makes
Total History

AnimalLIFE

The two words "animal" and "life" share the "L" because—just like our pets—they are a seamless part of our lives.



Patrice Scott, "AnimalLIFE" editor, with Clyde.

Outcomes speak louder than words

Based on the outcomes of the cases in this edition, Ben Franklin's quote leaves little for me to say but rather, as editor, to weave these amazing stories together.

A dog, a horse, an alpaca and a tiger might not have much in common on an average day. Certainly the circumstances surrounding each animal's hospital stay were vastly different: The reasons range from one animal being viciously attacked to another needing a dental procedure.

However, the story about Shiloh, the alpaca, best captures the essence of a teaching hospital. She needed a total hip replacement, but this procedure had never been performed on an alpaca before. This was a life-and-death situation for the animal who was also three months pregnant. Small and large animal surgeons—along with their residents—would have to commit themselves to this case, challenge themselves and collaborate. As the lead surgeon says with pride, "We passed the baton in that surgery suite." For those of us not fortunate enough to be there, we all have an opportunity to share in this success now.

I have to agree with Ben Franklin: Well done is far better than well said...especially in medicine.

Please contact me if you'd like to share your hospital experience or thoughts about our magazine. I look forward to hearing from you. 🐾

All the best,

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Well done is better than well said.

—Ben Franklin

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About the Cover

Bob, an Amur tiger and Sunset Zoo resident, returned home after an extensive dental procedure. Cover photo and tiger portraits by Dave Adams.

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Mattie

Commitment is the driving force behind what we do as caregivers and what our clients seek as providers. And because of this commitment, great things are happening.

Many new specialists have committed to joining our faculty. We look forward to providing exceptional service to referring veterinarians and clients in ophthalmology, cardiology and oncology. These are truly outstanding clinicians, and patients will benefit daily from their expertise.

Grateful clients donated nearly \$2 million to the teaching hospital over the last year. Please take a moment to look at the pictures of their animals. These are some of the faces that are changing the face of our hospital and transforming veterinary medicine. While state dollars and hospital revenue allow us to maintain quality general programs, state dollars for support of our hospital are dwindling. Private gifts allow us to achieve excellence, to provide the highest available level of medical care, and to sustain our exceptional clinical training program for future veterinarians. These gifts allow us to realize our potential. To the wonderful people who have made a gift, thank you.

Transformation stems from the intersection of innovation and renovation. We will next transform the Pet Health Center (PHC), the routine health care clinic for small animals located at the hospital. This area of the hospital is experiencing dramatic growth, thanks to the excellent primary care provided by our PHC clinicians, Drs. Susan Nelson, Matt Riegel, Jennifer Akers and Amy Dixon. We will provide updates on our progress on this important transformation in upcoming issues.

Please indulge me while I share a personal story. A few weeks ago, I experienced the loss of a beloved pet just like many of you have. Over the years, I have helped many clients through this time and have grown to understand the incredibly powerful connection that occurs between a pet and its 'parent.' Mattie, a beautiful Yorkie, lived over 16 years. We started life together as doctor and patient; she had a serious problem that required a complicated surgery so her owner wanted the hospital to have her. I resisted for all of 15 seconds, and then she was mine. The surgery went well, and although Mattie had many health issues over the years, she lived a full life. We miss her. The clinicians, staff and students in this hospital did for me what they have done for many of you; they let me love her a little longer. I appreciate them and am very proud of them. This is a special place.

Thank you for supporting our hospital, and thank you for caring about animals. 🐾

Warm Regards,

Roger B. Fingland, DVM, MS, MBA
Diplomate, ACVS
Professor and Director
Veterinary Medical Teaching Hospital

FACES changing the future of our HOSPITAL



Alex



Style



Gabe



Alf



Lucy



Rilko



Miles



Spud



Tobo



Radar



Coco



Tiffany



Stosh

Story by Patrice Scott

Dr. Meredyth Jones A Minority within a Majority



Dr. Jones (left) oversees senior student Melody Heskett as she vaccinates and de-worms a llama.

It is well documented that there is a critical shortage of large animal veterinarians. Dr. Meredyth Jones, clinical assistant professor in agricultural practices, is confounded by this and seems genuinely mystified as to why anyone would want to do anything else.

"I really love what I do," Dr. Jones says enthusiastically. "I truly feel sorry for people who don't have my job."

Her job as a large animal field services veterinarian at the Veterinary Medical Teaching Hospital (VMTH) entails making quarter-mile treks across icy pastures and working with 1,500 pound bulls that aren't feeling well. "You aren't going to make a bull do anything he doesn't want to do," she says. "You have to outsmart him."

Dr. Jones is living proof there is no longer a stereotype of a large animal veterinarian. In fact, she's a minority within a majority, a trend that begins in veterinary school. Women comprise 75 percent of the 432 veterinary students enrolled at K-State, a percentage that remains fairly consistent among all 28 Colleges of Veterinary Medicine in the country. However, Dr. Jones is in the minority in that she focused on large animal medicine. "This field has grown beyond the archetype and the range of opportunities in large animal medicine today is impressive. I am excited about being a role model." (About 25 percent of K-State graduates go into practices with a large animal component—double the percentage of many colleges.)

Hospital clinicians actively pursue ways to mentor the next generation of veterinarians, and in February Dr. Jones did so. She helped host 100 girls who rotated through 12 stations across campus as part of the GROW program, an acronym for Girls Researching Our World. "We wanted to show girls that they really can be successful in working with large animals," she says.



Her career path was a natural one as her father is a veterinarian. His example coupled with her deep respect for food animal producers led her to veterinary school. "Animal producers have devoted their lives to producing food for the world," Dr. Jones says. "These are exquisitely hard working, devoted people and they are committed to what they do for a living."

Likewise, clients like Sam Funk appreciate her commitment to patient care and education. "From her interaction with the senior veterinary students who came out to our farm (and with my 7- and 5-year-old children), it was obvious that she enjoys the teaching responsibilities of her appointment," Sam says. "Sharing knowledge and insight with others and helping them to understand the application of the classroom material is critical in her position. Her practical knowledge and sensible suggestions also show a true working knowledge of agriculture."

Senior veterinary student Kelly Strecker appreciates Dr. Jones. "Dr. Jones is an inspiration to students. She creates a comfortable learning environment and offers a wealth of hands-on experience," Kelly says.

Dr. Jones is working in a field she thoroughly enjoys and in a setting she values. "Every veterinarian is a teacher," she says. "In an academic setting you get to teach clients and students, and I couldn't be happier."

Dr. Jones graduated from Oklahoma State in 2002 with her DVM and became board certified in large animal medicine and surgery in 2006. Her parents and brother's family are at home in Kentucky. Dr. Jones' hobbies include basket weaving, knitting, sewing, gardening and spending time with her cat, Scarface. 🐾

Dr. Jones (left) directs students Kelly Strecker (kneeling) and Megan Behrens as they collect a blood sample.

GAME DAY TIMING WAS CRITICAL FOR GUS

Going the Distance

Story by Patrice Scott



Millions of people look forward to Super Bowl Sunday. But for one Wichita, Kan., couple it's a day they'll never forget, and it has nothing to do with the game.

Warren and Theresa Rensner gathered their party food, said goodbye to Gus, their 4-year-old Brittany spaniel, and headed to a friend's house to watch the game. When they returned home five hours later, Gus didn't greet them at the gate. Concerned, the couple divided up and called for Gus. Warren headed toward the house, and Theresa walked toward the side yard.

"He didn't come, didn't come, didn't come," Theresa says. "All of the sudden, I heard something behind me. It was Gus. He was covered in blood and was staggering toward me." Warren remembers his first glimpse of Gus. "He didn't even look like a dog," Warren says. "We were in shock when we saw him."

Theresa scooped up Gus and ran into the house and covered him in a blanket while Warren called a local emergency clinic. "When I wrapped the blanket around him, the area under his neck felt mushy so I knew there was significant trauma," Theresa says. "He was shaking and shaking."

Gus' thorax was ripped open and his abdomen and hind legs were punctured with multiple bites. The couple saw a stray dog lurking near their 10-acre yard in the days before the attack. Gus wore a collar wired to an underground electric fence, which kept him safely confined in his yard. However, the invisible fence provided no barrier against a predator.

On Monday, Feb. 5, Dr. Lacey Tiesmeyer, a veterinarian at Indian Hills Animal Clinic, examined Gus after his overnight stay at the emergency clinic. Gus' condition was very poor. "He was basically bandaged from head to toe and was very weak and depressed," Dr. Tiesmeyer says. "I was worried about his prognosis from the extensive damage, but I knew if he had a chance, it was at K-State. I explained that to Gus' owners and fortunately they were completely on board. We gave him an injection of pain medication, an antibiotic and started his IV fluids again. We helped them load Gus in the back of their SUV and sent them to K-State."

Dr. Tiesmeyer called Marsha Robyler, the hospital's referral coordinator, to inform her that Gus was en route to the VMTH and would require immediate care. Marsha obtained the necessary medical information, alerted the surgery faculty and staff about the case and provided an estimated arrival time.

Photo by Bill Rhoades



Photo by Patrice Scott

ICU technician Jen Arensdorf administers one of Gus' three IV treatments of the day.

At 4:03 p.m.—within moments of Marsha's call—they arrived at the hospital's emergency desk. Dr. Eric Hoots, surgery resident, and Davin Ringen, senior veterinary student, placed Gus on a gurney and took him to the Intensive Care Unit. They carefully removed Gus' bandages. Shrouded behind the bandages was unimaginable damage.

structures there and knowing he must have been shaken, he was lucky to survive."

Dr. Hoots was optimistic about Gus' chance of survival. But the decision to proceed rested squarely with the Rensners. "I just wanted them to help my dog," Warren says.

At 5:40 p.m., an anesthesiologist induced Gus. Dr. Hoots first explored Gus' abdomen. "Luckily everything inside his abdomen was normal, so we closed that wound," he says. "We debrided the wounds and placed active suction drains to remove fluid that was accumulating in the wounds. We cultured all the tissue to make sure we had him on the appropriate antibiotics," Dr. Hoots says.

Finally, Dr. Hoots approached the extensive damage to Gus' neck. "We explored his neck and examined all of the structures," he says. "Only the

Time was such a factor that when Gus had not arrived on schedule, Marsha called Dr. Tiesmeyer to make certain the Rensner's hadn't encountered a problem and returned to Wichita.

At 4:03 p.m.—within moments of Marsha's call—they arrived at the hospital's emergency desk. Dr. Eric Hoots, surgery resident, and Davin Ringen, senior veterinary student, placed Gus on a gurney and took him to the Intensive Care Unit. They carefully removed Gus' bandages. Shrouded behind the bandages was unimaginable damage.

"He had a huge open wound on his thorax that was 6 inches long by 4 inches wide. His jugular vein and trachea were exposed," Dr. Hoots says. "He also had two significant lacerations on his lateral thorax (side) that had torn open. He had bites over his back legs with his left suffering considerable damage. Basically, we had to get him into surgery to see what we were dealing with. I was also concerned that Gus could have intra-abdominal damage. The bite wounds on his cranial abdomen could have punctured the liver or bowel."

Explaining that a puncture wound from a bite is the "tip of the iceberg," Dr. Hoots says much harm can be inflicted even in cases when the surface wound appears minimal. "When the canine teeth puncture the skin and rip through an inch and a half of tissue, there is extensive damage and contamination with bacteria and debris," he says. "Gus' neck bite wound could have easily been fatal. There are so many vital



Gus, donning a purple bandanna, waits to board the Wildcat Express, the VMTH's climate-controlled ambulance that returned him to Wichita.



Warren Rensner brings Gus a toy following Gus' first surgery. "Gus, we thought we were never going to see you again," Warren says.

muscle was damaged but his major blood vessels, airway and esophagus were intact." Because of the devastation and contamination with grass and debris, Dr. Hoots delayed closing the wound to allow further debridement of the area and to insure that only viable tissue was sutured."

Following the two-hour surgery, Gus spent the next four days in the ICU where technician Jen Arensdorf monitored Gus' vital signs, cleaned his drains and provided general nursing care. "I'm not certain that I would have been as agreeable and even-tempered as Gus given all he had to go through," Jen says. "He was very, very sweet."

On Friday, Gus underwent a second surgery to close the neck wound and spent two more days in ICU. He was released from ICU on Sunday but remained in the hospital for a few extra days at Warren and Theresa's request since they were going out of town.

The following week, senior veterinary student Natalee Holt put a purple bandanna on Gus and placed him on the Wildcat Express, the VMTH's climate-controlled ambulance that took him to Wichita. (Wildcat Express



"Sometimes you have to take things a step at a time and not give up."

—Dr. Eric Hoots

picks up and returns animals to their veterinary clinics in Wichita and Lincoln and Omaha, Neb., after receiving advanced medical care at the VMTH.) Dr. Tiesmeyer was shocked when she saw Gus get out of the Wildcat Express. "It was hard to believe that it was the same dog," she says. "It was pretty amazing to watch Gus walk out of our front doors when the Rensners picked him up."

Dr. Hoots is proud to have made a difference to the Rensner family after operating on Gus and Warren's brother's dog months earlier. He believes it's important not to make decisions based on appearance because if that had been the case, Gus would likely not be with us today. "Sometimes you have to take things a step at a time and not give up," he says. "It's possible to manage several problems simultaneously."

Warren is just thankful that Gus is doing so well and they have time to enjoy life together. "He's going to live to hunt again, and his personality is exactly the same as it was before he was attacked. The only change is that he's wearing a purple collar, and that's kind of tough on a good ole KU boy like me." 🐾

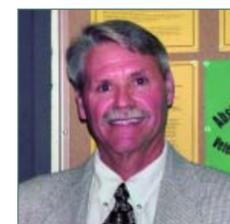
Photo by Patrice Scott

New Faculty

SPECIALISTS ARRIVE • Oncology • Anesthesiology Cardiology • Ophthalmology

By Amy Jo Wright

Six specialists will join the faculty at the Veterinary Medical Teaching Hospital (VMTH) this summer to offer patients advanced medical care.



Dr. McCaw comes to the VMTH from the University of Missouri.

Oncology

Dr. Dudley McCaw, board-certified in internal medicine and oncology, comes to K-State after nine years in private practice and 25 years at the University of Missouri's veterinary teaching hospital.

Dr. McCaw will focus on rebuilding the oncology program by building relationships. "I hope it becomes obvious to clients that I, along with the faculty and staff, truly care about them and their pets and strive to provide the best care for them."

Dr. McCaw and wife, Judy, have two children in college.

Dr. Mary Lynn Higginbotham joins former colleague and friend Dr. Dudley McCaw at K-State as part of the new oncology team. Dr. Higginbotham, board-certified oncologist, received her DVM and master's degree in veterinary medicine and surgery from the University of Missouri.



Newlyweds Jonathan Mahorney and Dr. Mary Lynn Higginbotham.

She'll apply her expansive knowledge base to each patient she treats while also learning from each. "We have a lot to learn about oncology and cancer in general. Not only can we learn from our pets with cancer to help other animals, but what we learn may also help people with cancer."

Dr. Higginbotham and Jonathan Mahorney were married on Dec. 30, 2006.



Dr. Amy Rankin examines a seal at the Milwaukee Zoo.

Ophthalmology

Dr. Amy Rankin comes to the VMTH from a busy ophthalmology practice near Milwaukee, Wis. Dr. Rankin, a board-certified ophthalmologist, received her DVM from the University of Wisconsin and her master's degree from Purdue University.

Dr. Rankin will enhance the ophthalmology services at K-State by providing clients with the convenience and expertise of a full-time

Ophthalmology specialist. "I am excited about sharing my enthusiasm and interest in veterinary ophthalmology with clients, students, interns, residents and referring veterinarians," she says.

Dr. Rankin and husband Dr. David Rankin (pictured right) have twin daughters, Eleanor and Mary Frances, 3, from China.



Dr. Michele Borgarelli, wife Lucy, daughters Giorgia and Magda.

Cardiology

Dr. Michele Borgarelli, board-certified cardiologist, will take the lead in developing a cardiology service with a standard of excellence in patient care. Dr. Borgarelli received both his DVM and doctorate in Clinical Veterinary Sciences from the School of Veterinary Medicine of Torino, where he has been an assistant professor since 2001.

"We will offer the best opportunities for our clients to cure their pet's cardiac diseases in order to prolong and improve their quality of life," he says. "At the same time, we will provide students with current and useful information they will need in their future professional activity."

Dr. Borgarelli and wife, Lucy, have two daughters, Giorgia and Magda.

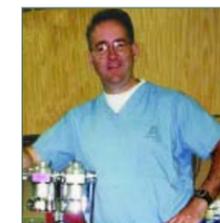
Dr. Marco Margiocco, former intern under Dr. Borgarelli, joins Dr. Borgarelli in the cardiology service at the VMTH. Dr. Margiocco recently completed a combined residency/master of science program in veterinary cardiology at Oregon State and will apply his extensive research and education to the patients he treats at K-State.



Dr. Marco Margiocco, wife Patrizia, children Luca and Gaia.

"I will devote time and energy to establishing good relationships and collaboration with referring veterinarians, colleagues within the college and owners and breeders in order to create caseload that will support teaching and research activities," he says.

Dr. Margiocco and wife, Patrizia, have two children, Luca and Gaia.



Dr. David Rankin returns to K-State, this time as an instructor.

Anesthesiology

Dr. David Rankin, board-certified anesthesiologist, is a 1993 graduate of the K-State College of Veterinary Medicine. He joins the VMTH's anesthesiology faculty with previous teaching experience at Purdue and Mississippi State. Dr. Rankin has spent the last six years in private practice.

His experience, in private practice and education, makes him a great asset to students and pet owners alike. "I am a pet owner, so that makes me a client as well as a clinician. I hope to meet my clients' expectations by meeting my own," Dr. Rankin says.

Drs. David and Amy Rankin's twin daughters are a source of great pride and joy. 🐾



One of the most popular residents at Sunset Zoo in Manhattan recently made a trip to the Pfizer Dental Suite at the Veterinary Medical Teaching Hospital (VMTH).

Bob, a 12-year-old Amur (formerly Siberian) tiger, received a root canal on April 18 after chipping his lower right canine tooth chewing on the bars in his cage. Zoo staff found a one-inch tooth fragment on the ground in Bob's cage and gave it to Dr. James Carpenter, professor of zoological medicine.

Dr. Carpenter brought the tooth fragment to Dr. Matt Riegel, assistant professor in small animal surgery, who performs the small animal dental procedures at the hospital. Upon evaluation, the presence of pulp indicated that Bob's nerve was exposed, that he was likely experiencing significant pain and was vulnerable to infection. To insure the tooth remained viable, a root canal was necessary to alleviate pain and prevent infection.

ROOT OF THE PROBLEM

Bob was anesthetized at the zoo, and his medical team inserted an intravenous catheter and placed him in a specially designed crate for transporting large carnivores. The crate was loaded into a vehicle where veterinarians monitored Bob's vital signs on the way to the VMTH.

Story by Amy Jo Wright

While he was anesthetized, Bob underwent a complete physical examination. Because he is genetically valuable, a reproductive examination was conducted by Dr. Maria Ferrer, assistant professor of theriogenology (reproduction).

After the initial evaluations were completed, Bob was moved to the Pfizer Dental Suite. While the suite was designed for dogs and cats, there was ample space to accommodate Bob and his medical team.

Dr. Riegel and his colleague Dr. Douglas Winter, a Wichita veterinarian with a special interest in veterinary dentistry, performed the root canal on the 368-pound endangered animal. Bob was carefully monitored throughout the procedure by anesthesiologists led by Dr. Rose McMurphy, professor of anesthesiology.

Because there are few dental instruments manufactured to accommodate a 4-inch tooth, some improvisation was necessary; however, in essence, the procedure is similar to the one performed on humans. Drs. Riegel and Winter explain the process: first, a long but narrow hole is drilled into Bob's tooth. The nerves and blood vessels inside the tooth are removed, and the canal is cleaned and sterilized. The canal is then filled with an inert material to block bacteria, and the hole is filled with restorative material.

"The procedure was a success," Dr. Riegel says. "A fractured tooth with an open pulp cavity can be painful with a high possibility of infection. We removed that possibility."

While this is a routine dental procedure for Dr. Winter, he was in a new arena with this patient. "I really appreciated the opportunity to help Bob and to work with the VMTH and Sunset Zoo," he says. "It was an awesome experience."

Dr. Carpenter says teaching opportunities like this are part of what make zoological medicine so unique. "Working with an endangered species such as a tiger provides a great opportunity for collaboration and teamwork," Dr. Carpenter says. "The VMTH has the facilities and experienced specialists needed to treat and accommodate animals of any species."

By the time Bob returned to the zoo, roughly 20 people—including experts in four specialty areas and zoo staff—were involved with his case. Bob recovered quickly and was back on display the next day.

Zoo visitors may not think they have much in common with Bob—but they do if they've been to a dentist. 🐾



Photo by Patrice Scott

Drs. Matt Riegel (left) and Douglas Winter work efficiently while the wild animal is under anesthesia.

SUPERIOR RESULTS

Story by Joe Montgomery

THE DETAILS

are still fresh.

Joe and Sheri Ellenbecker can recount the events of a fall day in 2001 at their Holsteiner farm near Lawrence, Kansas, as if it were yesterday. What began as a normal day turned into a two-year ordeal.

Dr. Abra Wright takes Rayleigh and one-day-old filly, Zelda, outdoors for the first time.



Photo by Patrice Scott

“It was the Tuesday after Thanksgiving,” Sheri says. “Rayleigh was running, and I was watching her,” Sheri says about her mare that was only 8 months old at the time. “She went to swap leads and fell down. I ran to her, and her leg was not attached the way it should be. I held her up and called out to one of our hired hands for help. We sedated Rayleigh and called the veterinarian.”

Rayleigh’s injury could have forced her termination. Instead, her medical journey includes a successful ending and a beautiful beginning. And both happened at the Veterinary Medical Teaching Hospital (VMTH).

“We held her till help arrived”

The Ellenbeckers’ local veterinarian, Dr. Thomas Sanders, was attending another patient so Dr. Jon Haggard quickly came to their ranch.

“We held her till help arrived,” Sheri says. Dr. Haggard had already talked to Dr. Lillich at K-State. “We splinted Rayleigh’s leg with boards and removed a door from a shed to make a ramp to slide her into the trailer so we could transport her to K-State. When we got to the hospital, they were ready for us.”

Rayleigh was immediately taken to radiology where radiographs revealed a displaced fracture of the radius on her right side. She needed surgery.

“The radius is a difficult bone to repair, but it helped that Rayleigh was young and lighter than an adult horse,” says Dr. Jim Lillich, associate professor in equine orthopedic and general surgery. “Two orthopedic teams worked simultaneously and inserted two plates and 24 screws. This was the only way to treat this injury. Since she was still growing, we could not put implants on the radius that could interfere with bone growth.”

“Dr. Lillich deserves great accolades,” Sheri says. “He performed a very long and difficult surgery.”

“It’s a team effort” Dr. Lillich says. “We depend on veterinarians in private practice to recognize the serious nature of the condition and stabilize the patient properly for safe transport. It’s also a team effort here—it takes veterinary students and lab and surgery technicians, anesthesiologists, radiologists, as well as all of the surgical team to be successful.”

Rehabilitation leads to lucky sevens

After the surgery, the next steps were rest and rehabilitation. Rayleigh stayed at the hospital for three weeks to recover.

“We were guardedly optimistic from the very beginning,” Sheri explains. “We felt happy about the surgery, but she was still a weanling. She bent some of the implanted screws right away, and by March 2002, she had to go back for another surgery, where two sequestra (dead bone fragments) were removed.”

“Multiple surgeries are required in a case like this because the implants have to be removed in stages while the bone is healing,” Dr. Lillich says. “If healed properly, there was no reason she couldn’t be an athlete.”

“Rayleigh needed to be hand-walked,” Sheri recalls. “At first she could only walk about 10 minutes. Joe started to trot her in the sand and we taught her to lunge. You could tell early that she wasn’t comfortable, but



Rayleigh’s leg following the extensive repair.

then one day she was noticeably better and was walking normally.”

Rayleigh’s recovery became most apparent when she was inspected by the American Holsteiner Horse Association.

“Every year the association has regional breeding stock approvals and brings in judges from Germany,” Sheri says. “The judges grade the Holsteiners on certain standards. Rayleigh got a seven on her trot and a seven on her canter. Those are superior gaits! I was in tears just to have a horse that recovered from a broken leg do that well. That’s how well it was repaired.”

Welcome Zelda

Sheri decided to breed Rayleigh in April 2006, which was successful. Sheri was confident in her mare’s ability to foal despite her previous injury, but she wasn’t taking any chances. Rayleigh was going to have her foal at the VMTH.

“Rayleigh has become a member of our family,” Sheri says. “This is my most precious mare in foal for the first time, so she has to foal at K-State. I could go to work knowing she was in the best possible place.”

Dr. Abra Wright, equine internal medicine resident, helped Rayleigh foal. “We had the theriogenologist if the foal should need anything and the medicine specialist was right there for Rayleigh,” she says. “Rayleigh did well. She foaled on March 8 about 6 p.m., which was wonderful, because a number of students witnessed the foaling. This usually doesn’t happen, because mares often foal in the middle of the night.



Dr. Wright emailed this photo to the Ellenbeckers moments after Zelda’s birth.

“I called the Ellenbeckers afterward and let them know that Rayleigh foaled uneventfully. I also took pictures and e-mailed them to Mrs. Ellenbecker. They were thrilled with the filly. She was very cute and very spunky.”

The filly, Zelda, is now at home with Rayleigh—two happy endings made possible by the specialists at the Veterinary Medical Teaching Hospital. 🐾

INTO THE UNKNOWN WORLD

LEADER

Story by Patrice Scott

Surgeons at the Veterinary Medical Teaching Hospital at Kansas State University made history when they successfully completed the world's first total hip replacement on an alpaca.



Drs. James Roush and David Anderson oversee Shiloh being prepped for surgery.

No one could predict the fate of the 3-year-old Suri alpaca named Shiloh when she arrived at the teaching hospital. However, less than two weeks after her ground-breaking surgery, the alpaca would be on her way home.

Dr. James Roush, professor and head of small animal surgery, performed the operation and was assisted by Dr. David Anderson, professor and head of agricultural practices.

"My expertise is in the orthopedic procedure while Dr. Anderson's expertise is with the species," Dr. Roush says. "We pooled our experience in the surgery room and this is the result."

Radiographs taken upon Shiloh's hospital admittance revealed that she suffered from coxofemoral luxation, a dislocated hip. Drs. Roush and Anderson agreed that she was a good candidate for surgery because her condition had not reached an advanced stage of bone degeneration.

"When the tissue around the hip breaks down, it is no longer able to hold the joint in place," Dr. Anderson explains. "Fortunately, Shiloh's owner took quick action when she experienced problems and accepted that this was her only option."

Shiloh's owner, Joyce Johnson, noticed Shiloh standing awkwardly near their barn in Defiance, Mo., 15 miles west of St. Louis. The next day when weighing Shiloh's baby (called a cria) Joyce noted that his weight gain had stalled. Knowing that a nursing cria's health is directly tied to its mother, Joyce knew Shiloh's problem was serious. "I immediately took her to our veterinarian and they took radiographs," she says. "When we discovered the severity of her condition, I knew that Dr. Anderson was at K-State and that's where we were going."

Dr. Roush performs about 20 hip replacements on dogs each year and compared the size of an alpaca to a large breed dog. He noted that while the implant used would be the same, the procedure would require significant modifications. The challenge was to select the correct size of implant and adjust its placement to accommodate the alpaca's curved femur.

He explained that Shiloh's case involved a list of unknowns because no veterinary medical literature existed about this procedure on an alpaca. Further complicating the case was the fact that Shiloh was three months pregnant.

Shiloh's case involved a list of unknowns because no veterinary medical literature existed about this procedure on an alpaca.

Johnson returned to her farm to care for her 50-plus alpaca herd where she received multiple updates about Shiloh—including the call that Shiloh was going to surgery.

The 160-pound alpaca was wheeled into a surgical suite with a team of 10 medical specialists and professionals. At 8:50 a.m. on Feb. 14, Dr. Roush started the nearly two-hour procedure. It went flawlessly but some very real post-operative challenges awaited the animal. "Within a couple of hours, she has to stand up and bear weight on her operated leg," Roush says. "That will be the moment of truth."

"I was as happy as I could be when Dr. Anderson called and said the surgery went as well as it could," Joyce says. "I wanted to give Shiloh the chance to have a quality, pain-free life. These guys (alpacas) are all a part of my family. I felt like I owed it to her to try."

Because alpacas are highly social animals, Joyce hoped it would reduce Shiloh's stress to have companions at the



"My expertise is in the orthopedic procedure while Dr. Anderson's expertise is with the species. We pooled our experience in the surgery room and this is the result."

—Dr. James Roush

Further complicating the case was the fact that Shiloh was three months pregnant.

WORLD LEADER



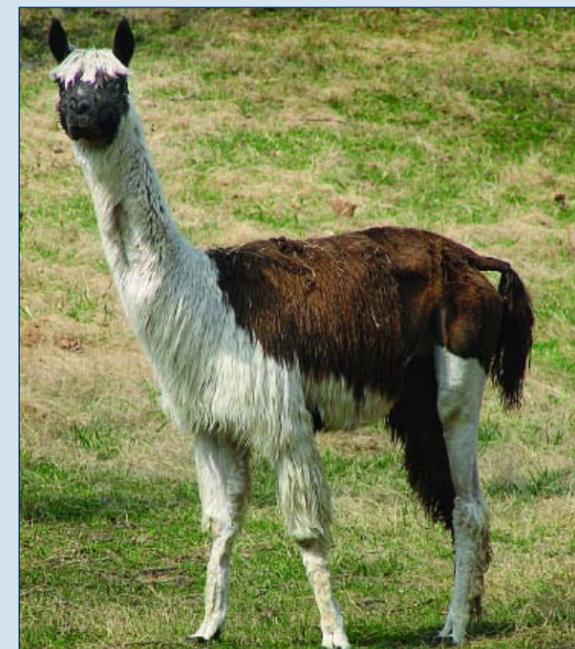
Photo by Patrice Scott

Dr. David Anderson performs an ultrasound evaluation to assess the health of Shiloh's fetus as three veterinary students, Dr. James Roush and Shiloh's owner, Joyce Johnson, catch a glimpse of the baby's heartbeat on the monitor.

hospital. So when Shiloh returned to her stall following surgery, she was welcomed by her 4-month-old cria and an alpaca companion. The surgeons expected Shiloh to attempt standing at about 3 p.m., which was precisely when she did so. With her medical team intently overseeing her movements, Shiloh stood and bore weight on her leg. Moments later, her cria began to nurse. "We were very pleased but remained cautiously

optimistic because she still was at risk of infection and the newly implanted hip could luxate," Dr. Roush says. On Feb. 20, a second set of radiographs was taken. "The implants remained in identical position and showed no loosening," Dr. Roush says. The day Shiloh was released from the hospital, Dr. Anderson performed an ultrasound examination to assess the health of the baby. Shiloh returned to her Missouri farm under the care of

her local veterinarian. In late March, Dr. Anderson went to Joyce's farm to evaluate Shiloh while in the area for a conference. "She's doing great," he says. Dr. Kara Schulz, large animal surgery resident, and Dr. Eric Hoots, small animal surgery resident, will never forget this case. "The surgery was intense but went smoothly," Dr. Schulz says. "I understand the anatomy, pathology and surgical procedures presented in this case in a whole new



light having seen it firsthand. As a surgeon in training, it was amazing to see great surgeons performing great surgery." Dr. Hoots says this case was monumental. "It took everything the hospital has to offer to produce this outcome," Dr. Hoots says. "It required the expertise of anesthesia, radiology and surgery. It's definitely an honor to have been part of this, and it's just another great experience I'll take from my residency. But the real lesson is that it is possible." Joyce says Shiloh's pregnancy is going well (she's due on Sept. 20) and she has regained her

mobility. "She moves around with the herd everyday," Joyce says. In the immediate sense, this case is a victory for Shiloh and Joyce. In a larger sense, it is a victory for veterinary medicine. Dr. Roush says it was rewarding to work with an esteemed colleague while training their surgery residents. "There I was with my small animal surgery resident standing next to me and Dr. Anderson with his large animal surgery resident standing next to him. We passed the baton in that surgery suite," Dr. Roush says. 🐾

Researching a Better Way

Story and Photo by Patrice Scott



Dr. James Roush outside a VMTH surgery room.

An intriguing European study prompted a VMTH specialist to investigate the potential long-term benefit of a new treatment option for dogs with hip dysplasia and arthritis.

Dr. James Roush, professor and small animal surgery section head, attended an American College of Veterinary Surgeons meeting in 2005 where oral presentations were given about a procedure called coxofemoral denervation, the removal of nerves responsible for the pain associated with hip dysplasia. Of the 269 dogs in the study, the researchers reported a 92 percent success rate, but this success was based on subjective results.

The current treatment for hip dysplasia in the United States is a total hip replacement. "It is major surgery, limits patient activity for six weeks and is performed by a specialist," Dr. Roush says. "Coxofemoral denervation is minimally invasive, has a shortened convalescence period, is less expensive and in all likelihood, general practice veterinarians will be able to perform the procedure."

The procedure is minimally invasive because no muscles are cut, Dr. Roush explains. The muscles are simply separated during the procedure, giving access to the joint capsule and four small nerve branches—the pain source. "We scrape the covering of the bone (the periosteum) and remove the nerve branches," he says. "Our preliminary results are encouraging because the six patients that we've performed the procedure on are demonstrating improvement. Patients usually experience immediate pain relief."



Pitch is pain-free and can join Lindsey on the couch at will.

While the findings in the European study are promising, Dr. Roush points out that no patients had objective follow-up evaluations. That's the key distinction between the studies. "Clients who enrolled their dog in our study are required to bring the patient back at one month and three months post-op," he says. "The patients walk over a force plate to determine if they are bearing more weight on their hind limbs. This is the best way to obtain credible data and objectively determine if there is a long-term benefit."

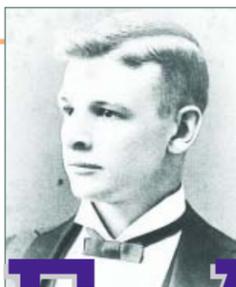
Lindsey Jones, a veterinary student, brought Pitch in for follow-up appointments after having the procedure. Pitch, a black Lab-Vizsla, mix demonstrated the classic signs of hip dysplasia: difficulty getting up, limited movement, and "warmed out of lameness," meaning mobility was less taxing after a few moments.

Lindsey was happy to be part of the study because Pitch was too young for a total hip replacement, and that procedure was costly. "I was very excited about this," Lindsey says. "At the time it was really our only feasible option. Pitch is doing great. She can climb stairs easier and doesn't get as tired as quickly as she used to. I was really interested to bring her in for her follow-up appointments to gauge her progress and determine how much more weight she was carrying on her hind limbs."

Dr. Roush and surgery colleagues Drs. Walter Renberg and Stephanie Lister were awarded a \$10,000 grant from the Canine Health Foundation with the American Kennel Club for this project. If your dog has hip dysplasia and is between 14 months and 9 years of age, please call Dr. Lister at 785.532.5690 to learn if your dog may be a candidate for this study. 🐾

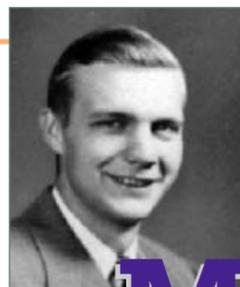
1891

Dr. Frank M. Linscott



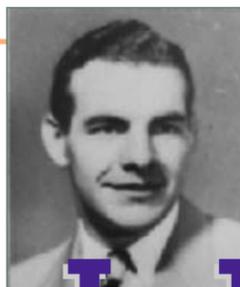
1954

Dr. Alfred O. Gigstad



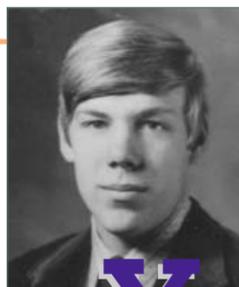
1955

Dr. Dale C. Gigstad



1976

Dr. A. O. "Orv" Gigstad, III



1993

Dr. James F. Gigstad



FAMILY TRADITION

Story by Patrice Scott

Dr. James (Jimm) Gigstad's professional calling was set in stone 100 years before he graduated with his DVM. His great-grandfather cemented the family's professional path, and his father built the clinic he practices in every day. And he couldn't imagine life any other way.

This family heritage has grown to include two brothers practicing in two Arbor Valley Veterinary Clinics in Nebraska, one in Nebraska City, the other in neighboring Syracuse. It hasn't been easy for any generation and it wasn't without challenge. Their amazing family story begins with the family's first veterinarian, Dr. Frank M. Linscott.

Dr. Linscott, Jimm's great-grandfather, graduated from Kansas State Agricultural College in 1891 then graduated from veterinary school in Toronto, Canada, in 1893. Due

He would be the first—and last—in the family to be denied his professional calling.

to the remarkable hardships at the time, he was forced to leave the profession that he loved and return to the family farm. He would be the first—and last—in the family to be denied his professional calling.

But half a century would pass before there was a practicing veterinarian in the family.

In 1954, Dr. Alfred O. Gigstad (Jimm's father) graduated with his DVM degree from K-State. The next year, Dr. Gigstad's brother, Dale C. Gigstad, (now deceased) graduated.

Dr. Gigstad and wife, Roberta, eventually settled in Nebraska City and built Arbor Valley Veterinary Clinic in 1960. The couple had four children, two of them becoming veterinarians: Dr. A. O. "Orv" Gigstad, III graduated in 1976; and Dr. James Gigstad, graduated in 1993.

Roberta says Jimm spent most of his life at the clinic. "I was here three hours before he was born, and we were both back three weeks later," she says. "He was always so content to be at the clinic." Jimm recalls the family routine. "Every day when I'd get out of school, I'd hop in the truck with Dad and we'd go on calls," he says.

Doctor becomes patient

Hard work, long hours and emergency calls were all part of the daily demands of veterinary medicine. Then the unthinkable happened—Dr. Gigstad became ill. In 1984, Dr. Gigstad, 55, was diagnosed with cancer of the esophagus and stomach. Life changed for everyone, including 16-year-old Jimm. "We had a house in town and a farm three miles outside of town," Jimm says. "Every day after school I'd go to the farm and take care of the cattle. I just started doing chores. Orv took over managing the practices by himself."

Dr. Gigstad underwent surgery and spent a year on chemotherapy. It took the dedication of each family member to keep the practices and farm operating. "I don't think I realized the gravity of the situation," Jimm says. "But I had no problem doing the chores and tending to the farm and livestock." In 1985, Dr. Gigstad went back to work. During the ensuing nine years, Jimm completed high school, earned his bachelor's degree, and then his DVM from K-State in 1993.

Just as Jimm returned home, so had Dr. Gigstad's cancer the family learned. The aggressive treatment required major surgery. In 1994, after an impressive 40-year career, Dr. Gigstad retired. During that time he was an active member of the Nebraska Veterinary Medical Association, served on the Board of Examiners and was twice elected mayor of Nebraska City despite wearing purple boots and a purple hat.



Photo by Patrice Scott

Dr. Gigstad and wife Roberta pictured with their sons, Dr. A.O. "Orv" Gigstad, III (left) and Dr. James F. Gigstad.

"The Gigstads always treat you like your animal is a member of the family."

—Katie Bebout

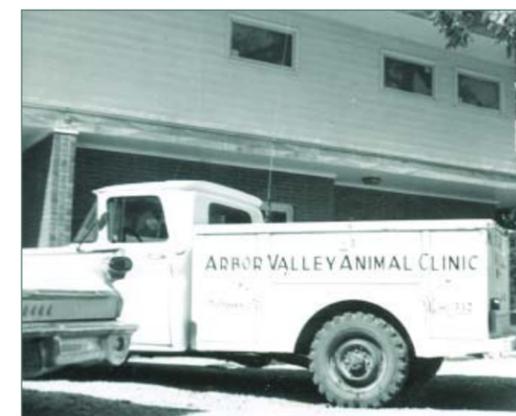
Just before his senior year in veterinary school, Jimm met Tammie, a veterinary technician at the Veterinary Medical Teaching Hospital. They married in 1995 and welcomed daughter, Anna, to the family in 2000.

Katie Bebout is a lifelong client of Arbor Valley Animal Clinic. Her dogs were treated by Dr. Gigstad until his retirement and are now treated by Jimm. She has a deep respect for the family because of their commitment to patient care and civic involvement, noting that Jimm donates time each week caring for animals at a local shelter. The care and commitment, Katie says, "goes hand-in-hand."

When Tooti, her Schnauzer-terrier mix, needed advanced care, Jimm referred them to the teaching hospital—once for cataract surgery and once to control Tooti's diabetes. "The Gigstads always treat you like your animal is a member of the family," she says. "That's the same way we were treated at K-State. I was amazed at how much they really did care, and how thorough the exams and tests were. I can't say enough how much I appreciate the K-State veterinary hospital. We're Huskers but I have a new respect for K-State. I encourage anyone whose animal is having a medical problem to go to K-State."

"They gave my little doggie a new lease on life," Katie says of the specialists at the teaching hospital and of Jimm. "For the last three years of her life, Tooti was like a puppy again."

Many things have changed at Arbor Valley Veterinary Clinic over the years but one thing has not—family. Time has touched everything except tradition and values. When Jimm comes to the clinic on emergency calls, Anna is often at his side. 🐾



Top left: K-State graduation photos. This is the first public recognition of Dr. Linscott's professional achievement to the family's knowledge. Above: The early years at the clinic.



Dr. Jimm Gigstad with wife Tammie and daughter Anna along with pets Zach, Buzz, Sidney and Bling.

Photo Credit Jo Vasa



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Animal **LIFE**

Story by Patrice Scott

Alpacas on Campus

Senior veterinary students have an extraordinary opportunity to learn about alpacas thanks to the Mid America Alpaca Foundation and two alpaca owners. Together, they have established an alpaca teaching herd at the VMTH.

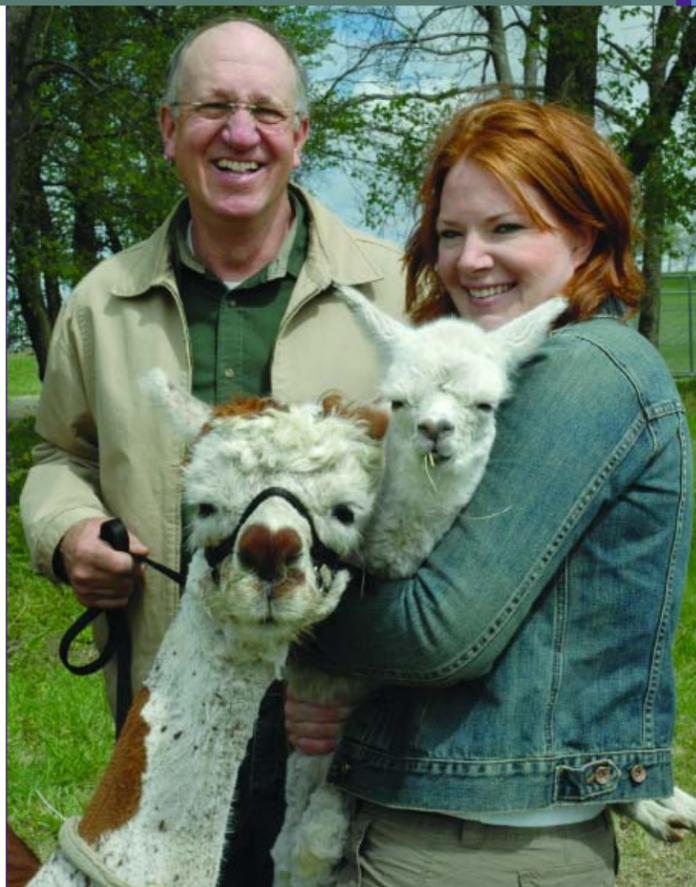
On April 12, Steve and Rose Ann Knoblock and Mike and Janet Wilkins donated a mix of nine huacaya and suri alpacas to the Department of Clinical Sciences. "This is our way of supporting the people who have supported us," Steve says.

Dr. David Anderson, professor and VMTH section head of agricultural practices, is certain this herd will spark students' enthusiasm. "The best way to stimulate interest in working with alpacas is to provide hands-on activities for students starting their first semester in veterinary school," Dr. Anderson says.

The Foundation's \$50,000 gift established the Camelid Teaching and Education Fund, which provides for the herd's housing costs and supports training activities for senior veterinary students. It also makes funding available for continuing education opportunities for practicing veterinarians.

"Our goals are to introduce students to alpaca treatment, care and study while enhancing the knowledge of veterinarians currently treating alpacas," says Bob Sines, president of the Mid America Alpaca Foundation. "Knowing that K-State graduates are practicing in all 50 states and 13 countries, this was the best place to create this type of program." 🐾

Photo by Dave Adams



Right: Steve Knoblock and daughter, Tasha, bring alpacas to the VMTH.

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