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CVM Grants Administrator Donna Stearns Passes Away

Donna Stearns, 65, of Fayette, Mo., passed away Wednesday evening, Aug. 7, 2013, at her daughter's home in Ashland.

Donna Kay Stearns was born on Sept. 2, 1947, in Wichita, Kan., to James and Imogene (Newcomer) Wiley. She graduated from Maine East Township High School in Park Ridge, Ill., in 1965. She went on to earn her bachelor's and master's degrees in education from the University of Missouri. She married Sonny Stearns on Sept. 2, 1992, and they resided in Fayette, Mo.

Mrs. Stearns had been a vital part of the College of Veterinary Medicine Dean's Office staff since June of 2003 working for the Office of Research and Postgraduate Studies. She joined us as a Grants and Contract Specialist and three years later was elevated to the position of Grants and Contracts Administrator. She excelled in her role assisting investigators with fiscal management of their grants and as the College's grants and contracts liaison with other University departments and funding sponsors. She also contributed her time and talents to raise the Phi Zeta Program and Phi Zeta Annual Research Day to the level of excellence they have achieved at the CVM. Her organizational abilities, thorough knowledge of grant policies and procedures and helpful nature were among the traits that earned her the College's 2009 Dean's Impact Award for outstanding and sustained impact on the College of Veterinary Medicine.

Her career with MU began in 1990. Prior to joining the CVM, she was employed at the Dalton Cardiovascular Research Center and the School of Medicine. Mrs. Stearns also served on the MU Staff Advisory Council. She served a three-year term beginning in 1993, and was serving a second three-year-term that commenced in 2011 alongside her daughter, Pam Cooper, who is employed at the Bond Life Sciences Center. She chaired the Council's Staff Development Awards Committee for 12 years, most recently in 2011. She was elected vice-chair of the Staff Advisory Council in 2012, a position she held at the time of her passing.

She was also an active member of Linn Memorial United Methodist Church in Fayette.

Survivors include her husband, Sonny, of the home, one son, Michael (Jamie) Taylor of Lee's Summit, Mo., one daughter, Pam (Dale) Cooper of Ashland, stepson, Calvin (Lindsey) Stearns of Marceline, Mo., brother, James Wiley of Fayette, sister, Laurel McNamara of Parkridge, Ill., 13 grandchildren, Emma, Rachel, Ayden, Jeshua, Austin, Shayla, Aaron, Tristan, Brayden, Kaylee, Barrett, Baylor and Brenner. She was preceded in death by both parents.

Funeral services will be 10 a.m., Monday, Aug. 12, 2013, at the Friemonth-Freese Funeral Home in Fayette, Mo., with a visitation Sunday evening from 5 to 7 p.m. In lieu of flowers, memorial donations are suggested to Linn Memorial United Methodist Church or University of Missouri College of Veterinary Medicine Gentle Doctor Benefit in care of Friemonth-Freese Funeral Service, 174 Hwy. 5 and 240 N., Fayette, Mo., 65248.



Mohan Honored with Prestigious Indian Award

Rajiv Mohan, PhD, the Ruth M. Kraeuchi Endowed Professor in Veterinary Ophthalmology at the MU College of Veterinary Medicine, has been awarded the Mahatma Gandhi Pravasi Samman 2014 award by the Non-Resident Indians (NRI) Welfare Society of India. Mohan has a joint appointment at the School of Medicine's Mason Eye Institute.

The award honors outstanding service and accomplishments by Indians in the international arena. Recognized by the Indian government and based in New Delhi, the NRI Welfare Society was formed to strengthen ties between non-resident Indians and India. It aims to acknowledge the "work, contributions and achievements of ... those who left the country empty-handed and made a respected place for themselves outside the country," according to its website.

Mohan came to the United States 20 years ago.

"This was always my dream when I was growing up to get such a prestigious award from India," he said.

Mohan's ophthalmology research has spanned more than 20 years. His research interests include corneal gene therapy, corneal nanomedicine, corneal wound healing, corneal scarring and angiogenesis, and refractive laser surgery. His work includes more than 100 articles in scientific journals, seven book chapters and more than 200 scientific presentations. Mohan's research program is funded through grants from the National Eye Institute and U.S. Department of Veterans Health. His research has received more than 35 national and international awards.

Mohan said he feels humbled by the recognition.

"This award is the testimony to our research accomplishments and their broader global application in restoring vision among millions of people," he said. "I expect to establish many more new joint research collaborations of mutual interests, exchange of scientific knowledge, discovery of newer therapies for blindness and larger economic partnership between the two countries."

Mohan said he would love to travel to New Delhi in May for the award ceremony, but the date conflicts with the annual meeting of the Association for Research in Vision and Ophthalmology, where he will be receiving another honor, the Silver Fellow award. It recognizes ARVO members for their individual accomplishments, leadership and contributions to the association. ARVO is the largest eye and vision research organization in the world.

Mohan is also organizing and chairing a cross-sectional interdisciplinary session on nanotechnology and regenerative medicine at the conference.

Mohan earned a bachelor of science degree in chemistry, zoology and botany, a master's degree in organic chemistry, and a doctoral degree in synthetic medicinal chemistry at Lucknow University in India. He completed cell and molecular biology training at Case Western Reserve University in Cleveland and vision research and gene therapy postdoctoral training at the Cleveland Clinic Cole Eye Institute and University of Washington in Seattle.

Retired CVM Faculty Member Alan Allert Passes Away

Dr. J. Alan Allert, 64, a long-time educator, researcher and former executive director of the Central Missouri Humane Society (CMHS) peacefully passed away at his home on Jan. 10, 2014. A celebration of his life will be held on Friday, May 23 at his home in Columbia, Mo.

He was born on June 13, 1949, to Maxine and Bill Allert in San Antonio, Texas. Upon graduating from Robert E. Lee High School in San Antonio, he attended Texas A&M University, where he received his bachelor of science in 1971 and doctor of veterinary medicine in 1972. He was certified by the Texas State Board of Veterinary Medical Examiners in 1972.

Dr. Allert began his professional career in Mason, Texas, as a large-animal veterinarian, where he learned many life lessons while tending to the cattle of his close-knit Hill Country town from 1972 to 1973. After the birth of his two sons, he became a practitioner for a small animal private practice in San Antonio from 1973 to 1975.

Following his interest for teaching and research, he accepted an associate professorship in the Veterinary Physiology and Pharmacology Department at Texas A&M University in 1975 and became an assistant professor in 1977. He had a broad understanding of many subjects that allowed him to teach classes in pharmacology, physiology and surgery. He was the faculty sponsor of the Student Veterinary Medical Association; served on the College of Veterinary Medicine curriculum committee and was a faculty adviser for undergraduate and veterinary students. Dr. Allert was a valued and accomplished instructor and teacher. He was awarded numerous citations and awards, including the Texas A&M University Distinguished Teacher Award from the College of Veterinary Medicine in 1984. His research included cardiovascular physiology, pharmacology, tissue implantation and biomaterials as prosthetic devices, which he developed for veterans of the Vietnam War.

In 1985, he moved to Columbia, Mo., to pursue a doctorate and become an instructor in the Department of Biomedical Sciences at the University of Missouri College of Veterinary Medicine. He taught veterinary pharmacology while pursuing his degree, expanding his teaching experience to include anatomy and histology. He ended his academic career in 1996 with a legacy of numerous publications, presentations and having helped many students complete their degrees.

After leaving academia, Dr. Allert worked with the U.S. Geological Survey Columbia Environmental Research Center (CERC) and as a private contractor. He volunteered for numerous researchers, eventually becoming the CERC's veterinary biomedical officer. He worked on numerous projects in California, the Great Lakes, Maryland, Missouri, Montana and New Mexico, ending his time at CERC while working with pallid sturgeon in the Missouri River. After leaving formally in 2005, he worked as a private contractor helping U.S. Fish and Wildlife Service fish biologists study stress hormones in pallid sturgeon used in their captive breeding program. He continued to publish until he finally retired a second time in 2007.

In 2009, he became executive director at Central Missouri Humane Society. It was a position for which he was well-suited and one that allowed him to use the skills he had developed as a veterinarian, teacher and researcher. His accomplishments included the completion of the Zootoo renovations and improved relations with the MU College of Veterinary Medicine and the local community. He was instrumental in the cooperative agreement between the CVM and CMHS that allowed veterinary students to spay and neuter shelter animals. His time at the shelter saw several programs grow, including "Walk A Hound, Lose a Pound" and a cooperative program where armed forces veterans with post-traumatic stress disorder teach dogs from CMHS basic obedience skills such as walking with a leash, sitting and staying to improve the dogs' chances of adoption. He was most proud of his dedicated staff, as well as the many volunteers who work so hard to care for the abandoned animals of central Missouri. It was with much sadness that he resigned his position due to the progression of amyotrophic lateral sclerosis (ALS or Lou Gehrig's disease) in 2011.



Dr. Allert was a gifted teacher with a natural rapport that served him well as a mentor, whether a perennial favorite professor or coach for his sons' early sports teams. His hobbies were diverse, with a bent toward the outdoors as an overarching theme. As a younger man, he pursued hiking, camping, fishing and hunting with both gun and bow, caving and was an early advocate of SCUBA diving. Running, sailing and photography were also favorites, as was playing guitar and slowly turning up the volume knob on the stereo. He was an accomplished wood worker, motorcyclist and canoeist, frequently found working in his shop on projects for his home and work, getting motorcycles ready for a long trip or packing up gear to head south for the exploration of a cave or a float on a spring-fed stream. He had an exceptional eye for fruiting box-wine trees, often pointing them out to fellow floaters as they readied their campsite. Dr. Allert was generous with his time and knowledge, and could be counted on to help with any project, whether it was constructing scientific equipment for CERC or helping a neighbor with home improvement.

He was preceded in death by his parents and numerous good dogs. He is survived by his wife, Ann; sons Adam (Amy) and Daniel; their mother, Candace; brother Andrew (Andy); and numerous other family members and friends.

New Faculty Member Emily Miller Joins CVM

Emily Miller, DVM, DACVS-SA, has joined the MU College of Veterinary Medicine as an assistant teaching professor of small animal surgery.

Miller, who specializes in soft tissue surgery, said her clinical interests include surgical oncology and critical care surgery. She was drawn to MU because of the “active oncology program and the friendly, collegial members of the college community,” she said.

After receiving her doctor of veterinary medicine degree from Virginia Tech, Miller completed a rotating internship in small animal medicine and surgery in Charlotte, N.C., and a small animal surgical internship in Dallas. She completed her surgical residency training at Iowa State University and served as assistant professor of small animal surgery at Virginia Tech before coming to MU. Miller is a diplomate of the American College of Veterinary Surgeons.

Her main responsibility will entail providing coverage for the soft tissue surgery service. She also will be involved in training house officers and veterinary students at the Veterinary Medical Teaching Hospital, as well as teaching pre-clinical veterinary students through didactic lectures and laboratories.

Miller said as a veterinarian she enjoys being an advocate for patients and involving clients in decisions about their pets’ care.

“Each client and patient has unique needs, and my job is to work with the clients to come up with the best solution for their unique situation,” she said.

In her free time, Miller enjoys running, traveling and reading. She shares her home with Marvin, a “very handsome” Flemish giant house rabbit, she said.



Dr. Emily Miller with her pet rabbit, Marvin.

Alumnus David Moore Named Missouri Livestock Person of the Year

The Missouri Livestock Symposium has named CVM alumnus David Moore, DVM '74, of Kirksville the 2013 Missouri Livestock Person of the Year. He was inducted into the symposium's hall of fame in December.

The award honors livestock or forage leaders from northeast Missouri who have made significant contributions to the progress and well-being of the livestock industry.

"I was humbled by (the award)," Moore said. "It was an honor I didn't expect."

A veterinarian for 39 years and a sheep producer for more than 50, Moore's livestock career began in 1957 with a 4-H project with a crossbred ewe lamb. Now a well-known and respected producer of registered Montadale and Dorset sheep, he has exhibited sheep locally and nationally, with champions at all levels.

Moore received his bachelor's degree in biology at Northeast Missouri State University, now Truman State University. After he completed his doctor of veterinary medicine degree at the University of Missouri, he practiced in Illinois for a year before opening a mixed animal practice in Kirksville.

In 1995, his oldest son, John, joined him in practice. In 1998, the pair opened an additional clinic in LaPlata.

Moore is a member of the American Veterinary Medical Association, Missouri Veterinary Medical Association, Bovine Practitioners, Society of Theriogenology and Veterinary Consultants. He has presented numerous programs throughout the Midwest, including sessions for the Missouri Livestock Symposium, on sheep production and diseases.

In addition to serving on numerous committees and boards concerning livestock, Moore is a past president of the Northeast Missouri Sheep Producers and was a member of the Missouri Scrapies Eradication Program. He has served as secretary of the Northeast Missouri District Fair Board, a 4-H sheep project leader and the sheep superintendent for the fair.

He has been honored as an Adair County Friend of 4-H and awarded the Show-Me Master Purebred Sheep Producer's Award. He and his wife, Brenda, have been added to the MU Extension Leaders Honor Roll, and the Moore family has been honored as the Adair County Farm Family at the Missouri State Fair.



Dr. David Moore

Former CVM Associate Dean Lloyd Faulkner Passes Away

Lloyd C. Faulkner, DVM, PhD, DACT, of St. Clairsville, Ohio, passed away at age 87 on Dec. 20, 2013. He was a former associate dean for Research and Graduate Studies at the MU College of Veterinary Medicine.

He was born in Longmont, Colo., a son of Earl and Verna (Sommer) Faulkner. He served in the Navy during World War II aboard the USS Pinkney. He earned a DVM from Colorado State University in 1952 and his PhD from Cornell University in 1963. He was a founding diplomat of the American College of Theriogenologists and served as president of the Western Veterinary Conference.

He married Elaine Mae Wagner June 11, 1954. They moved from Fort Collins to Columbia, Mo., in 1978. In 1979, he was named associate dean at the MU CVM. Dr. Faulkner went on to serve as associate dean of research at the Oklahoma State Center for Veterinary Health Services, and assistant director of the Oklahoma Agriculture Experiment Station at OSU in Stillwater, Okla. In addition, he was interim head of the Department of Pathology, interim head of the Department of Physiology, and interim director of the Oklahoma Animal Disease Diagnostic Laboratory. He retired as an emeritus professor in 1992.

His wife, Elaine, preceded him in death in 1995.

He is survived by his wife of 13 years, Margo (Smith) Faulkner, his daughter, Vickie Keen of Cameron, Texas, also by his four sons, Earl, Ron, Chad, and Kurt Faulkner, as well as several grandchildren and great-grandchildren.

Private services will be held.



Owner Travels from California for Treatment at VMTH



Karen Young believes in doing anything she can to care for her pets – even if that means driving 2,000 miles for treatment. Recently, Young, her brother-in-law, Ron Lehman, and Young's dogs, Tartufo and Milagros, traveled from Mountain View, Calif., to treat Tartufo's cancer at the University of Missouri Veterinary Medical Teaching Hospital.

Tartufo, or Tufo, as Young calls her 9-year-old mixed-breed dog, initially had his apocrine gland anal sac adenocarcinoma removed surgically in December 2012. When the cancer returned in October 2013, Young and her veterinarian decided to get a second opinion from Dr. Jeffrey Bryan, associate professor of oncology at the MU College of Veterinary Medicine. Bryan had been Young's veterinarian several years earlier when he lived in California and also had been a classmate of her current veterinarian, Dr. Jenny Taylor. In addition, Bryan had a good record of success treating aggressive cancers like Tufo's, Lehman said.

Bryan and Taylor recommended radiation treatment for Tufo, and though Young initially feared it would be too hard on her dog, discussions with both doctors made her confident it was the right decision.

Next Young had to pick a veterinary hospital for Tufo's radiation. Her previous history with Bryan, plus his experience treating cancer, led to her decision to make the trek to Columbia.

Young said she wasn't familiar with any of the veterinarians at the nearest veterinary hospital and wanted Tufo to be treated by someone she knew would provide outstanding care.

"A personal relationship with a vet is really important," Young said. "I just felt more comfortable with somebody I knew."

Tufo's cancer was surgically removed in California in November, and after a four-day drive the group arrived in Columbia to meet with Bryan and tour the VMTH.

"We were incredibly impressed with the facility," Lehman said. "The advanced technology is impressive. They're doing really great things here."

Lehman said the presence of veterinary students was a benefit. Students ask interesting questions, he said, which can lead to innovation.

Tufo received 18 daily treatments using the VMTH's new linear accelerator. The machine allows veterinarians to tailor radiation to the tumor's shape and depth, thus minimizing harm to surrounding tissue.

Bryan said veterinarians generally aim for a "magic window" of three to five weeks of radiation treatment.

"Typically we want to spread it out because it's more effective at killing the tumor while minimizing side effects," he said.

Technology like the linear accelerator has greatly improved cancer treatment. Although 10 years ago he would have

Linear Accelerator Improves Cancer Care

Tufo received 18 treatments using the MU Veterinary Medical Teaching Hospital's new linear accelerator, a powerful tool in the fight against cancer. The machine, a remanufactured model that came from a hospital that treats humans, is the most advanced veterinary radiation therapy system in the Midwest, said Dr. Jimmy Lattimer, associate professor of veterinary medicine and surgery.

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been skeptical that Tufo's cancer could be treated safely and effectively, Bryan said, the treatment went very well. Tufo experienced only moderate skin side effects and had almost no side effects in concerning organs such as his colon.

Bryan said he expected Tufo would need no further treatment for at least two years, whereas the tumor probably would have recurred within a couple months without the radiation.

He said anal sac tumors can cause severe problems because they grow in an area where space is limited and can prevent the dog from being able to eliminate urine and feces. Many dogs don't receive the treatments they could get for these tumors, which tend to respond well to surgery and radiation therapy, Bryan said.

Although Bryan admitted it's unusual for a client to travel so far, he said he knew the VMTH could provide Young both excellent care and excellent communication.

"They wanted the best for this dog," he said. "It's always an honor to provide our very best for our patients. I knew that the team here could provide the care and communication that Tufo and Karen needed."

In an email Young sent recently to Bryan and Taylor, her veterinarian in California, she praised the care she received.

"Thank you both for making it possible for us to look forward to a cancer-free future," she wrote. "As I told Dr. Jenny yesterday, the memories of Tufo's suffering are already receding as he heals and we are left with the good memories of feeling very safe and totally supported while he underwent his baptism by fire."

Although Tufo's radiation treatment "wasn't a walk in the park," he is now fully recovered and very happy, Young said.

"I think a large part of my being able to go through with it was the complete confidence I have in Dr. Bryan," she said. "I think that if it had been at another facility where I didn't have such good communication, I might have given up when the going got tough, but I am so glad I didn't."

Linear Accelerator Improves Cancer Care

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"Like anything, it's not 100 percent (effective)," he said. "But even for human medicine it would be considered pretty much state-of-the-art."

Before beginning radiation, CT scans and sophisticated new software allow faculty and residents to create a 3D representation of the tumor that helps identify the best angles of approach. The linear accelerator then targets tumors with a beam of radiation tailored specifically to the tumor's shape and depth. The ability to fine-tune the radiation dose means less normal tissue is irradiated and surrounding organs are avoided.

Although the hospital previously had a linear accelerator, this newer model allows veterinarians to more accurately and quickly target tumors. One of the biggest improvements is its multileaf collimator, Lattimer said. Whereas the old system had four collimator leaves, the new system has an additional 80 collimator leaves that are independently moveable below the four leaves. By manipulating the individual leaves, the beam is tailored precisely for the tumor.

"It's a safer machine, it's more accurate and it's more flexible than the old machine was," Lattimer said. "We can shape the beam much more delicately than before, and it allows us to do the treatments much more quickly."

In addition, because less radiation is applied to the surface of the animal, it is less harmful to its skin, said Dr. Jeffrey Bryan, associate professor of oncology.

Veterinarians at the teaching hospital are using the linear accelerator primarily to treat dogs and cats with cancer that can't be remediated by surgical or medical means.

Radiology technician Jeff March said the effects of the linear accelerator on patients with brain tumors can be remarkable to watch.

"A lot of times when you see them they're so clinically affected they're like zombies," he said. "There's no life to them. And then after we treat them they come back to life. They turn back into the dogs they were to begin with. You get to see a flower bloom, essentially, as they come back to life and respond to treatment."



Surgical Resident Jessica Knapp Receives Research Award

Jessica Knapp, DVM, a second-year resident in small animal surgery at the MU College of Veterinary Medicine, has received a 2014 Mark S. Bloomberg Memorial Resident Research Award for her research abstract "Classification of Antebrachial Limb Deformities: A Retrospective Review of 101 Limbs from 2006-2013."

The award will allow Knapp to travel to the 2014 World Veterinary Orthopaedic Congress in March to present her work, which was co-authored by Derek Fox, DVM, PhD, an assistant professor of small animal orthopedic surgery.

Held every four years, the conference is a joint meeting between the Veterinary Orthopedic Society of America and the European Society of Veterinary Orthopaedics and Traumatology. This year's meeting is in Breckenridge, Colorado.

Knapp admitted she was a bit nervous about presenting her work at the prestigious conference, but she said she was excited about the chance to share it with top orthopedic surgeons from across the world.

"This is an amazing opportunity to present the frequency and wide diversity of skeletal deformities that we see in our pet dogs at MU," she said.

Knapp received a bachelor's degree in biology from Pacific Lutheran University in Tacoma, Wash. She completed her doctor of veterinary medicine at Washington State University in Pullman, Wash.

The award honors Mark Bloomberg, a former president, member and supporter of the Veterinary Orthopedic Society. In addition to his outstanding contributions to orthopedics, especially sports medicine, in the clinical and research settings, he was known as a tremendous mentor to residents.



CVM's Middleton Named National Mastitis Council President

The National Mastitis Council has named John Middleton, DVM, PhD, a professor of food animal medicine and surgery at the MU College of Veterinary Medicine, its 2014 president.

The council is a nonprofit organization devoted to reducing mastitis and enhancing milk quality. It promotes research and provides information to the dairy industry on udder health, milking management, milk quality and milk safety. Founded in 1961, the council now boasts members in more than 40 countries.

Mastitis is an inflammation of the udder that can result in a loss of milk output and a decline in milk quality. It can either be infectious or a result of injury to the mammary gland.

Middleton said his goal for the next year is to explore how the council can improve its efforts to engage and retain new members.

"The vitality of the organization is its membership," he said. "It is important that we invest in membership expansion by engaging constituents around the globe in NMC and ensuring that members get their money's worth."

Middleton's involvement in mastitis research spans nearly 20 years. His research efforts are focused on bovine mastitis epidemiology, prevention, diagnosis and treatment; diseases caused by staphylococci, including assessment of how staphylococcal species affect the host; and molecular fingerprinting of clinically important bacterial isolates. His current research projects are focused on coagulase negative staphylococcal mastitis, mastitis in the dairy heifer, dry cow mastitis control strategies and influence of subclinical hypocalcemia at calving on postpartum health, including clinical and subclinical mastitis.

He has been an external collaborator in the Canadian Bovine Mastitis Research Network.

Middleton received his bachelor of science, DVM and PhD degrees from Washington State University. He joined the faculty of the University of Missouri as an assistant professor in the Department of Veterinary Medicine and Surgery in 2001.

NMC presidents serve a one-year term, after serving one year as second vice president and one year as first vice president. The presidency alternates annually between individuals representing industry and academia.

Challenging Cornea Repair Means Owl Can Return to the Wild

When a Boone County couple brought a great horned owl to the University of Missouri Veterinary Medical Teaching Hospital on Oct. 4, Raptor Rehabilitation Project volunteers gave her a name in keeping with a recent theme: Pepe's Penelope. Pepe alludes to Pepe Le Pew, and Pepe's Penelope, the unfortunate owl, bore the distinct odor that typically follows a close encounter with a skunk. It is not uncommon for raptors to arrive at the project's facilities with the lingering scent from trying to hunt the wrong prey, said MU veterinary medicine student Stephen Treese. Treese, one of the project's volunteers, took responsibility for Penelope's care, and clean-up, while she was treated at MU. However, it was not the need of a bath that prompted the couple to bring the bird to the veterinary hospital. Penelope had a far more serious concern.

The couple first noticed the owl sitting on the ground near their driveway as they left their house. When they returned later in the day and realized the bird was still in the same spot, they became concerned that she was ill or injured. At the MU veterinary hospital volunteers with the Raptor Project triaged her and tried to determine why she couldn't seem to fly.

The Raptor Rehabilitation Project is a service and education partnership of the MU College of Veterinary Medicine and the surrounding community. Veterinary students, other MU students and community members volunteer their time to rehabilitate injured raptors and care for resident birds. Volunteers also raise awareness about birds and their needs by giving presentations at schools and other forums throughout central Missouri. In addition to a raptor wing within the veterinary hospital, the project maintains mews for the birds, as well as a flight cage where recovering birds can rebuild their strength and ability to hunt.

Treese said Penelope was slightly dehydrated, but for the most part exhibited good overall health. However, she had sustained a serious injury to her left eye. Treese said that as they hunt, raptors display a linear focus that may have resulted in Penelope's eye getting nicked by a branch. Although the injury itself would not preclude flight, Treese speculated that the owl was in shock from the injury when the property owners discovered her.

Project volunteers contacted the VMTH ophthalmology service to examine Penelope. Kevin Donnelly, DVM, an alumnus of the MU College of Veterinary Medicine, is pursuing a residency in ophthalmology. He and Jacqueline Pearce, DVM, an assistant teaching professor in veterinary ophthalmology at MU, examined the owl and discovered her cornea was ruptured.

"Vision is hard to assess, but her pupil was not responsive to light," Donnelly said. "We had evidence of some trauma. There was some bleeding inside her eye."

Donnelly and Pearce determined that the best way to treat the injured eye would be to implant a conjunctival graft.

"The cornea has no blood vessels," Donnelly explained. "While a human could get a corneal transplant, this type of procedure has not been routinely successful in birds and donor tissue was not readily available."



Dr. Kevin Donnelly holds Pepe's Penelope just prior to the great horned owl's release back into the wild.



MU veterinary ophthalmology resident Dr. Kevin Donnelly and veterinary ophthalmologist Dr. Jacqueline Pearce implanted a conjunctival graft in the owl's eye to repair a ruptured cornea.

However, the conjunctiva, the healthy pink tissue that surrounds the eyes, does have a blood supply. A few days after Penelope came to the VMTH, with Pearce assisting during the surgery, Donnelly took a sliver of her conjunctiva, still connected at the base to maintain the blood supply, and moved it to create a physical support for the weakened cornea.

Donnelly said that after completing his DVM, he was drawn to pursue microsurgery as a professional specialty because it allows him to work with his hands and provides the opportunity to help a variety of species, but this was the first time he had performed this particular procedure on a bird.

"It's more difficult on birds than other species because their eyes are smaller and don't move in their head. Their cornea is also thinner than a dog's cornea," he said.

Although the procedure succeeded initially, approximately two weeks after the surgery the graft came loose. The graft itself was still viable, so Donnelly and Pearce returned to surgery to perform a second procedure on Penelope. Donnelly said this time they added a biosynthetic scaffold to cover the defect and make the graft even stronger.

"Within four to six weeks after the second surgery, her pupil was responsive to light," Donnelly said.

At that point in her recovery, Penelope was moved to the Raptor Rehabilitation Project's flight cage to work on rebuilding her strength and demonstrate her ability to hunt in preparation for her return to the wild. Treese said within two weeks the owl was ready, but project volunteers wanted to wait for the weather to cooperate. "It's a little disorienting for them when they're released back into the wild, so we like to release on warmer days to minimize the stress," Treese explained.

That day came on the morning of Jan. 11. Donnelly, Treese and other project volunteers drove Pepe's Penelope back to the partially wooded property in northern Boone County where she had originally been found. They were joined by the couple who had brought her to the Raptor Rehabilitation Project in October. Treese removed her from her box and handed her to Donnelly, who held her legs with one gloved hand and supported her with the other. As he released his grip, Penelope took flight. "This has been one of the most rewarding things I have been a part of," Donnelly said.

A video of Pepe Penelope's release is [available on Youtube](#).

Dental Health Month Reminds Owners to Protect Pets' Oral Health

If you find yourself gasping for air every time you get a whiff of your pet's breath, it's probably time to reevaluate its dental care.

February is National Pet Dental Health Month, an annual effort to raise awareness of the importance of oral health care for pets.

"Virtually every adult dog and cat we see has some dental disease," said Richard Meadows, DVM, MU College of Veterinary Medicine Curator's Distinguished Teaching Professor and the director of the Veterinary Medical Teaching Hospital's Community Practice Section.

Dental disease affects as many as 91 percent of dogs and 85 percent of cats over the age of 3, according to a 2013 Banfield Pet Hospital report that analyzed data from 2.2 million dogs and 460,000 cats.

The most common clinical condition in dogs and cats is periodontal disease, in which bacteria spread beneath the gum line and damage supporting tissues around the teeth, potentially leading to a loss of teeth.

Despite the frequent occurrence of dental disease, it often goes untreated.

"The vast majority of pets we see with even whopping dental disease, the owners do not realize," Meadows said.

That's because pets often show no signs of dental problems even though they may be experiencing chronic pain. However, when these dental issues are finally treated and the pain is alleviated, owners will often tell Meadows "It's like you took years off my dog," he said.

Failing to address dental problems in a timely manner can cause needless suffering and expense, Meadows said. According to an analysis conducted by VPI Pet Insurance, the average cost in 2012 to prevent pets' dental disease, such as through a professional teeth cleaning, was \$171.82, compared to \$531.71 to treat dental disease.

Meadows said veterinary dentistry has become very sophisticated.

"We can pretty much do anything human dentistry can do," he said.

To protect pets' oral health, Meadows offered the following tips:

Watch for symptoms of dental disease. Although pets frequently show no symptoms, Meadows said signs of dental problems can include not chewing on food or chew toys, chewing on only one side of the mouth, excessive drooling and bad breath. Pets shouldn't have bad breath, Meadows said. If their breath stinks, anaerobic bacteria could be growing underneath the gum surface.

Brush their teeth. "There is no substitute for brushing teeth," Meadows said. "It is the gold standard." Ideally, owners should brush pets' teeth daily, he said, but at minimum they should brush them at least every 48 hours. That's because after 48 to 72 hours plaque turns into calculus, which cannot be brushed off teeth. Dogs and cats produce calculus five times as fast as humans, he said. For more information on how to brush pets' teeth, the American Veterinary Medical Association offers a [video](#) with step-by-step instructions.

Have your pet's teeth cleaned regularly by your veterinarian. If you're not brushing their teeth, pets generally need annual cleanings, Meadows said. However, that can be prolonged to two to three years with good home care. He said when owners are surprised that pets need cleanings so frequently, he often asks them, "What would happen to you if you didn't brush your teeth?"

Consider products designed to help prevent dental disease. Examples include food, water additives and chew toys. However, Meadows warned, claims for these products aren't regulated. He suggested asking your veterinarian for advice or checking the product on the Veterinary Oral Health Council website, <http://vohc.org>. Products listed on the site have been independently tested to verify their claims. When purchasing chew toys, owners should test them

for safety, Meadows said. Unless you can dent the toy with your thumbnail or bend it between your hands, a product is too hard and could break teeth, he said.

Although Meadows appreciates the recognition oral care receives during National Pet Dental Health Month, he said it should be a year-round endeavor.

“In my opinion every month should be dental awareness month,” he said.

MU Veterinarians Put Springfield Dog on the Road to Recovery After Overpass Fall

Chance Lawrence, a 6-year-old black Labrador-mix has a choice of dog houses. There is the dog house in the yard at his Springfield, Mo., home, and there is an insulated dog house within the garage. Chance opted for the warmer indoor option on a cold Sunday night in early February. The following morning, Debbie Lawrence went out to the garage to let Chance out and to feed him. He returned to the garage as Lawrence readied to leave for her job with the Springfield Fire Department. She believed he was still tucked into his dog house as she left for work. A short time later her husband, Hosea, a retired firefighter, left the house for a medical appointment. When he returned, he went to check on Chance, but the dog was nowhere to be found.

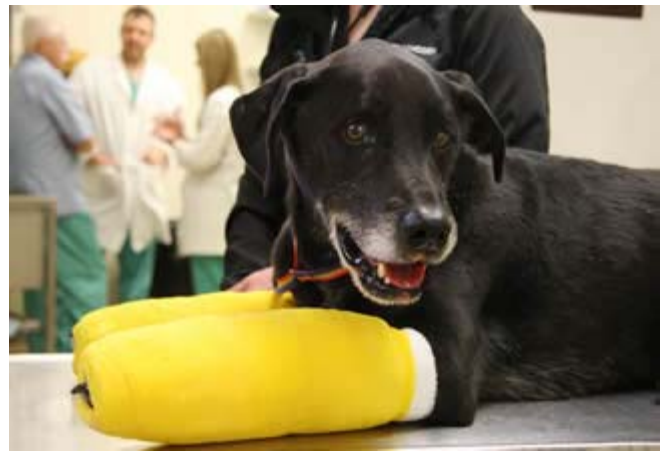
Hosea Lawrence got back into his truck and began searching his south Springfield neighborhood for his dog. He called his wife, who left work and joined him looking for Chance. They enlisted the help of neighbors, friends and the mail carrier, but there was no sign of the missing dog.

The Lawrences suspect that when Debbie Lawrence backed her vehicle out of the garage earlier that morning, Chance took the opportunity to sneak out. He didn't have to travel far before he found himself on a busy freeway. A motorist reported seeing a car slam on its brakes to avoid hitting Chance. The frightened dog then ran in front of another car. In what was an apparent attempt to escape the traffic, he jumped over a concrete wall that runs alongside the freeway. Unfortunately, he was on a bridge and the only thing on the other side of that concrete barrier was a two-story fall to the road below.

The driver of a passing school bus spotted the falling dog and braked sharply. A couple in the car behind swerved to avoid a collision with the bus and saw Chance hit the pavement. They picked up the injured and bleeding animal and transported him to the Springfield Veterinary Center.

The Lawrences, unaware of what had happened, continued to scour their neighborhood for their missing dog. While they searched, Debbie Lawrence spoke with a woman she didn't know who was walking in the area and asked her to please call Hosea's cell phone if she happened to encounter Chance. As it turned out that encounter was a fortunate one. Shortly after 5 p.m., the stranger called Hosea and told him that she had seen a report on a local television news station about a dog falling from an overpass that matched the description of Chance. The Lawrences called the television station to find out where the dog had been taken.

"We went to the wrong veterinary office at first," Debbie Lawrence recalled. "The correct vet closed at 5:30 and we got there shortly after that, so we banged on the door and thankfully, they heard us and let us in."



Chance came to the MU Veterinary Medical Teaching Hospital after he fell from an overpass near his Springfield, Mo., home. He required two surgeries to stabilize the badly damaged ligaments in his front legs.



Dr. James Tomlinson reviews Chance's radiographs with his family Debbie and Hosea Lawrence.



Debbie and Hosea Lawrence are reunited with their dog after he spent a week at the MU Veterinary Medical Teaching Hospital.

Dr. Cynthia Wiseman had taken care of Chance at the Springfield Veterinary Center and found that he had sustained lacerations and knocked one of his canine teeth loose. It was also determined that he was struggling to walk despite having no broken bones.

Dr. Wiseman contacted Dr. Marie Kerl, associate teaching professor at the University of Missouri Veterinary Medical Teaching Hospital. As a snowstorm shut down the university and much of mid-Missouri for two days, Wiseman and Kerl, a small animal emergency and critical care veterinarian, consulted via email and telephone, reviewing radiographs and videos of the injured dog. Kerl consulted with the orthopedic and radiology faculty in the VMTH to analyze Chance's videos and radiographs and determine the best course of treatment.

On Feb. 6, three days after his fall, Chance's family picked him up from the Springfield Veterinary Center and brought him to the VMTH. Dr. James Tomlinson, a professor of veterinary orthopedic surgery, determined that Chance had injured the complex set of ligaments in both carpal joints of his front legs rendering them unstable and unable to support his weight. Tomlinson said the injury probably occurred when Chance landed from his fall from the bridge.



With his legs stabilized and placed in casts, Chance is ready to go home.

Repairing Chance's injured legs required surgery over two days. During the first two-and-a-half hour operation, Tomlinson, assisted by surgery resident Dr. Ryan McCally, placed a bone plate in Chance's right forelimb to fuse the damaged joint. They performed the same procedure on the dog's left leg a few days later. Tomlinson said scheduling the surgeries over two days was preferred to avoid having Chance under anesthesia for nearly six hours.

After each surgery Chance's legs were each placed in a cast, which provided additional support while the bones heal. Although they are awkward, he quickly adapted to walking with the casts.

After hearing Chance's story, a representative from SECUROS, the company that manufactures the arthrodesis bone plates, provided the implants for Chance at no charge.

The Lawrences had to return to Springfield after Chance's first surgery. Hosea Lawrence said they were grateful for the ongoing contact that they received from MU CVM student Bryan Davidson, who was assigned to Chance's case. "He has stayed with us on the phone the whole time. He would call with updates two to three times a day."

By Valentine's Day, Chance was able to bear weight on both of his front legs and was ready to return home with his family. He will need to remain in the casts for about six weeks while the carpal joints fuse. It is hoped that additional X-rays at that time will confirm healing adequate enough to allow the casts to be removed, and for him to begin using his legs unassisted once more. His veterinarians expect that Chance will be able to walk, run and play once the healing is complete in several months' time.

To help support families with veterinary costs for critical and long-term care, please consider a gift to the College's [Small Animal Surgery Fund](#) or Silent Partners Fund. These funds provide financial assistance to pet owners according to set criteria, such as financial need. For more information on giving opportunities, please contact the Advancement office at: 888-850-2357.

Funds Benefit Large Animals

New state funding improves large-animal program.

<http://mizzomag.missouri.edu/2014/02/funds-benefit-large-animals/>

Faster Anthrax Detection Could Speed Bioterror Response and Save Millions in Decontamination Costs, MU Study Finds

Feb. 26, 2014

Story Contact(s):

Jeff Sossamon, sossamonj@missouri.edu, 573-882-3346

<http://munews.missouri.edu/news-releases/2014/0226-faster-anthrax-detection-could-speed-bioterror-response-and-save-millions-in-decontamination-costs-mu-study-finds/>

Student-Built Apothecary Cabinet Among GDB Auction Items

Lynn Barton, a third-year student at the MU College of Veterinary Medicine, spent 15 years in residential construction before starting veterinary school. While attending last year's Gentle Doctor Benefit, the Utah native came up with the idea of using his woodworking skills to craft a project for the 2014 benefit's auction.

The annual Gentle Doctor Benefit is a long-standing tradition that supports the College's scholarship fund for veterinary medical students. The gala includes a live auction, silent auction and musical entertainment. It will be held at 5 p.m. April 5 at the Holiday Inn Executive Center, 2200 I-70 Drive Southwest, in Columbia.

"As a veterinary student I have and continue to directly benefit from the proceeds of GDB," Barton said. "I thoroughly enjoy contributing where I can, and though I'm unable to donate financially at this time of life, I feel I have some talents that can be of benefit to the MU CVM. Besides, it's kind of nice to have a little something as an escape from the rigors of vet school."

Barton began designing his apothecary cabinet last summer, and construction started in November. He enlisted the help of two fellow students, Jacob Lucas and Grant Wilburn.



"I call it an apothecary cabinet because I tried to capture some of the features of the cabinets one would see in an old pharmacy in its design," Barton explained. "I thought it would be neat to merge old features like the small drawers a pharmacist would store his compounding ingredients in, skeleton key locks and marble countertop with modern drawers and adjustable shelves to create an eclectic yet highly functional display and storage cabinet."

Barton has built a variety of projects before, including homes, bookcases and built-in entertainment centers.



“As a child, my friends and I were constantly building things from huts to wooden guns,” Barton said. “That continued into adulthood. I find it very satisfying to take an idea and transition it into a finished product.”

For more information about the Gentle Doctor Benefit or to register to attend, go to gdb.missouri.edu.



St. Louis Couple Gives \$2.5 Million to Fund Veterinary Medicine Scholarships at MU

March 03, 2014

Story Contact(s):

Nathan Hurst, hurstn@missouri.edu, 573-882-6217

<http://munews.missouri.edu/news-releases/2014/0303-st-louis-couple-gives-2-5-million-to-fund-veterinary-medicine-scholarships-at-mu/>

Hank Foley Named MU Senior Vice Chancellor for Research and Graduate Studies;
Leona Rubin Named MU Associate Vice Chancellor for Graduate Studies, UM
Associate Vice President for Academic Affairs and Graduate Education

March 13, 2014

Story Contact(s):

Christian Basi, BasiC@missouri.edu, 573-882-4430

<http://munews.missouri.edu/news-releases/2014/0313-hank-foley-named-mu-senior-vice-chancellor-for-research-and-graduate-studies-leona-rubin-named-mu-associate-vice-chancellor-for-graduate-studies-um-associate-vice-president-for-academic-affairs-an/>

Senior Veterinary Technician Named MU Service Champion

Stephanie Gilliam, RVT, BS, CCRP, VTS (Neurology), a senior veterinary technician in neurology/neurosurgery and small animal physical rehabilitation, has been named the February MU Service Champion by the MU Staff Advisory Council. The monthly campuswide award honors staff members who possess an exceptional work ethic and attitude and embody MU's four core values, respect, responsibility, discovery and excellence.

Gilliam has worked at the MU Veterinary Medical Teaching Hospital for seven years. She performs a wide variety of duties, including client communication, scheduling appointments for the neurology service and physical rehabilitation on neurologic and orthopedic patients.

In addition to her clinical duties, she has several teaching responsibilities, such as assisting third- and fourth-year students with the daily care of in-house patients and helping teach them how to perform a neurological examination. She also teaches Clinical Neurology to preveterinary and veterinary technician students as part of an online biomedicine program at the College of Veterinary Medicine and is in the process of developing an online small animal physical rehabilitation course.

Of all her responsibilities, Gilliam said her favorite part of her job is working with veterinary students in a teaching environment.

"It constantly challenges me to be the best that I can be," she said. "I learn something new every day."

In her nomination of Gilliam for the award, veterinary neurologist Joan Coates, DVM, MS, praised Gilliam's dependability, kindness and initiative. She said Gilliam was instrumental in developing the VMTH's Physical Rehabilitation Service and also has represented MU well at the lectures Gilliam has presented at national meetings for veterinary practitioners and technicians.

"We as a service are very proud of her accomplishments, which are pivotal to providing exceptional service and care to our companion animal patients," Coates wrote. "She quietly leads by example and is an excellent influence on those around her. I sincerely respect her composure, attitude and work ethic."

Gilliam said she was honored just to have been nominated for the award.

"I love my job and the people I work with," she said. "It is easy to do a good job when you are happy in your work and when you are appreciated."

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Stephanie Gilliam (center) receives her Service Champion Award from Drs. Daniela Mauler, Dennis O'Brien and Joan Coates, as well as a Staff Advisory Council representative.

Get Fit with Fido Dog Jog is a Fun Way to Exercise with Pets

An upcoming race at the MU College of Veterinary Medicine will offer a unique twist on the usual 5K: a chance to run with your dog.

The Dog Jog, sponsored by the College's Pre-Vet Club and Student Chapter of the American Veterinary Medical Association, will feature a 5K run and a 2.5K walk. It will be held April 5 at the College, 1600 E. Rollins Road. All proceeds benefit the Central Missouri Humane Society.

A pooch is not required to participate, though SCAVMA representative Alicia Tutino encourages people to bring their dogs.

"I know personally for my dog and I, I feel like we form a strong bond while running with each other; we both are tuned into what the other is doing while just simply enjoying our environment," she said. "Running or walking with your pet is also a great way to get some physical exercise."

Owners who wish to bring their dogs, but wonder whether they'll be up to the task of running, should gauge their pets' activity level and any health conditions, such as being overweight or having heart problems, said Deborah M. Fine, DVM, MS, associate professor of veterinary cardiology.

"I would say that almost all dogs less than 5 years of age that are overtly healthy to the owner are probably healthy enough to run a 5K," she said. "Whether they are 'willing' to run a 5K is another story!"

While their owners might wish to train before the event, second-year surgical resident Ryan McCally, DVM, said active, healthy dogs probably wouldn't need to do any extra running in advance.

"I think most healthy dogs would be able to handle that," he said. "But they'll let you know if they're uncomfortable with the pace."

Owners of dogs that are normally sedentary or have arthritis should plan on walking, McCally said.

All dogs must be on a 4-foot leash.

Human participants will receive a free T-shirt and raffle tickets for a chance to win gift certificates and gift baskets. Their canine companions will receive a goody bag with treats and toys.

The cost of registration is \$15 by March 20 and \$25 after that date.

For more information or to register, go to cvm.missouri.edu/dogjog/.

MU's Raptor Rehabilitation Project Releasing a Bald Eagle

The University of Missouri [Raptor Rehabilitation Project](#) will release a mature bald eagle back into the wild after months of rehabilitation, at noon on Saturday, April 5. The release will take place at 7254 Coon Club Road in Versailles, Mo.

Marquis is a mature bald eagle who was found in Benton County on May 5, 2013. When he arrived at the Raptor Rehabilitation Project he was examined and found to be in severe shock. He was given shock dose fluids and pain medications and provided supportive care. It seemed unlikely he would survive the night due to the severity of his shock. However, he surprised Raptor Rehabilitation Project members and was given a more thorough examination the following day. Radiographs revealed his right ulnar carpal bone (equivalent to a wrist bone) was fractured and displaced. A pelvic fracture was also found. After healing, he was put in a flight cage to rebuild flight muscles, but he wouldn't fly. Further examination revealed he had also sustained a dislocated shoulder. Physical therapy was given for weeks in an attempt to heal the shoulder. With little improvement, project members decided Marquis would not be releasable and put him back in a flight cage to wait until a new home could be found for him. While in the flight cage, he began to fly and his strength increased. The therapy had worked after all. After months of hard work and he can now be released back into the wild.

This event is free and open to the public. Weather permitting, project education coordinators present with some of the resident raptors to offer information and answer questions about birds of prey.

The Raptor Rehabilitation Project rehabilitates injured birds of prey before returning them to the wild. The project gives veterinary students, community members and other MU students the opportunity to work hands-on with professional veterinary medical faculty and cutting-edge technology to rehabilitate and release injured or ill birds of prey.

Local Investor Group Helps Biotech Startup Animal Health Specialties

Columbia-based angel investor group Centennial Investors recently announced a \$230,000 investment into local biotech startup, Animal Health Specialties, based at the MU Life Sciences Incubator at Monsanto Place. The company is developing a platform drug to treat cachexia, which is the wasting of lean body mass often associated with cancer, in companion animals, as well as a drug to help eliminate the need for antibiotics for production animals.

Dr. Kenneth Gruber is the president and CEO of Tensive Controls Inc. and a faculty member at the University of Missouri. He founded Animal Health Specialties as a subsidiary of Tensive Controls Inc.

“Leveraging the resources of the University of Missouri has made a big difference in our ability to move forward,” Gruber said. “Combined with Centennial’s assistance, we hope to make a difference in the way infectious diseases are treated.”

Dr. Carolyn Henry, who works with Gruber at the MU College of Veterinary Medicine Department of Veterinary Medicine and Surgery, commented, “Dr. Gruber’s work and the effort to commercialize it represent a wonderful alliance with the University of Missouri. I really do believe we will do great things together.”

Centennial Investor member Greg Wolff is investment team leader, working as part of a group of approximately 30 private investors who are investing the \$230,000 into Animal Health Specialties.

“We are pretty excited about the investment,” Wolff said, “Animal Health Specialties is working on what could be blockbuster drugs that will change everything for pet owners, farmers and others who need production animals; treating cachexia and helping to eliminate the need for antibiotics for these animals will change domesticated animal health as we know it.”

Centennial Investors reviews a wide range of deals each year, and members invest in a select few that they think will be great successes.

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CVM Student's Article Featured in Publication

An article penned by Kenton Hoernig, a second-year student at the MU College of Veterinary Medicine, was featured in the February 2014 issue of M-2 Magazine, a Belgian publication that focuses on mastitis and milk quality and serves dairy professionals. The article is a summary of Hoernig's master's thesis.

Hoernig earned his bachelor's degree in animal science from MU. He went on to complete a master's degree under the guidance of Dr. John Middleton, a professor of large animal medicine in the Department of Veterinary Medicine and Surgery at MU's College of Veterinary Medicine. As part of his master's thesis, Hoernig researched whether an antimicrobial fusion protein could be used to kill *Staphylococcus aureus* cells. *Staph. aureus* bacteria are a frequent cause of contagious mastitis in dairy cattle. The study used a protein from the Human Immunodeficiency Virus as a delivery mechanism to carry a bacteriolytic enzyme lysostaphin into cells in an effort to kill *Staph. aureus* sequestered intracellularly in the mammary glands of chronically infected Holstein cows.



Middleton said that the Hoernig's article was selected for publication after the M-2 editorial board asked members of a multistate mastitis research project and mastitis research workers for suggested graduate student theses for the edition. Middleton proposed Hoernig's paper, which was subsequently accepted.

Hoernig, a member of the CVM Class of 2016, serves as the captain Veterinary Medical Teaching Hospital After Hours Clinic Crew. He is also a member of the Veterinary Business Management Association, Student Chapter of the American Veterinary Medical Association, Student Chapter of the American Association of Bovine Practitioners, Student Chapter of the Veterinary Emergency and Critical Care Society, and American Animal Hospital Association. He was raised on a family farm in Perryville, Mo. He initially hoped to work with companion animals. However, his interest in food animals developed as he pursued his studies in animal science and worked part-time at the Land O' Lakes Inc. dairy, a part of Purina's Longview Animal Research Center in Gray Summit, Mo. Although he has no definite plans upon completion of veterinary school, he looks to pursue a career as a mixed animal practitioner.

Research Assistant Honored for Public Health Achievements

Pam Thorne, research assistant and laboratory manager in the MU College of Veterinary Medicine Department of Biomedical Sciences, has been selected for induction into MU's Gamma Eta chapter of Delta Omega, the honorary society in public health. Members are selected for outstanding scholarly achievement and dedication to public health.

Thorne is pursuing a master's degree in public health at MU. She was one of four MPH students chosen to join Gamma Eta this year, in addition to 10 alumni and one faculty member.

The purpose of Gamma Eta is to enhance connections between public health research and practice and to foster relationships among MPH scholars, alumni, researchers and practitioners, and those in related scientific and social disciplines.

"Public health is important because it addresses the health of entire populations by looking at the big picture rather than simply focusing on treating individuals," Thorne said. "My primary interests involve preventable diseases and their cost on our society."



In her role as a research assistant and laboratory manager, Thorne supervises and trains staff, undergraduate students, graduate students and postdoctoral fellows in procedures and techniques used in the laboratory of Dr. Harold Laughlin, professor and chair of Biomedical Sciences. Thorne is responsible for the daily operations of the lab, collecting, analyzing and presenting data, developing new techniques, writing laboratory and animal use protocols, and ensuring proper use and care of laboratory animals.

Thorne has worked in Laughlin's lab for 23 years studying the effects of exercise on cardiovascular disease, obesity and Type 2 diabetes. In her more than 30 years of research experience at MU, she has contributed to work presented in scientific journal articles, seminars and scientific conferences and has co-authored numerous journal articles and abstracts.

When Thorne retires from research, she plans to shift her focus to prevention and promotion programs in schools, businesses and communities, she said. She is particularly interested in workplace wellness programs and has been asked to assist in developing a wellness program for a private college in mid-Missouri. As the CVM Wellness Ambassador, she promotes health in the workplace by making colleagues aware of programs offered through the MU Healthy for Life program.

Delta Omega was founded in 1924 at the Johns Hopkins University School of Hygiene and Public Health to recognize outstanding achievement in public health, a field that was still in its infancy. Today the honorary society has expanded to more than 80 chapters throughout the world and more than 15,000 members.

New MU Chancellor Addresses Connaway Society

The John W. Connaway Society held its annual social Saturday, April 5, prior to the Gentle Doctor Benefit. The Connaway Society was formed to encourage private participation in the support and development of the College of Veterinary Medicine, and its membership is dedicated to securing the future of the College.

Members enjoyed cheese, fruit, wine and other beverages during a reception at the Holiday Inn Executive Center in Columbia. College of Veterinary Medicine Dean Neil C. Olson addressed the donors to the College before introducing guest speaker MU Chancellor R. Bowen Loftin.

Dr. Olson recounted information about the organization's namesake and the early history of comparative medicine at Mizzou. Although he taught veterinary medicine for many years John Connaway held a doctorate in comparative medicine from the Chicago Veterinary College and an MD from the University of Missouri in 1891. Connaway had intended to pursue a career in human medicine, but he diverted from his planned career path on the advice of a mentor who advised him that farmers would be quicker and more willing to pay for treating their horses or cows than their sick wife or children.

Dr. Loftin discussed the importance of comparative medicine and how the resources available at Mizzou, with its College of Veterinary Medicine, School of Medicine and College of Agriculture, Food and Natural Resources, position the University to accelerate discovery within the One Health discipline.

"We are linked together inseparably with the health of plants and the health of animals, as humans," he said. He also talked about MU's Comparative Oncology Program and the recent partnership between the University's Ellis Fischel Cancer Center and Houston, Texas-based MD Anderson Cancer Network, which makes Mizzou the only academic medical center in the country affiliated with MD Anderson.

Loftin predicted that the next advances in human health will be made at an institution like MU, which is in a position to chart the course. "This is an exciting moment, folks. We are watching a birthing," he said.

Following the reception, Connaway Society members had the opportunity to preview Gentle Doctor Benefit auction items prior to the start of the event.



MU Chancellor R. Bowen Loftin meets with members of the John W. Connaway Society on April 5. He talked about his own interactions with veterinarians as a child growing up on a farm, and the importance of veterinarians to rural Missouri as well as to research into comparative medicine.

Alumna Wins Motorcycle in Gentle Doctor Benefit Raffle

Melanie Swope rode on the back of a motorcycle once, just around her driveway as a child.

"I'm more like the uneasy rider than the easy rider," she said.

Swope, DVM '88, was attending her 25-year class reunion in September when she heard about the motorcycle raffle for this year's MU College of Veterinary Medicine Gentle Doctor Benefit, an annual gala to raise funds for veterinary student scholarships. Swope thought buying a ticket would be a good way to support her alma mater. The prize didn't make much of a difference to her; after all, she never wins anything.

Consequently, the Cuba, Mo., native was stunned when she was notified her ticket had been drawn during the April 5 benefit.

Although she was thrilled by her good fortune, she has decided to sell the motorcycle, a custom bike built by Gary Savill and donated by him and his wife, Barbara Stampfli-Savill, and their business, Silver Wraith Choppers.

"I would rather it go to somebody who would enjoy it," Swope said. "I don't even have friends who ride motorcycles. We're all horse people."

She is trying to find a buyer with a connection to the veterinary school and hopes to donate some of the proceeds to the College.

Savill delivered the motorcycle to Swope this week. It features artwork inspired by the College mascots, the mule team of Tim and Terry.

"That's awesome," Swope said when she first saw the chopper. Her husband, K.C. Swope, DVM '88, was also impressed.

Showing off the bike's features – which include chrome-finish upper and lower controls, a custom-built tank and rear fender, and a king/queen seat with tuck-away passenger pegs – Savill explained how custom motorcycles resemble animals in that they need constant maintenance and care.

Anyone interested in purchasing the chopper can contact Swope at the Cuba Veterinary Clinic, 573-885-7775.



Drs. Melanie and K.C. Swope of Cuba, Mo., take delivery of the custom-built motorcycle Melanie Swope won during the 2014 Gentle Doctor Benefit raffle. Gary Savill (right), of Silver Wraith Choppers, built the motorcycle and donated it to the MU College of Veterinary Medicine as a fundraiser for student scholarships.



Gary Savill goes over the title to her new motorcycle with Melanie Swope.

Dog Ownership Benefits Families of Children with Autism, MU Researcher Finds

April 14, 2014

Story Contact(s):

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<http://munews.missouri.edu/news-releases/2014/0414-dog-ownership-benefits-families-of-children-with-autism-mu-researcher-finds/>

Alumnus Returns as Phi Zeta Research Day Speaker

In 1986, Dr. Albert Jergens, then a resident in small animal internal medicine at the MU College of Veterinary Medicine, was awarded first place for his abstract presentation at Phi Zeta Research Day. On May 9, he will return to Columbia to again participate in the annual event — this time as the keynote speaker.

Although he's received several awards since that day nearly 30 years ago, Jergens still recalls the "heated competition" he faced.

"I remember it being great fun," he said. "I think that those experiences really stimulated my interest in clinical research."

Jergens is a professor and associate chair for research and graduate studies in the Department of Veterinary Clinical Sciences at the Iowa State University College of Veterinary Medicine. He is also a staff internist at the Lloyd Veterinary Medical Center.

His keynote address, "Animal Models for Human Inflammatory Bowel Disease," will discuss the role of the clinician scientist in investigating the pathogenesis of inflammatory bowel disease in animals and its similarities to human Crohn's disease and ulcerative colitis, he said. The presentation, sponsored in conjunction with the Niemeyer Lecture Series, will begin at noon in the Veterinary Medicine Auditorium.

In addition to Jergens' keynote address, Phi Zeta Research Day will feature presentations of research projects by veterinary students, interns, residents and graduate students. New members of the Phi Zeta Veterinary Honor Society will be inducted at a banquet that evening.

Jergens said he hopes the day will inspire students by providing them a good introduction to research.

"You don't know whether you like something until you're exposed to it," he said. "At the end of the day, we're all concerned about improving animal health and, in turn, improving human health."

Dr. Craig Franklin, professor of veterinary pathobiology at the CVM, first met Jergens during their residency and then reconnected with him during a presentation at Iowa State. He said Jergens would excel at promoting research to students as either a component of a veterinary career or its own option.

"The purpose of the Phi Zeta speaker is to find someone who's a combination of a really good researcher and a dynamic speaker," he said. "He's a great role model for a student who's considering veterinary research. I think he's going to be a phenomenal speaker."

Jergens completed his undergraduate and veterinary studies at Texas A&M University. He also received a master's in veterinary pathology and a PhD in immunobiology at Iowa State. He is a diplomate of the American College of Veterinary Internal Medicine (ACVIM).

Jergens has worked at Iowa State since 1989. His clinical and research interests include gut microbiota-host interactions mediating gastrointestinal health and disease.

Phi Zeta Research Day is sponsored by Purina, Zoetis, the College of Veterinary Medicine Office of the Dean and the College's Office of Research.



Dr. Albert Jergens

Retired CVM Department Chairman Charles Martin Passes Away

Dr. Charles E. Martin, 84, of Troy, Mo., passed away May 5, 2014, after a long battle with respiratory and heart disease. He was born on Nov. 7, 1929, in Lincoln County, Mo., near Moscow Mills, the youngest child of James S. and Mary E. (Schaffer) Martin.

After attending local schools he graduated from Buchanan High School in Troy in 1947. For several years he farmed, and then from 1940 to 1952 he attended the University of Missouri in Columbia where he studied agriculture. He served in the United States Air Force from 1952 until 1954 and was honorably discharged. In 1954 he entered the MU College of Veterinary Medicine, earning his doctor of veterinary medicine degree in 1958. After graduation he worked for several years in veterinary clinics before working in his own private practice. Dr. Martin left his practice in 1965, and began attending graduate school at Purdue University. In June 1967 he received a master's degree.

It was at this time he joined the faculty at MU College of Veterinary Medicine. He worked at the Department of Veterinary Medicine and Surgery specializing in theriogenology from 1967 until 1980. Dr. Martin served as department chairman from 1974 until 1980. He then became a technical service veterinarian with the Upjohn Company (Zoetis). He remained at Upjohn until his retirement in 1993. Dr. Martin stayed busy throughout his retirement serving as a part-time consulting veterinarian for Cargill Swine from 1993 until 2003. In addition to his private practice, teaching, technical service and consulting career, he is a past president of the Missouri Veterinary Medical Association and a charter diplomate of the American College of Theriogenologists.



Dr. Martin is survived by his three sons, Tony Martin and his wife, LeeAnn, of Rocheport, Mo., Jim Martin of Columbia, Mo., and David Martin and his wife, Alondra; eight grandchildren; three great-grandchildren; niece Karen Brown of Troy, who was his caregiver and traveling companion for his last few years; older brother Kenneth Martin, and his wife, Ardell, of Centralia, Mo.; older sister Alma Singleton and her husband, Robert, of Clemont, Fla.; and one sister-in-law, Carolyn Shramek of Middletown, Mo.; as well as many other relatives and friends.

He is preceded in death by his beloved wife, Emilie Martin, who passed away in 1986, three half-sisters, Earl, Lorene and Mary, and two half-brothers, Hubert and Robert.

Visitation will be held from 2 to 5 p.m. on Saturday, May 10, 2014, at the McCoy-Blossom Funeral Home and Cremation Center in Troy. A memorial service will follow at 5 p.m. at the funeral home with the Rev. Eugene Rahmier officiating.

Genetic Pre-Disposition Toward Exercise and Mental Development May be Linked, MU Study Finds

April 15, 2014

Story Contact(s):

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<http://munews.missouri.edu/news-releases/2014/0415-genetic-pre-disposition-toward-exercise-and-mental-development-may-be-linked-mu-study-finds/>

CVM Dean Neil C. Olson appointed to USDA Advisory Board

Agriculture Secretary Tom Vilsack recently announced the appointment of eight individuals to serve on the National Agricultural Research, Extension, Education, and Economics (NAREEE) Advisory Board. Dr. Neil Olson, dean of the MU College of Veterinary Medicine, will serve a three-year term on the board representing American colleges of veterinary medicine.

The board advises the secretary of Agriculture and land-grant colleges and universities on top national priorities and policies for food and agricultural research, education, extension and economics. In addition, the board holds stakeholder listening sessions, reviews draft guidance for competitive-grant programs, advises the Agriculture Research Service on its scientific peer review process for national programs, conducts an annual review of all agricultural research, extension, or education activities conducted or funded by the department for relevance to national priorities and adequacy of funding, and advises the USDA's Research, Education, and Economics (REE) Mission Area in the development of its draft strategic plan.

Olson has served as dean of the CVM since 2007. He earned a bachelor's degree in veterinary science in 1973 and a doctor of veterinary medicine in 1975 from the University of Minnesota. He completed a small animal internship at Cornell University in 1976 and a small animal surgery residency at Michigan State University in 1979. He went on to earn a doctorate in physiology from Michigan State University in 1982.

Each of 25 NAREEE advisory board members represents a specific category of U.S. agricultural stakeholders as outlined in the 2008 Food, Energy, and Conservation Act. These areas include farming or ranching, food production and processing, forestry research, crop and animal science, land-grant institutions, non-land grant colleges or universities with a historic commitment to research in the food and agricultural sciences, food retailing and marketing, rural economic development, and natural resource and consumer interest groups, among many others.

Olson was nominated to serve on the board by the Association of American Veterinary Medical Colleges. He said he is looking forward to the opportunity to represent veterinary medicine as an integral component of agriculture.

"There has to be a balanced perspective of regulations and policy issues controlling the raising and feeding of animals," he said. "There are animal welfare issues that are also regulated by the USDA. It's important that a veterinarian serve on the board to represent the profession."

CEO of AVMA PLIT to Speak at Commencement

Among Steve Jobs' words of wisdom is a 1995 quote that inspires Dr. Janet Donlin: Don't just live a life; build your life.

She plans to bring that message to the MU College of Veterinary Medicine on May 16 as the guest speaker for the college's 65th commencement. Commencement ceremonies will be held at 1 p.m. in Jesse Hall on the MU campus.

As a veterinary student, Donlin didn't understand the breadth of career opportunities in veterinary medicine, she said. She said she hopes her keynote address will make students more aware of the diverse options the profession offers.

Donlin has experienced firsthand the variety of choices a doctor of veterinary medicine degree offers. She began her career in a mixed animal practice and then held faculty positions at the University of Minnesota-Waseca while also working at an emergency clinic. She served in several roles at the American Veterinary Medical Association from 1991 to 2007, when she became the chief veterinary officer of Hill's Pet Nutrition Inc. There she was responsible for managing global veterinary teams and driving the development of products and services for the veterinary profession.

Donlin is now the chief executive officer of the American Veterinary Medical Association Professional Liability Insurance Trust. Founded in 1962 to ensure veterinarians would have an advocate in the management of their professional liability claims, the trust has expanded its sponsored program offerings to include veterinary license defense, business owner policies, workers' compensation, employment practices liability, automobile, and comprehensive personal insurance solutions for AVMA and student AVMA members. About 60,000 veterinarians participate in the PLIT-sponsored program.

In her role as CEO, Donlin is responsible for the business operations of the trust. She helps AVMA members insured through PLIT-sponsored programs understand issues related to malpractice allegations and practice situations. She also reviews professional liability claims, identifies experts and appraisers for claims defense, and advises the insurance broker and underwriters regarding new developments in veterinary medicine.

"I believe passionately that the AVMA is a great association for its members," she said. "It's nice to be a key part of that and to be able to help veterinarians in the trenches do their jobs."

Donlin graduated from the University of Minnesota with a doctorate of veterinary medicine and a bachelor of science in medical technology. In 2006, she was the first veterinarian to obtain the American Society of Association Executives Certified Association Executive credential.

Donlin holds active memberships with the AVMA, Illinois Veterinary Medical Association, American Animal Hospital Association, American Society of Association Executives and the American Association of Corporate and Public Practice Veterinarians.

Donlin has a daughter who is a first-year veterinary student at MU.



Dr. Janet Donlin

CVM Professors Receive Excellence in Education Awards

Among the 10 recipients of MU's Excellence in Education Awards for 2014 were two College of Veterinary Medicine faculty members, Drs. Chris Baines and Rebecca Johnson. Baines is an assistant professor of biomedical sciences at the college and an investigator at the Dalton Cardiovascular Research Center. Johnson is a professor at the college, director of the Research Center for Human-Animal Interaction, and the Millsap Professor of Gerontological Nursing in the Sinclair School of Nursing.

Co-sponsored by the Division of Student Affairs and the MU Parents Leadership Council, the award recognizes faculty members, advisers and academic administrators who have made significant contributions to the out-of-class learning experiences of MU students and who have demonstrated a long-standing commitment to student learning and personal development.

"These individuals have created an environment where the students take the knowledge and skills that they've learned in the classroom and apply them outside the classroom," said Interim Provost Ken Dean at the April 29 awards ceremony. "They are role models, they are mentors, and they often lend a willing ear when they need to."

Thanks to this faculty support, "we know that when our students leave here they are going to be successful," said Vice Chancellor for Student Affairs Cathy Scroggs.

Dr. Baines

Baines earned his bachelor's degree in pharmacology from the University of Bath in Avon, Great Britain, and his PhD in basic medical sciences at the University of South Alabama in Mobile. He came to MU in 2008.

"I am genuinely honored, flattered and humbled that folks thought I was worthy to be even considered for nomination," Baines said. "I could not do any of this without the unbelievable mentors and role models I have here at the College of Veterinary of Medicine. They have taken the time to teach me and have given me the opportunities to be a greater part of our students' education."

In addition to his role as course director for Veterinary Cell and Molecular Biology, Baines is involved in activities outside of the classroom. He is co-director and a mentor for the Veterinary Research Scholar Program, which allows students to explore different facets of biomedical research to expose them to potential career choices they may not have considered. He also participates in the Veterinary Enrichment and Teambuilding orientation program, a three-day, overnight teambuilding event for incoming first-year veterinary students.

"I'm proud to be part of the VET orientation program as this provides the incoming students the opportunity to team build, to learn to tackle and overcome problems together, and to learn how to communicate better with their peers," Baines said. "These are all things that will aid the students not just through school but also through their entire veterinary careers."

Dr. Doug Bowles, professor of biomedical sciences, nominated Baines. He said his rapport with students is enviable.

"In the classroom, Chris is an outstanding teacher who presents course material in a clear and concise manner and generates enthusiasm for the subjects covered," Bowles wrote. "His rapport with the students, despite the complexity of the subject material he covers, is a testament to his ability as an effective instructor."

Dr. Johnson

Johnson earned her bachelor's degree in nursing from the University of Dubuque in Iowa, her MPhil from the University of Edinburgh in Scotland, and her PhD from the University of Iowa in 1992. She joined the MU Sinclair School of Nursing in August 1999 as the Millsap Professor of Gerontological Nursing and Public Policy and shortly thereafter was given a joint appointment in the College of Veterinary Medicine for her research on human and companion-animal interaction.



Drs. Chris Baines and Rebecca Johnson

Johnson established the Research Center for Human-Animal Interaction (ReCHAI) in 2005. The center's research has demonstrated that human-animal interaction benefits both people and companion animals by enhancing their physical and emotional well-being. Projects studying these benefits have included an animal visitation program for older adults and a program that helps military veterans fight post-traumatic stress disorder symptoms by training shelter dogs. Johnson is president of the International Association of Human-Animal Interaction Organizations.

Johnson teaches Human-Companion Animal Interaction, a class that requires each student to participate in a minimum of 20 hours in a service-learning project. Students select a project from different human-animal interaction organizations, including ReCHAI. In addition, she offers opportunities outside of the classroom for undergraduate and graduate students to engage in projects at ReCHAI.

"Working with students outside of the classroom is highly rewarding and also greatly enhances the work of our team at the Research Center for Human-Animal Interaction," she said. "Our work is entirely based in the community, so it must involve students outside of the classroom. Students engage in our work enthusiastically and bring diverse insights and skills, which make them delightful to work with. They also make significant contributions to our work."

In her nomination of Johnson, Dr. Gretchen Carlisle, a postdoctoral fellow at ReCHAI, said interactions with Johnson help students realize their full potential.

"Students who work or come into contact with Dr. Johnson learn much more than content lessons, they learn life lessons," she said. "She has very high expectations of her students, and they respond with enthusiasm and gratitude."

ACLAM Honors CVM's Franklin with Comparative Medicine Scientist Award

The American College of Laboratory Animal Medicine (ACLAM) has awarded MU College of Veterinary Medicine Professor Craig Franklin its Comparative Medicine Scientist Award for 2014. In addition to his position as professor within the Department of Veterinary Pathology, Franklin, DVM, PhD, is the director of the MU Mutant Mouse Regional Resource Center, a position he has held since 2011. He has also served as director of Comparative Medicine Program since 1998 and head of the Veterinary Research Scholars Program since 2005.

The Comparative Medicine Scientist Award is the ACLAM's highest honor for scientific achievement in comparative medicine. Judging is based on outstanding contributions to the field through research publications, reviews, book chapters and lectures over a period of time between five and 20 years. The award criteria states that recipients must have had a significant impact on the field of animal-based biomedical research.

Franklin earned a bachelor's degree in agriculture from the University of Missouri in 1984. He went on to complete his doctor of veterinary medicine in 1987, a master's in laboratory animal medicine in 1990, and a PhD in pathology in 1992, all from the University of Missouri. He also undertook a residency in laboratory animal medicine from 1988-1991.

Franklin began his professional career at MU in 1987 as a research associate. After completing his residency and PhD, he was appointed as an assistant professor in 1992 and an associate professor in 1999. He became a professor in 2011.

Dr. Gregory Boivin, a professor in the Department of Pathology and Orthopaedic Surgery and director of Laboratory Animal Resources at Wright State University in Dayton, Ohio, nominated Franklin for the award. In his letter to the nomination committee, Boivin noted that Franklin's research has been continuously funded through the National Institutes of Health or industry partners for 15 years. That research has resulted in the publication of more than 90 articles, most related to infectious diseases in laboratory animals. He also noted that Franklin's mark on the field extends to the more than 60 post-DVM graduate students he has trained who have also gone on to careers in laboratory animal medicine.

In letters supporting his nomination, other colleagues commended Franklin's mentorship of graduate students and noted that he also encourages veterinary students to explore careers in research through his involvement in the Veterinary Research Scholars Program.

Franklin received the award during the ACLAM's annual forum held earlier this month in Coeur d'Alene, Idaho.



Dr. Sue VandeWoude, professor of Comparative Medicine at Colorado State University, presents Dr. Craig Franklin with the ACLAM Comparative Medicine Scientist Award.

Students and Faculty Honored During Annual Honors Banquet

More than \$289,000 was awarded May 13 during the annual Honors Banquet recognizing some of the most accomplished MU College of Veterinary Medicine students. The event featured the presentation of awards acknowledging scholastic achievement, clinical proficiency, community service and leadership. Several of the scholarships were offered in memory of former students and beloved pets.

While the recipients of most awards were MU veterinary students, they shared the spotlight and honors with faculty members, technicians, interns and residents. The students themselves gave several awards to peers and mentors whose teaching and leadership have helped guide them through the veterinary curriculum. Students in each academic class selected an outstanding teacher to receive 2014 Golden Aesculapius Teaching Awards. Winners were Dr. Christopher Baines, honored by the Class of 2017; Dr. Charles Wiedmeyer, honored by the Class of 2016; Dr. Dawna Voelkl, recognized by the Class of 2015; and Dr. Mirae Wood, who was the honoree chosen by the graduating Class of 2014.

Wood, who is an assistant teaching professor of small animal surgery in the Department of Veterinary Medicine and Surgery, went on to win yet another honor when she was named the recipient of this year's Zoetis Distinguished Veterinary Teacher Award. The award is supported by Zoetis, and the winner is chosen by members of the graduating class, who select an outstanding teacher who, through ability, dedication, character and leadership, contributes to the advancement of the profession.

Zoetis also sponsored the Zoetis Award for Veterinary Research Excellence, which this year was presented to Dr. Rajiv Mohan. Mohan, PhD, is the Ruth M. Kraeuchi Endowed Professor in Veterinary Ophthalmology at the CVM.

The recipient of this year's Dadd Award was Dr. William Fales. The Dadd Award honors excellence in veterinary medicine teaching, and its recipients are selected by their faculty peers. Fales, PhD, is a professor within the Department of Veterinary Pathobiology. He teaches diagnostic veterinary bacteriology and mycology and pharmacology of antimicrobial agents.

The 2014 Honors Banquet took place at the Courtyard by Marriott in Columbia.

[See the complete list of 2014 award winners.](#)

→The CVM Class of 2014 selected Dr. Mirae Wood (second from left) as the recipient of the year's Zoetis Distinguished Veterinary Teacher Award. She is pictured with last year's winner, Dr. Dusty Nagy (left), CVM Dean Dr. Neil Olson, and Dr. Marnie Mellencamp, academic liaison for Zoetis.



Dr. Rajiv Mohan (right) received the Zoetis Award for Veterinary Research Excellence from CVM Dean Dr. Neil Olson. Also pictured is Marnie Mellencamp, academic liaison for Zoetis.



Dr. Neil Olson, CVM dean (left), presented the 2014 Dadd Award to Dr. William Fales.



CVM Graduates 112 New Veterinarians

The University of Missouri College of Veterinary Medicine graduated 112 new veterinarians May 16 during the college's 65th annual commencement. Dean Neil C. Olson, DVM, PhD, served as the master of ceremonies for the event.

During her commencement address, Janet Donlin, DVM, chief executive officer of the American Veterinary Medical Association Professional Liability Insurance Trust, shared some of the lessons she has learned in the years since she earned her doctor of veterinary medicine degree.

She said she finds inspiration in a quote by Steve Jobs: "Don't just live a life; build your life."

"To me that really resonates," Donlin told the graduates. "The fact that you're sitting in these chairs means that you get that. You are building your life."

Donlin encouraged the graduates to be unafraid to take risks when opportunities arise and to focus on their strengths rather than their weaknesses.

"What do we all want to be?" she said. "Passionate, committed, successful veterinarians. You will do that by establishing your own personal goals, knowing how you want to build your life. Make sure you're brave and you're bold."

To watch Dr. Donlin's speech, please [click here](#).

David Prigel, DVM, president of the Missouri Veterinary Medical Association, led the graduates in reciting the Veterinarian's Oath. Ron Cott, DVM, associate dean for Student and Alumni Affairs and director of Advancement, presented the graduating class for investiture, which was conducted by Linda Berent, associate dean for academic affairs, Bill Fales, PhD, professor of veterinary pathobiology, and Mirae Wood, DVM, assistant teaching professor of veterinary medicine and surgery. Former Missouri Supreme Court Judge Ann K. Covington, a member of the UM Board of Curators, conferred the doctor of veterinary medicine degree to the class members.

Members of the Class of 2014 selected Nathan Feyerabend to give a response on their behalf.

"It certainly feels unreal to be standing here celebrating this day, which once seemed so far away," he said. "Years of hard work, sleepless nights and occasionally substandard hygiene have all culminated in this moment."

Feyerabend recalled the challenges the graduates faced throughout their four years of veterinary college, from their first two years in the classroom through their clinical experiences, in which he said, "We dressed like doctors, talked like doctors and ran around like marathon runners." He thanked the families, friends and instructors who helped the graduates succeed and encouraged his classmates to be confident as they begin their careers.

"No matter where this great profession takes you, remember to enjoy the journey," Feyerabend said.



A group of newly graduated doctors of veterinary medicine celebrate following commencement ceremonies held May 16 at Jesse Hall.



Before the commencement ceremonies start, Karen Kreienseieck assists classmate Alicia Rueschhoff with her mortar board.



Graduation speaker Dr. Janet Donlin advises the Class of 2014 to be brave and bold in building their lives.



Abigail Owens receives her hood from Dr. Mirae Wood (right), assistant teaching professor, and Dr. Linda Berent, associate dean of academic affairs.



Dean Neil C. Olson presents Zijin Zhou with his diploma.



Led by Missouri Veterinary Medical Association President Dr. David Prigel, members of the MU College of Veterinary Medicine Class of 2014 recite the Veterinarian's Oath.



Dr. David Prigel leads the graduates in the Veterinarian's Oath.



Nathan Feyerabend gives the response on behalf of his classmates.

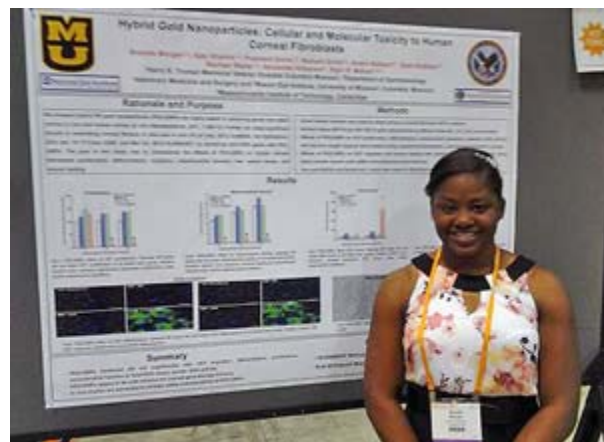


Meital Laks celebrates with her family and the CVM mule team, Tim and Terry.

Ophthalmology Fellow's Research an ARVO 'Hot Topic'

The Association for Research in Vision and Ophthalmology recently selected a research abstract by Brandie Morgan, PhD, a postdoctoral fellow in ophthalmology at the MU College of Veterinary Medicine, to feature as a "Hot Topic" during the annual ARVO meeting. The distinction, awarded to less than 3 percent of all 2014 abstracts submitted for the meeting, recognizes research that holds potential interest to the press and the public. Morgan presented her research May 5 at the meeting.

Morgan's abstract, "Hybrid Gold Nanoparticles: Cellular and Molecular Toxicity to Human Corneal Fibroblasts," was co-authored by Ajay Sharma, PhD, Rachel A. Waller, Nishant R. Sinha, Prashant R. Sinha, Audra N. Stallard, Saad Siddiqui and Rajiv R. Mohan, PhD, MSc. Sharma is an assistant research professor of veterinary ophthalmology, and Mohan is the Ruth M. Kraeuchi Endowed Professor in Veterinary Ophthalmology. Waller is a medical student, Nishant Sinha and Prashant Sinha are high school students, and Stallard and Siddiqui are undergraduate students.



Brandie Morgan presents her research into gold nanoparticles as a therapeutic delivery approach for treating corneal fibrosis.

"Corneal fibrosis caused by disease or injury is the third leading cause of blindness in humans and a predominant cause of vision impairment in animals," Morgan said. "Current treatment options are limited, costly and have low efficiency. The main goal of our lab is to identify better therapeutic targets and delivery options compared to those currently on the market.

"The research I presented at ARVO highlights one novel corneal therapeutic delivery approach, the use of gold nanoparticles. This approach has the potential to safely and efficiently deliver therapeutic drugs/genes to the cornea and provide long-term or even permanent relief from vision impairment associated with fibrosis."

Gold nanoparticles (GNPs) appear to be promising drug and gene delivery tools for the treatment of corneal disease and injury, Morgan said. Toxicity profiling is necessary to determine clinical usefulness of the tool. The purpose of Morgan's work was to identify and characterize any potential toxicity GNPs may induce on human corneal fibroblasts (HCF).

HCFs obtained from donor corneas were treated with GNPs for selected durations. Following treatment, several parameters were measured to analyze GNPs' effect on overall cell health, appearance and function. The results indicated GNPs do not alter the measured cellular features and appear safe for corneal gene therapy.

"I truly enjoy being a part of a laboratory that is heavily involved in translational research," Morgan said. "I appreciate the many opportunities Dr. Mohan has given me. Having this research selected as a hot topic is like a cherry on top."

Morgan earned her bachelor's degree in biology from Northwestern State University in Natchitoches, La., and her PhD in biological science from MU. She has served as a postdoctoral fellow in Mohan's lab since October 2013.

Franz Receives Award for Best Paper

Alexander Franz, PhD, assistant professor in the Department of Veterinary Pathobiology at the MU College of Veterinary Medicine, has won the 2014 award for best paper in the journal *Insect Molecular Biology*. Sponsored by the Royal Entomological Society, the award recognizes the best paper over a two-year period.

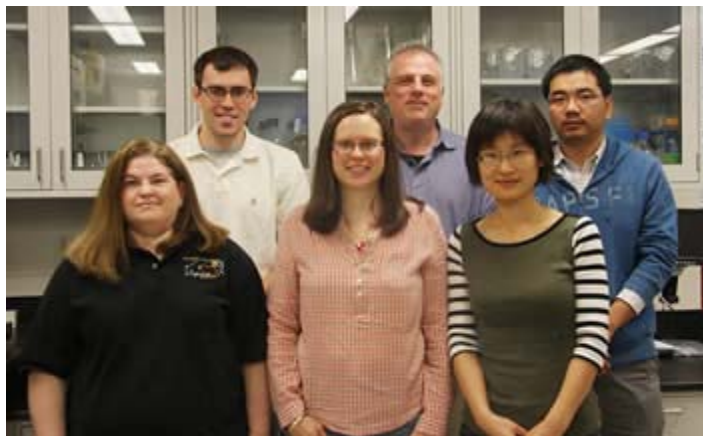
The paper, "Transgene-mediated suppression of the RNA interference pathway in *Aedes aegypti* interferes with gene silencing and enhances Sindbis virus and dengue virus type 2 replication," was published in February 2013. Franz's co-authors were C.C.H. Khoo, J.B. Doty, M.S. Heersink and K.E. Olson, all of Colorado State University. The research was funded by the National Institutes of Health and the National Institute of Allergy and Infectious Diseases.

Franz's research focuses on the molecular interactions of arboviruses with the yellow fever mosquito, *Aedes aegypti*. Arboviruses cause numerous emerging and resurgent human and veterinary diseases. Dengue virus and chikungunya virus are the two arboviruses the Franz group is currently studying. According to estimations by the Centers for Disease Control and Prevention, dengue virus has become the most wide-spread mosquito-borne virus infecting humans in tropical and subtropical regions of the world. Chikungunya virus, which often causes symptoms similar to dengue, is a newly emerging virus of African origin. It recently found its way to the Caribbean and into South America, causing disease outbreaks among the local human population.

Dengue and chikungunya viruses circulate between humans and mosquitoes. Following uptake of a bloodmeal from an infected human during biting, the viruses need to persistently infect the mosquito vector before being able to be transmitted to another human host. Control of these mosquito-borne viruses is difficult due to the lack of vaccines and therapeutics. Principal control efforts rely on vector control, such as insecticide applications, use of bed nets and removal of potential mosquito breeding containers around human premises.

There is a highly specific genetic interaction between an arbovirus and its mosquito vector, Franz said. Inside the mosquito an arbovirus is confronted with several hurdles such as tissue barriers and the mosquito's immune responses. Importantly, mosquitoes do not get sick from being infected with dengue virus or chikungunya virus, whereas humans frequently develop severe disease symptoms following infection.

Franz said it is assumed that an infected mosquito does not try to get rid of an arbovirus, as the human host would do. Nevertheless, the mosquito somehow still keeps the replicating virus in check, which allows the virus to survive and be transmitted to a new vertebrate host, fulfilling the transmission cycle.



Members of Dr. Alexander Franz's laboratory study the molecular interactions of arboviruses with the yellow fever mosquito, *Aedes aegypti*. Pictured are (from left) Michelle Gregory, Asher Kantor, Dr. Nicole Held, Dr. Alexander Franz, Jingyi Lin and Dr. Shengzhang Dong.



Aedes aegypti mosquitoes are infected with chikungunya virus in a biosafety level 3 biocontainment laboratory of the MU Laboratory of Infectious Disease Research.

The aim of Franz's research is two-fold: to understand the major genetic constituents in the mosquito that render the insect able to acquire and transmit an arbovirus, and to exploit or modulate these genetic factors to interrupt the transmission cycle as an alternative, novel arbovirus control strategy.

"As part of these efforts we previously discovered that the RNA interference pathway is a major antiviral immune pathway in the mosquito, which recognizes and destroys viral RNA genomes in a highly specific manner," Franz said. "In a previous effort, we were able to manipulate the RNA interference pathway in genetically modified mosquitoes in such a way that they became resistant to dengue 2 virus. In these mosquitoes the virus was completely eliminated."

In the research described in his award-winning paper, Franz and his co-authors tried the opposite: In genetically modified mosquitoes, they over-expressed a small protein originating from a beetle-killing virus known to disable the RNA interference pathway in invertebrates.

"Thus, we wanted to see what effect a dysfunctional RNA interference pathway would have on dengue virus and Sindbis virus, another human-infecting arbovirus, inside the mosquito," Franz said.

Their major observation was that these viruses reached significantly higher concentrations in the genetically modified mosquitoes in a much shorter period of time than in non-modified control mosquitoes, confirming the gatekeeper role of the RNA interference pathway.

Before coming to MU in January 2013, Franz spent 11 years at Colorado State University. There he worked as a postdoctoral researcher and a research scientist before being named an assistant professor. He received his bachelor's and master's degrees in agricultural sciences, as well as a PhD in plant pathology (plant virus-insect interactions), from the University of Kiel in Germany.

MU Phi Zeta Day Showcases Student Research

Each year, the University of Missouri College of Veterinary Medicine showcases the scholarly research conducted within the college during Phi Zeta Research Day. This year's Phi Zeta Research Day, held May 9, was the largest ever for the college with veterinary students, interns, residents, and graduate students sharing 59 posters and 22 oral presentations detailing their research projects. In addition to the student presentations, the day featured a keynote lecture and culminated in a banquet during which 29 new members were inducted into the esteemed Phi Zeta Veterinary Honor Society.

The College of Veterinary Medicine Dean's Office, College of Veterinary Medicine Research Office, Purina, Zoetis the Jesse L. Hartley Research Endowment in Veterinary Medicine, and the Niemeyer Visiting Lecturer Fund sponsored this year's Phi Zeta Day.

Dr. Albert Jergens, DVM, PhD, offered the keynote lecture. Jergens is a professor and associate chair for research and graduate studies in the Department of Veterinary Clinical Sciences at the Iowa State University College of Veterinary Medicine. He is also a staff internist at the Lloyd Veterinary Medical Center.

In his keynote address, "Animal Models for Human Inflammatory Bowel Disease," he discussed the role of the clinician scientist in investigating the pathogenesis of inflammatory bowel disease in animals and its similarities to human Crohn's disease and ulcerative colitis.

The following awards were presented to 2014 Phi Zeta Research Day participants:

Veterinary Professional Students

Posters

First Place, Pamela Zgoda

Second Place, Leanne Mathew

Third Place, Marcella Springstead

Honorable Mention, Celia Friedman Cowan

Honorable Mention, Christopher Kennedy

Honorable Mention, Shanna Nelson

Oral Presentations

First Place, Rowena Woode

Second Place, Stacy Krumme

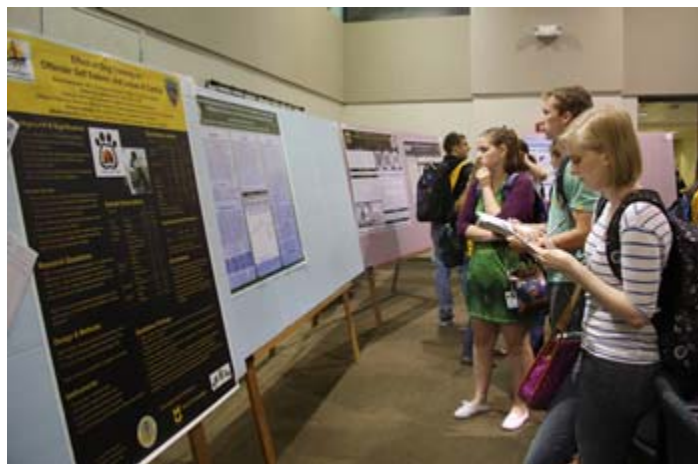
Interns, First-Year Residents and Graduate Students

Posters

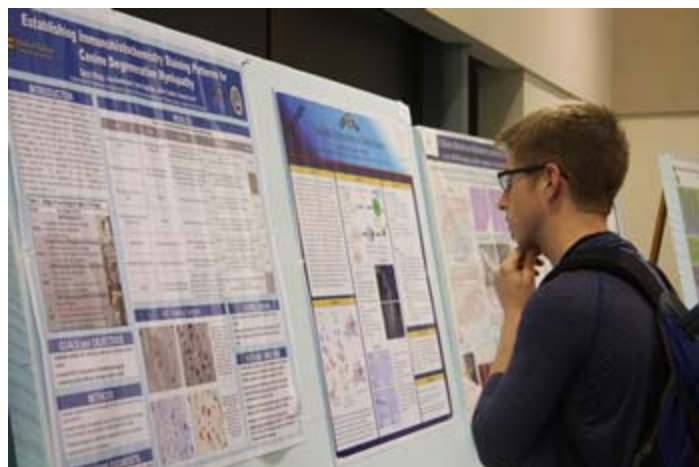
First Place, Erica Creighton

First Place, Daniel Davis

Third Place, Charles Washington



Phi Zeta Day 2014 saw record participation at the MU College of Veterinary Medicine with 59 individuals presenting posters detailing their research and another 22 giving oral presentations. The posters were displayed in the Adams Conference Center



First-year veterinary medicine student Lance Day reviews the information presented on a student's poster.



Thomas Reilly, PhD, associate clinical professor in the Department of Veterinary Pathobiology, served as a judge for the combined advanced graduate and postdoctoral students posters and oral presentations.

Oral Presentations

First Place, Michael Fink

Second Place, Christa Bernhard

Third Place, Megan Grobman

Second- and Third-Year Residents and Graduate Students

Posters

First Place, Kurt Marshall

Second Place, Marcia Hart

Third Place, Marina McCoy

Oral Presentations

First Place, Julie Trzil

Second Place, Jessica Hiemstra

Third Place, Carmella Pratt

Advanced Graduate and Postdoctoral Students

Posters and Oral Presentations

First Place, Manuel Gutierrez-Aguilar

Second Place, Miqdad Dhariwala

Third Place, Allison Ostdiek

Best Overall Veterinary Professional Student

Casandra Jacobs

Best Overall Intern, Resident, Graduate and Postdoctoral Student

Rachel Olson



Dr. Albert Jergens, DVM, PhD, offered the keynote lecture, "Animal Models for Human Inflammatory Bowel Disease," for Phi Zeta Day. Jergens is a professor and associate chair for research and graduate studies in the Department of Veterinary Clinical Sciences at the Iowa State University College of Veterinary Medicine.

New members of the Phi Zeta Veterinary Honor Society initiated into the organization during the evening banquet are:

Class of 2014

Sarah Katherine Bardsley

Bailey Carr

Penny Coder

Anthony James Dank

Kristin Nicole Dank

Rebecca Leggett

Sarah R. Pierson

Sarah Elizabeth Prochnow

Christopher M. Roberts

Marie Lynn Smith

Sarah J. Timmerman

Paige Hamilton Wallace

Class of 2015

Sage Martin Buckner

Amy Catherine Lack

Sarah Kelly

Sarah E. Motsinger

Erin M. Murphy

Katie Nadolny

Allison Rohde Newgent

Elena Nicole Rodriguez

Lance Serbousek

Megan Visger

Dana A. White

Residents

Carin E. Ahner

Tamara S. Hancock

Sarah Hansen

Natalie Christine Hoepp

Allison M. Ostidiek

Faculty

Kei Kuroki

ReCHAI to Sponsor Pet Education Day

Children who interact with pets can be motivated to increase their physical activity, learn responsibility and experience unconditional love, companionship and stress relief.

To help children learn more about safely interacting with pets, the University of Missouri Research Center for Human-Animal Interaction (ReCHAI) will sponsor a pet education event for children from 10 a.m. to 2 p.m. May 31 in the Adams Conference Center at the College of Veterinary Medicine, 1600 E. Rollins Road.

Activities at the event will include a special reading corner where children can choose a book to read to a therapy dog, a safety lesson on how to approach a new dog and understanding the body language of dogs, and an interactive opportunity to learn how scientists conduct surveys. In addition, a baby farm animal exhibit will feature goats, rabbits, ducks and chickens, as well as discussions about caring for these animals as pets. Activities will be led by faculty, undergraduate, graduate and veterinary medical students.



“Caring for pets is a common responsibility for children,” said Dr. Gretchen K. Carlisle, a ReCHAI postdoctoral fellow. “This interactive event will provide them with knowledge to help them be successful in this task.”

Children will also learn about the important work of service dogs and therapy animals, she said.

The cost of the event is \$8 per child, and adults are free. Children must be accompanied by an adult.

The first 100 children to register will receive T-shirts. Children who visit all the stations and complete a punch card will receive a free raffle ticket to enter to win a basket filled with summer activity items for children and pet products.

Proceeds will support travel scholarships for ReCHAI students to present research at conferences.

Only service animals will be permitted at the event.

ReCHAI was established in 2005. The center’s research has demonstrated that human-animal interaction benefits both people and companion animals by enhancing their physical and emotional well-being. Projects studying these benefits have included an animal visitation program for older adults, a study of children with autism and pet dogs, and a program that helps military veterans fight post-traumatic stress disorder symptoms by training shelter dogs.

VMTH Patient Nominated for Hero Dog Award

In the beginning, it was Bandit who needed a hero. When Kelly Brownfield and David Gist of Waynesville, Mo., picked out their Great Dane Duke, they noticed that his brother had mange and a large growth on his face for which the breeder had chosen not to seek veterinary care. They decided to adopt him, too, taking him to a veterinarian right away.

Two and a half years later, the dog they named Bandit has stolen the hearts of many who have met him and gained a reputation for being a hero to those he helps. As a therapy dog, Bandit spends most of his days bringing comfort to members of the military at the Fort Leonard Wood USO, where he has been deemed the official USO Comfort Dog, as well as patients at the Fort Leonard Wood hospital and residents at the St. James Veterans Home. He is one of 25 dogs nominated for the 2014 American Humane Association Hero Dog Award in the therapy dogs category.

After developing cranial cruciate ligament tears in both of his back legs recently, Bandit's veterinarian referred him to the MU Veterinary Medical Teaching Hospital for surgery. Canine cranial cruciate ligaments are similar to anterior cruciate ligaments (ACLs) in humans. Ruptures of these ligaments are a common injury in dogs, said Jessica Knapp, DVM, a second-year resident in small animal surgery at the MU College of Veterinary Medicine who treated Bandit.

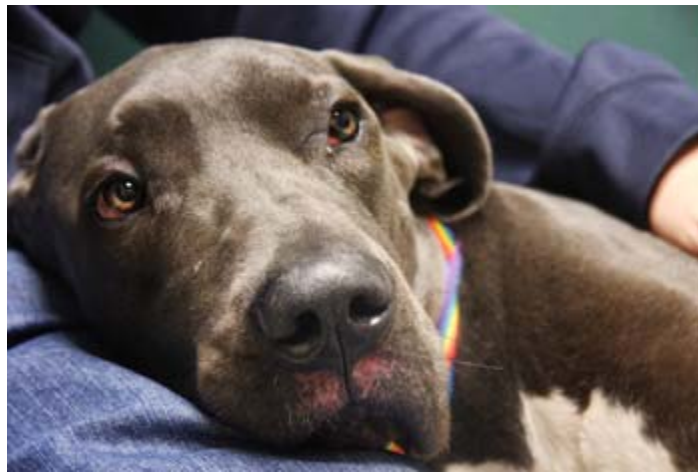
To slow the degenerative process in Bandit's knees and reduce his pain, veterinarians at the VMTH decided to perform a tibial plateau leveling osteotomy. Because dogs have a steep slope to the top of their knees, the surgery involves making a circular cut in the top of the shin bone, or tibial plateau, and rotating the contact surface of the bone until it attains a relatively level orientation. The bone was stabilized with an eight-screw plate and a 10-screw plate.

Although the cranial cruciate ligaments in both of his legs were torn, Bandit's veterinarians only operated on his left leg during this surgery. There is a much higher complication rate if both legs are treated at the same time, Knapp said. He will have surgery on the right leg later.

The procedure meant two months of confinement for Bandit, who normally encounters about 2,500 people each week.

"I think the hardest part has been constricting his movements," said Brownfield, who works as the Fort Leonard Wood USO Center director and brings Bandit to work daily. "Bandit is used to being out and about, doing what he does best, which is putting smiles on anyone who comes into contact with him."

Brownfield said the comfort Bandit provides on a daily basis means much to those he encounters. She described a hospital visit in which Bandit helped a young soldier who was experiencing severe pain from an injury.



Bandit spends most of his days bringing comfort to members of the military at the Fort Leonard Wood USO, patients at the Fort Leonard Wood hospital and residents at a veterans home. He is one of 25 dogs nominated for the 2014 American Humane Association Hero Dog Award in the therapy dogs category. Voting for the contest ends June 6.



Fort Leonard Wood USO Center Director Kelly Brownfield, Bandit's co-owner, presents a USO of Missouri Inc. coin to second-year resident Jessica Knapp, DVM, in appreciation of her work in caring for Bandit. "We do not pass them out to just anyone, and they are rare to come by, but Bandit means a lot to thousands of troops around the world who have come into contact with him," Brownfield said. "Because of Dr. Knapp's level of professionalism, care and compassion, Bandit will make a full recovery to ensure he can continue lifting the spirits of those in need."

"The patient's glance met Bandit, and she motioned for him to come forward," Brownfield said. "She was still in obvious pain, with tears still rolling down her cheeks, but the calmness that came over both her and Bandit was amazing. Bandit was able to dry her eyes with a few kisses."

Members of the military often take their unit patches from their uniforms and place them on Bandit's therapy dog vest as a symbol of their appreciation for what he has done for them. He has received so many patches that Brownfield and Gist had to get a second vest to hold them all. He now also sports an MU College of Veterinary Medicine pin given to him by VMTH staff.

Susan Hinkle, a Therapy Dog Inc. tester who performed Bandit's therapy dog test, nominated Bandit for the Hero Dog Award because of his impact on the community. The annual national competition recognizes dogs in eight categories: law enforcement dogs, arson dogs, service dogs, therapy dogs, military dogs, guide and hearing dogs, search and rescue dogs, and emerging hero dogs.

"The American Humane Association Hero Dog Awards celebrate the powerful relationship between dogs and people," the awards website states. "These amazing dogs provide compassion and comfort to transform people's lives with their unconditional love, devotion and intuition. Hero Dogs are ordinary dogs doing extraordinary things."

The awards contest consists of three rounds. In the first round, online voting will determine three semifinalists in each category. After that, the public and a panel of judges will choose a finalist in each category. From these finalists the public and celebrity judges will select the winner.

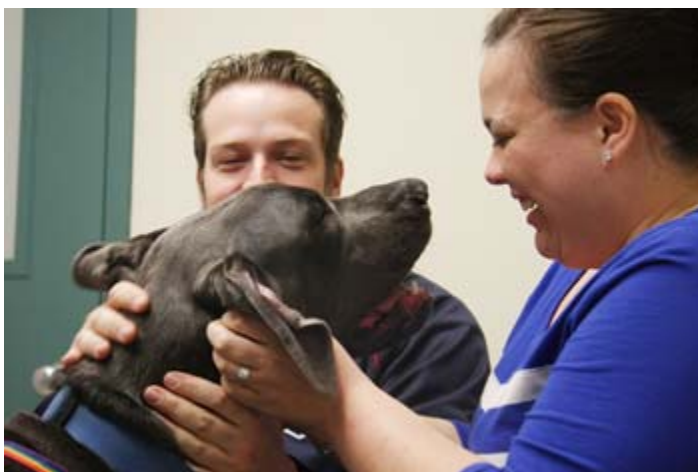
First-round voting continues until noon EST on June 6. People can submit one vote per category every day. Votes for Bandit can be cast

at <http://www.herodogawards.org/vote/?nominee=58779771>.

For updates on his progress in the contest, go to <https://www.facebook.com/VoteForBandit>.



Bandit comforts a soldier in severe pain during one of his hospital visits. "Bandit was able to dry her eyes with a few kisses," Brownfield said. Brownfield and Bandit visited the soldier every day during her stay in the hospital.



Bandit greets owners David Gist and Brownfield after his surgery to repair a rupture in the cranial cruciate ligament in his left leg. The injury is common in dogs, Knapp said.

New MRI Advances Care and College's Research Mission

Diagnostic and research capabilities took a leap forward at the University of Missouri College of Veterinary Medicine May 29 with the launching of a new 3T Magnetic Resonance Imaging machine. The college held a ribbon cutting for the device and the facility housing it at the Veterinary Medical Teaching Hospital.

CVM Dean Neil C. Olson, DVM, PhD, told the group gathered for the event that a great veterinary college needs not only top-notch faculty, students and staff, but also up-to-date facilities and equipment. He noted that with the addition of the new MRI to the college's existing imaging capabilities, which include positron emission tomography (PET), computed tomography (CT), and superior digital radiography, MU becomes one of only a few veterinary schools in the country with such advanced technology available.

The new MRI replaced an old system that was built in 1997 and housed in a trailer outside of the veterinary teaching hospital. The new equipment is faster, reducing the time needed for animals to be anesthetized, and provides improved anatomic detail of soft tissue. Another improvement is that the 3T MRI is housed in a custom-designed addition to the veterinary hospital. This new facility allows access for larger animals, such as horses whose limbs are particularly susceptible to injury, said VMTH Director and Professor of Equine Surgery David Wilson, DVM.

Improved and expanded patient care is not the only benefit of the new facility and equipment, Olson said. The ability to image larger animals also advances the college's research ability. The 3T MRI is also the only such magnet in Missouri that will be available not only to researchers throughout MU, but also to investigators from other academic institutions and animal health companies. This access is expected to facilitate partnerships, advance scientific investigation and serve as an economic development tool for the college. MU Interim Provost Ken Dean also spoke during the ribbon cutting and said that it is also a tool that will attract faculty to the campus.

The college acquired the 3T MRI through a partnership with Toshiba, which upgraded the system's technology in exchange for the CVM sharing imaging research with the company.



MU College of Veterinary Medicine Dean Neil C. Olson cuts the yellow ribbon held by members of the Columbia Chamber of Commerce Ambassadors to celebrate the opening of the college's new Magnetic Resonance Imaging facility.



A look at the new 3T MRI.



John Dodam, DVM, PhD, chairman of the college's Department of Veterinary Medicine and Surgery (left), discusses the new MRI with MU Interim Provost Ken Dean, a member of the Columbia Chamber of Commerce Ambassadors, and CVM Dean Neil C. Olson.

Ophthalmology Resident Wins National Phi Zeta Award

Kevin Donnelly, DVM '10, a third-year veterinary ophthalmology resident at the MU College of Veterinary Medicine, has received a national Phi Zeta award for outstanding research in the basic science category.

The objectives of the Society of Phi Zeta are to recognize and promote scholarship and research pertaining to the welfare and diseases of animals. Every year, the national society recognizes two manuscripts, one for basic science research and another for clinical research. Each veterinary school's Phi Zeta chapter is allowed to submit one manuscript in each category.

"This award is a tremendous honor for me and our research group," Donnelly said. "To be selected for this award among so many innovative research projects feels incredible."

Donnelly's manuscript, "Decorin-PEI nanoconstruct attenuates equine corneal fibroblast differentiation," was published in *Veterinary Ophthalmology* in May 2013. His co-authors were Elizabeth Giuliano, DVM, MS, an associate professor of veterinary ophthalmology; Ajay Sharma, PhD, an assistant research professor of veterinary ophthalmology; Ashish Tandon, PhD, a postdoctoral fellow; Jason T. Rodier, MD, a postdoctoral fellow; and Rajiv R. Mohan, PhD, MSc, the Ruth M. Kraeuchi Endowed Professor in Veterinary Ophthalmology.

Corneal disease, one of the most common issues faced in veterinary ophthalmology, frequently results in vision impairment due to scarring, known as fibrosis. The MU ophthalmology group has pursued a variety of methods to attempt to inhibit or decrease corneal fibrosis.

In the research described in Donnelly's manuscript, the team used nanoparticle gene therapy to insert DNA that codes for an antifibrotic protein, decorin, into normal equine corneal cells in cell culture and then simulated injury. The goal was to cause the corneal cells to overproduce the antifibrotic protein to reduce scarring. The researchers demonstrated that gene therapy with this protein was safe and effective at inhibiting fibrosis in an in vitro model of equine corneal fibrosis.

Donnelly said he was grateful for the guidance of his primary research mentors, Giuliano and Mohan.

"To be a part of this incredibly productive laboratory and vision science group has richly added to my residency experience while at MU," Donnelly said.

After receiving his doctor of veterinary medicine degree from MU in 2010, Donnelly completed a rotating internship at the University of Pennsylvania. He then returned to MU for his residency, which he will complete in June.



Potential Cholesterol Lowering Drug Has Breast Cancer Fighting Capabilities, MU Researcher Finds

Researchers at the University of Missouri have proven that a compound initially developed as a cholesterol-fighting molecule not only halts the progression of breast cancer, but also can kill the cancerous cells.

“Cholesterol is a molecule found in all animal cells and serves as a structural component of cell membranes,” said Salman Hyder, the Zalk Endowed Professor in Tumor Angiogenesis and professor of biomedical sciences in the College of Veterinary Medicine and the Dalton Cardiovascular Research Center at MU. “Because tumor cells grow rapidly they need to synthesize more cholesterol. Scientists working to cure breast cancer often seek out alternative targets that might slow or stop the progression of the disease, including the elimination of the cancerous cells. In our study, we targeted the production of cholesterol in cancer cells leading to death of breast cancer cells.”

Previous studies suggest that 70 percent of breast cancers found in women are hormone dependent and can be treated with anti-hormone medicines such as tamoxifen. Although tumor cells may initially respond to therapies, most eventually develop resistance which causes breast cancer cells to grow and spread. Cholesterol also can contribute to the development of anti-hormone resistance because cholesterol is converted into hormones in tumor cells. Therefore, these cholesterol-forming pathways are attractive therapeutic targets for the treatment of breast cancer.

Using compounds initially developed by Roche Pharmaceuticals for the treatment of high cholesterol, which reduces cholesterol in a different manner than the widely used statins, Hyder and his team administered the molecule to human breast cancer cells. They found that the compound was effective in reducing human breast cancer cell growth and often caused cancer cell death. Most interestingly they found that the cholesterol lowering drug they tested destroyed an estrogen receptor, a protein which encourages the tumor cells to grow.

Equipped with this information, Hyder and the team tested the results in mice with breast cancer. Following injection of the compound, Hyder found that the molecule was effective at killing breast cancer cells by reducing the presence of estrogen receptors in tumor cells, Hyder said.

“The compound exhibited anti-tumor properties in both human samples, which were outside the body, and in samples that were administered by injection into the mice,” Hyder said. “In both cases, the proteins that cause tumors to grow were eliminated, leading to more aggressive cell death.”

Hyder believes that further clinical testing can lead to a drug that has the dual purpose of fighting high cholesterol and cancer.

Researchers involved with the study included Yayun Liang, research associate professor at Dalton Cardiovascular Research Center; Cynthia Besch-Williford, professor of veterinary pathobiology at MU; Benford Mafuvadze, post-doctoral fellow at Dalton Cardiovascular Research Center; Matthew Cook, pre-doctoral fellow in Biomedical Sciences; and Xiaoqin Zou, associate professor of physics and biochemistry and a researcher at the Dalton Cardiovascular Research Center. Johannes Aebi from Roche Pharmaceuticals also contributed to the research.

The study, “Cholesterol biosynthesis inhibitors as potent novel anti-cancer agents: suppression of hormone-dependent breast cancer by the oxidosqualene cyclase inhibitor RO 48-8071,” was published in *Breast Cancer Research and Treatment* and was funded by a grant from the Department of Defense Breast Cancer Program.



Dr. Salman Hyder

Nixon signs bill extending vet loan forgiveness

- BY THE ASSOCIATED PRESS

- Jun 20, 2014

http://www.columbiamissourian.com/news/higher_education/nixon-signs-bill-extending-vet-loan-forgiveness/article_b20cfb9d-9154-57fd-a6be-a2e6dbcf48ac.html

Report Documenting MU Researchers' Degenerative Myelopathy Investigation Wins DeBakey Journalism Award

Dr. Ann Hohenhaus recently received a prestigious 2014 DeBakey Journalism Award in the online category for her article "[Dogs Go To Bat Against Lou Gehrig's Disease.](#)" Hohenhaus, an ACVIM board certified veterinary oncology and small animal internal medicine specialist, is a member of the Vetstreet.com Veterinary Advisory Board and is a frequent contributor to the site. She is also on staff at the Animal Medical Center where she specializes in treating cancer patients.

Hohenhaus's awarding winning article is a comparative medicine look at amyotrophic lateral sclerosis (ALS) in humans and canine degenerative myelopathy (DM) in dogs. The article was inspired by Hohenhaus's attendance at the November 2013 Zoobiquity Conference in New York City, an event that seeks to highlight connections between human and animal health. In the article, Hohenhaus recounts the work of University of Missouri veterinary neurologist Dr. Joan Coates and how it has positioned dogs and canine research models to be key players in understanding more about both ALS and DM. Coates' multi-institutional research is backed by funding from the National Institutes of Health and the ALS Association.

"Veterinarians play a crucial and ever-expanding role in demonstrating the interdependence of species; medically, environmentally, and emotionally. That the DeBakey Award has been given to a veterinary journalist highlighting the important work of a fellow veterinary practitioner and researcher is a tribute to the profession," said Dr. Beth Thompson, medical director and publisher of Vetstreet.com and *Healthy Pet* magazine. "Vetstreet.com is honored to have such a distinguished contributor and advisor on our team and we congratulate Dr. Hohenhaus on her award," Thompson added.

About the DeBakey Awards

Named in honor of the FBR's late chairman Dr. Michael E. DeBakey, the awards recognize outstanding journalism that highlights the role of biomedical research. The FBR established the awards in 2002 to strengthen the bridge between the scientific community and the media.

Dr. Carolyn Henry Appointed CVM Associate Dean

University of Missouri College of Veterinary Medicine Dean Neil C. Olson recently named Carolyn Henry, DVM, MS, associate dean for the Office of Research and Graduate Studies. Henry has served as the interim associate dean since Sept. 1, 2013, replacing Ron Terjung, PhD, who retired.

Henry said her interest in seeking the position stemmed from her commitment to animal health and agriculture and the advancement of biomedical discovery.

“Veterinary medical researchers and educators play an essential role in everything from leading advances in companion animal health to ensuring a safe and sustainable food supply and solving complex global health problems,” she noted in her application to the search committee tasked with filling the position.

Henry said that in addition to ensuring MU researchers operate on the leading edge of scientific discovery, she also plans to enhance the college’s graduate and postdoctoral programs. “I believe we need to train students in ways that have not before been attempted and for jobs that may not yet exist. Our educational opportunities must be responsive to the needs of the marketplace and provide our students with the greatest chance for career satisfaction and professional growth.”

Henry received a bachelor of science degree in animal science and biology with a minor in chemistry, graduating magna cum laude from Eastern Kentucky University. She went on to earn a doctor of veterinary medicine cum laude and master’s degree in small animal surgery and medicine at Auburn University.

She began her career working in an animal clinic in Alabama and then worked as an emergency care veterinarian in Alabama and Georgia before pursuing a residency in veterinary oncology at Auburn. In 1993 she became an assistant professor in the Department of Veterinary Clinical Sciences at Washington State University. She joined the faculty of the University of Missouri in 1997 as an assistant professor of oncology. In 2001, she received a dual appointment with the MU School of Medicine. Henry became the first American College of Veterinary Internal Medicine board-certified oncologist at MU.

In 2002 she became the director of the Tom and Betty Scott Endowed Program in Veterinary Oncology. She was appointed a professor of oncology in both the College of Veterinary Medicine and the School of Medicine in 2008.

Henry has worked to advance collaborations in human and animal medicine at Mizzou. She serves as the faculty facilitator for the One Health/One Medicine Mizzou Advantage for the MU Office of the Provost, a position she has held since 2010, and as the associate director of research at Ellis Fischel Cancer Center since 2012.

“It is now second nature for me to recognize linkages between departments and colleges that were once seemingly unrelated,” she said.

Henry is the mother to five step children, three biological children and two adopted sons. She and her husband, Tim Schild, have three dogs. She enjoys travel, sporting events, concerts and running. In addition to many professional memberships, Henry is a Kentucky Colonel, appointed by the governor of Kentucky, an honor she shares with actor George Clooney, and she is a member of Mensa.



Novel Treatment Saves Foal with Respiratory Infection

At two weeks old, Maggie seemed happy and healthy. Then the foal suddenly began struggling to breathe, developed nasal discharge and a fever, and became lethargic. Her trainer, Owen Parker of Oak Grove, Mo., took her to his veterinarian, who referred the paint filly to the MU Veterinary Medical Teaching Hospital for diagnosis and treatment.

Maggie, who is training to be a show horse, arrived at the VMTH in the middle of the night. Veterinarians quickly performed a physical examination, routine blood tests and an ultrasound scan of the chest. The results led to a diagnosis of bilateral pleuropneumonia. Uncommon in foals, the severe infection primarily affected the pleural cavity, the surface of the lungs, the interior of the chest wall and the space between them. Normally, a small quantity of fluid in this space helps to lubricate the movement of the lungs against the chest wall. However, Maggie's infection caused inflammation that provoked an excessive quantity of fluid to accumulate, which prevented her lungs from expanding completely and led to difficulty with breathing.

The initial treatment involved draining fluid from the chest, antibiotics and efforts to determine the cause. Determining the cause was important to ensure the infection wasn't contagious and to identify the best antibiotics to use, said Dr. Philip Johnson, a professor of equine internal medicine at the MU College of Veterinary Medicine who treated Maggie.

In her chest fluid, veterinarians identified excessive fibrin, a thick inflammatory protein that interfered with their ability to drain the fluid and provide Maggie relief. The protein eventually forms a fibrous, or scar-like, attachment between the lung surface and chest wall, an outcome that would have permanently interfered with Maggie's breathing.



Veterinarians at the MU Veterinary Medical Teaching Hospital diagnosed Maggie, a 2-week-old paint filly, with bilateral pleuropneumonia, a severe infection that is uncommon in foals.



The left side of Maggie's chest is drained, a process called pleurocentesis. The team caring for Maggie included Drs. Philip Johnson, Alicia Foley and Jamie Zimmerman; technician Jane Ebben; and veterinary student Nicole Freeman.

Tips to Avoid Respiratory Infections in Foals

Although respiratory infections can be unavoidable, there are some steps horse owners can take to try to prevent them.

Ensure the barn is well ventilated. Weather permitting, "being outside is often better than being in a barn with other horses," Johnson said. In addition, ammonia from soiled bedding in a barn that is less than optimally ventilated can predispose young foals to respiratory infections.

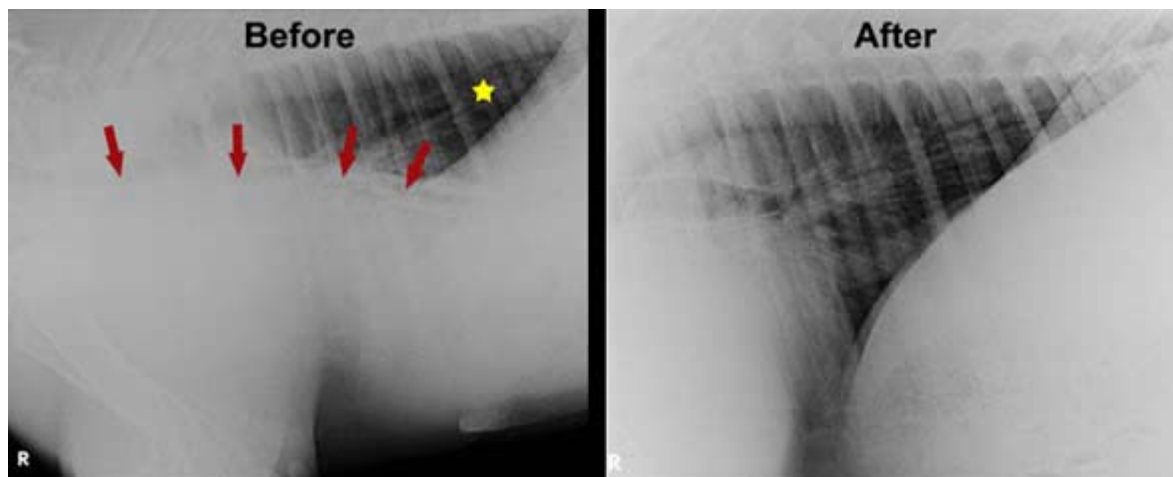
Be careful about mixing young foals with adult horses and older foals in an enclosed space. This facilitates concentration and transmission of potential respiratory pathogens, such as the herpes virus identified in Maggie's case, Johnson said.

Most importantly, obtain veterinary help as soon as possible if a foal is experiencing any health problems. The faster the problem is identified and treated, the better the outcome.

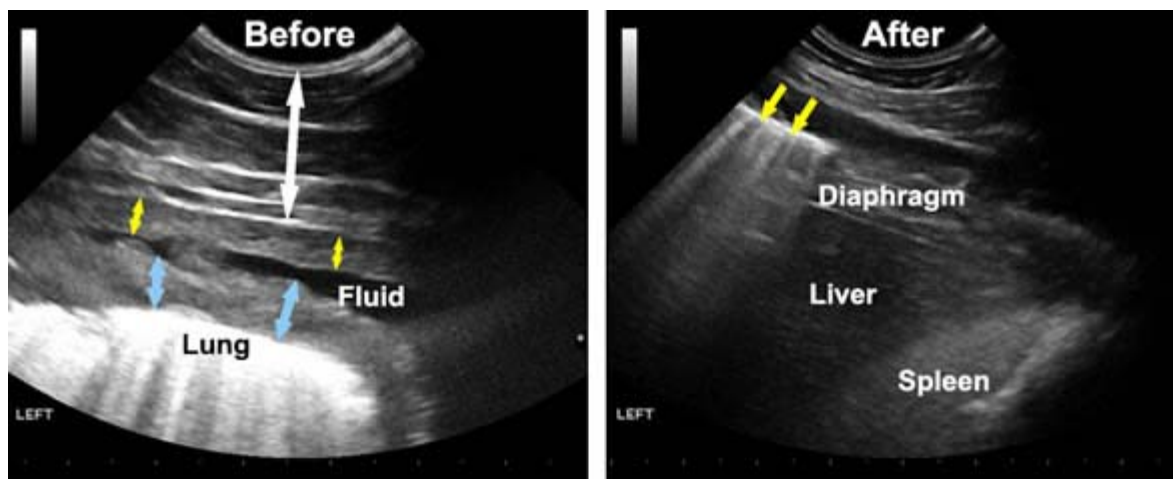
To address the fibrin, veterinarians tried a novel treatment. They injected tissue plasminogen activator (TPA), a “clot buster” used in human medicine to treat strokes. When injected into the chest cavity, it can help dissolve fibrin.

“The more conventional treatment is drainage of chest fluid alongside antimicrobials, but fibrin accumulation, if it is significant, can both impede treatment effectiveness and render the patient incapable of a normal life from a breathing perspective,” Johnson said.

Maggie improved quickly with the TPA, and both the fibrin and the excessive pleural fluid disappeared within a few days.



Left: Radiographic appearance of Maggie's chest before treatment. The dorso-caudal lung fields appear normal (yellow star). Excessive fluid in the ventral part of the chest was evident (below the arrows). **Right:** Radiographic appearance of the foal's chest after treatment. Excessive fluid in the ventral part of the chest is no longer evident, and the lung fields appear clear.



Left: Ultrasonographic image of the left pleural cavity obtained following draining of fluid. Notice the thick layer of fibrin (yellow double arrowheads) lining the chest wall and another thick layer of fibrin (blue double arrowheads) covering the surface of the lung (white double arrowhead depicts the wall of the foal's chest). Residual pleural fluid is present between the two layers of fibrin. **Right:** Post-treatment ultrasonographic image of the ventral border of the foal's left lung (arrows) showing absence of excessive pleural fluid and resolution of adherent fibrin.

Maggie's tests identified two pathogens that likely contributed to development of pneumonia, *Streptococcus pneumoniae* and a gammaherpesvirus. Although her veterinarians couldn't be completely certain, they speculated that the gammaherpesvirus may have been the “first attack,” causing damage and inhibiting the foal's immune system, Johnson said. They believe it was followed by the *Streptococcus pneumoniae*. She likely acquired the pathogens from other horses in her environment.

"Young foals have not developed a fully effective immune system," Johnson said. "At this age they are encountering lots of potential respiratory viral and bacterial micropathogens from co-mingled horse stock."

Maggie is now back to normal. Parker said he was very pleased by her care at the VMTH, where he has had several horses treated. He said he has had great experiences with not just the veterinarians but also the staff.

"Our first pick is always the University of Missouri," Parker said. "The staff are not like a lot of other places. You feel like a person there."

CVM's Ron Cott Honored for Leadership Program Contributions

Ron Cott, MU DVM '73, associate dean of Student and Alumni Affairs and director of Advancement at the MU College of Veterinary Medicine, has been named a Veterinary Leadership Experience (VLE) Hall of Fame member for his contributions to the program.

The Veterinary Leadership Institute sponsors the national leadership training retreat to encourage participants to “think outside the box” for personal and professional growth. During the week-long program, veterinary students and faculty, industry representatives, private practitioners, technicians and other veterinary professionals explore the concepts of emotional intelligence, teamwork, effective communication and servant-leadership in a facilitated small-group learning environment.

Cott served as a VLE facilitator for seven years and as a member of the institute's board of directors for three years.

Cott said the VLE offers an important opportunity for participants, especially veterinary students, to learn invaluable skills for career success, such as effective leadership, communication and self-awareness. He said many of those skills can be difficult to teach in an academic setting because the veterinary curriculum is scientifically driven.

After participating in the VLE, Cott founded the MU Veterinary Enrichment and Teambuilding (VET) orientation program in 2005. During the intensive three-day event, incoming first-year veterinary students learn about communication styles and develop teambuilding, servant-leadership and self-awareness skills. They also get to know their fellow classmates as well as faculty and staff at the college.

Cott received his DVM from the University of Missouri in 1973 and spent three years in the Army. He then worked in a private companion animal practice in the Kansas City area for 25 years. In 2001 he was appointed associate dean for the College of Veterinary Medicine, followed by an additional appointment as director of Advancement in 2008. He is the course director for the college's Fundamentals of Veterinary Business Management class.



CVM Dean Honors Staff and Faculty for Long-term Impact

MU College of Veterinary Medicine Dean Neil C. Olson selected three individuals to receive the 2014 Dean's Impact Awards. The awards, established in 1993, recognize individuals who have had an outstanding and sustained impact on the College of Veterinary Medicine. Each year, the CVM dean selects up to three people for the honors. For the 2014 honors Olson selected two staff members and one member of the faculty.

The honorees received an engraved wall plaque presented during a reception that also recognized staff members who achieved milestones in their years of service to the University of Missouri. This year's Impact Award winners were Stephanie Bossaller, Irene Ganjam and Dr. Gary Johnson.

Bossaller is a manager of information technology and works within the Office of Academic Affairs providing instructional technology support. Olson commended Bossaller for her efforts administering tests and willingness to respond to email requests for technical assistance at all hours. He also noted that it was due to Bossaller's examination of security camera tapes that the college was able to identify and apprehend the individual responsible for a series of thefts in the women's locker room.

Bossaller was also credited for helping to put in place new educational software, which was cited as one of her longest lasting contributions. With her help, the college was able to implement clinical competency tracking vital to receiving accreditation from the American Veterinary Medical Association Council on Education.

The dean presented a second Impact Award to the Veterinary Medical Diagnostic Laboratory's bacteriology supervisor Irene Ganjam. Ganjam, who has been with the college for 24 years, supervises an operation that involves 19,000 cultures and 9,000 antimicrobial susceptibility tests per year. She is renowned for her work ethic, not only putting in long hours during the week, but also on weekends and holidays. She has been known to walk to work when snow has halted vehicle traffic.

Her nominators for the award called Ganjam the glue that held the institution together during the early 1990s when money and staffing were in short supply. She was credited with helping to train many technicians, pre-veterinary students and colleagues and for co-authoring several scientific papers.

Olson presented his third Impact Award to Dr. Gary Johnson, CVM associate professor of veterinary pathobiology. Olson noted that Johnson's work



CVM Dean Neil C. Olson is pictured with 2014 Impact Award winner Stephanie Bossaller



Irene Ganjam receives her Impact Award from Dr. Olson.



Dr. Gary Johnson's efforts amassing tissue samples and clinical records earned him a 2014 Dean's Impact Award.

collecting clinical records and DNA samples from animals with clinically diagnosed genetic abnormalities had resulted in a collection of samples from almost 100,000 animals representing hundreds of breed and dozens of inherited diseases.

"This resource is an absolute gold mine and has led to MU researchers discovering the causal mutations underlying at least five diseases in the last two years," according to one of the letters submitted in support of Johnson's nomination for the award.

In addition to advancing the research of his colleagues, Johnson himself has identified nearly two dozen canine mutations in his laboratory and as part of collaborations.

The following staff members were also recognized for their years of service to the college:

Dean's Office:

Jason Wisdom, 10 years
David Willis, 15 years

Biomedical Sciences:

Jan Ivey, 15 years

Veterinary Diagnostic Laboratory:

Megan Young, 5 years
Margaret Dunsmore, 10 years
Mike Wimmenauer, 25 years
Carla Sears, 30 years

Veterinary Medicine and Surgery:

Stephanie Adams, 5 years
Kathleen Backus, 5 years
Alyssa Doner, 5 years
Carrie Duran, 5 years
Anastasia Glahn, 5 years
Antonio Rainey, 5 years
Paulette Smith, 5 years
Terry Stockton, 5 years
Kimberly Terry, 5 years
Billy Jamison, 10 years
Kim Morrison, 15 years
Kathleen Smith, 20 years

Veterinary Pathobiology:

Christine Bethune, 5 years
Anagha Bock, 5 years
Brad Uppinghouse, 5 years
Mark Foecking, 15 years
Liz Hansen, 15 years
Allen Maddy, 25 years

Look out for ergot in pastures

The fungus thrives in warm, wet weather and is toxic to cattle.

Published: Wednesday, July 17, 2013

Story sources:

Craig A. Roberts, 573-882-0481

Tim J. Evans, 573-884-9270

<http://extension.missouri.edu/news/DisplayStory.aspx?N=1908>

Dog's Illness a Reminder to Take Summer Precautions



A brutal assault and robbery 10 years ago left Davis Hawn of Mississippi riddled with fear and depression. A roommate had attacked him and stolen his truck. Soon after his vehicle was found, the tow truck company retrieving it discovered an 8-week-old yellow Labrador retriever inside. Hawn reluctantly decided to keep him.

Suffering from post-traumatic stress disorder, he wanted nothing to do with the puppy, whom he named Booster after he stole a toy from a pet shop. Hawn frequently relived his trauma and had become isolated, and he hated the attention the dog brought him. Although he just wanted to be left alone, children frequently approached him to ask if they could pet Booster and play with him.

Hawn was at the lowest point of his life and even contemplated suicide one night. The next morning Booster injured his paw by running into a truck's trailer hitch. Hawn could see the pain his dog was experiencing, a feeling he could relate to all too well. He held Booster in his arms and comforted him. Their shared suffering forged a deep bond between the pair, and Hawn's healing began.

Booster and his owner, Davis Hawn of Mississippi, have been inseparable for 10 years. A trained service dog, Booster helps Hawn with PTSD symptoms stemming from an assault and robbery.



Hawn and Booster have traveled all over the world to teach others about the healing power of dogs. Hawn said Booster has fostered international relations by serving as a "social bridge" in Cuba and comforting children with HIV in Thailand, where this photo was taken.



Booster celebrates his recovery from cancer and Rocky Mountain spotted fever by cuddling with his favorite toy.

“Booster saved my life once,” Hawn said. “I made him a promise that I’d never take him or life for granted.”

Hawn and Booster enrolled in a service dog training program in California. Today Booster helps Hawn with mobility issues and PTSD symptoms. Booster’s skills include getting Hawn water from the refrigerator if he needs to take medication, turning lights on and off, helping Hawn maintain his balance, and jumping and barking if Hawn needs help. Most importantly, Booster provides comfort for the anxiety and nightmares Hawn still suffers from his trauma.

“Booster is my medicine,” Hawn said about his nightmares. “The minute I see Booster in the bed, I know it’s not real.”

Hawn and Booster have traveled all over the world to teach others about the healing power of dogs, Hawn said. Among his travels, Booster has fostered international relations by serving as a “social bridge” in Cuba and comforting children with HIV in Thailand, Hawn said. He and Booster even attended Bergin University of Canine Studies, where Hawn received a master’s degree in canine life sciences.

The pair is inseparable, which is why Hawn was devastated when Booster recently began showing signs of a serious illness. He was lethargic, walked in circles and would twitch like he was shivering. His wobbly legs made it hard to get up, and he had become afraid of stairs.

Hawn, who spends his summers in northern Arkansas, visited his local veterinarian, who referred him to the MU Veterinary Medical Teaching Hospital.

Booster’s case posed an interesting challenge for the veterinarians and veterinary students treating him. He had been diagnosed in 2013 with squamous cell carcinoma, a form of cancer that attacked his sinuses and skull. Given that history and his neurological symptoms, it seemed likely that the cancer had recurred or that his illness had resulted from the radiation therapy used to treat it. In addition, his extensive travel history raised the possibility of diseases not normally seen in the United States.

Veterinarians and staff from a variety of services — emergency and critical care, neurology, anesthesia, oncology, radiology and internal medicine — collaborated as they raced to diagnose and treat Booster.

“We all worked together on this case, which is one of the benefits of being at a university hospital,” said Booster’s veterinarian, Missy Carpenter-Anderson, DVM, a first-year neurology/neurosurgery resident.

A computed tomography (CT) scan found no evidence that Booster’s cancer had returned. Magnetic resonance imaging revealed meningitis, an inflammation of the membranes surrounding the brain and spinal cord.

Booster’s blood tests showed anemia, low platelets and low albumin, or blood protein. His urine had protein in it, which raised suspicion that an infectious agent might be attacking multiple organ systems.

The combination of neurological symptoms, meningitis and protein in Booster’s urine led his veterinarians to suspect that he had been infected with a tick-borne disease such as Rocky Mountain spotted fever or Ehrlichia. Both can be fatal in humans and animals.

Tips to protect animals during the summer

Tick-borne diseases such as the illness Booster faced are among several hazards animals can encounter during the summer. With a few precautions, owners can protect animals during the hot summer days.

Small Animals

Protect your pet from fleas and ticks. Those pests are a concern year-round, but they’re particularly prevalent during the summer. Ticks are a “walking bag of diseases,” said Richard Meadows, DVM, MU College of Veterinary Medicine Curator’s Distinguished Teaching Professor. Ask your veterinarian about the best flea and tick prevention products for your pet.

Although these products are often effective, they’re not foolproof, as was the case with Booster. Check yourself and your pets for fleas and ticks after spending time outside, and remove any quickly to prevent disease. Even indoor cats can be at risk, Meadows said. If you find a tick, remove it with tweezers or a tick-removal product.

More information about protecting pets from ticks can be found at the [American Animal Hospital Association website](#).

Don’t leave your pet in the car. “It gets really hot in a big, big hurry,” Meadows said. “They’re already wearing a fur coat.”

When your pet is outside, provide shade and lots of water. Keep in mind that pets may spill their water, so provide plenty.

Because of the life-threatening nature of these diseases, Booster's veterinarians immediately began treating him with antibiotics and anti-inflammatory medications. Booster started improving within 24 hours. When his test results came back, they confirmed that Booster had Rocky Mountain spotted fever.

According to the Centers for Disease Control and Prevention, five states account for more than 60 percent of Rocky Mountain spotted fever cases in humans. These states include Arkansas, where Hawn was living, and Missouri, plus North Carolina, Oklahoma and Tennessee.

Although cancer seemed like an obvious cause given Booster's history, his veterinarians kept an open mind while seeking a diagnosis, Hawn said. He attributes Booster's recovery to Carpentier-Anderson's decision to treat for Rocky Mountain spotted fever even before test results were available.

"Nobody in their wildest dreams would have thought this severe situation was due to a tick bite," he said, especially considering the fact that Booster was using a tick prevention product. "That's experience, and that's the value of an education. Had Dr. Carpentier not done that he wouldn't be alive today."

Being from Mississippi, Hawn wasn't previously familiar with the MU veterinary hospital, but he said the "warm and enthusiastic environment" created by the faculty and staff made a difficult experience more manageable.

"You knew that they were going to do everything they could," Hawn said. "I knew he was in the right hands."

Because his and Booster's mission is to educate people, Hawn celebrated the opportunity Booster had to teach residents and students at the VMTH, he said.

Today Booster is back to his usual self. He and Hawn even traveled to Fairbanks, Alaska, and San Francisco recently.

"Booster's been through a heck of a lot in his life," Hawn said. "I want to share with the world what this dog has done for me."

"He's not just a dog. He's my Booster."

HORSES

Protect horses from the heat by providing shade and access to water at all times. In the heat of the summer it can be helpful to keep horses that are particularly susceptible to heat issues in stalls during the day with fans and misting systems, and out during the cooler evenings, said Alison LaCarrubba, DVM, assistant teaching professor of equine medicine.

Especially during the hottest times of year, horses are sometimes affected by a condition called anhidrosis, or the inability to sweat, which greatly affects their ability to cool themselves. This disease is best managed by keeping horses out of the sun and providing fans and water cooling systems, such as misting systems.

When riding horses in the summer it is best to ride in the early mornings before the heat of the day and it is important to hose them down after their workout to prevent overheating, LaCarrubba said.

Food and Fiber Animals

As with all mammals, access to shade, adequate water and salt are important, said John Middleton, DVM, PhD, a professor of food animal medicine and surgery. Shear fleeced animals like sheep, alpacas and llamas. For animals raised in confinement, such as some dairy cattle, swine and poultry, adequate ventilation, cooling and sources of water are important.

MU CVM Residents' Research Honored During Forum

University of Missouri College of Veterinary Medicine residents captured two of 10 awards presented during the recent American College of Veterinary Internal Medicine Forum. Rob Daniel, DVM, and Meredith Sherrill, DVM, received the awards for the research projects they presented during the annual conference held this year in Nashville.

Daniel is completing a three-year residency in neurology and neurosurgery. He presented the results of a study titled "Feline Myotonia Congenita: Clinical, Electrophysiologic and Histopathologic Characteristics with a Novel Mutation in CLCN-1."

The study looked at five cats collected from a feral colony in Winnipeg, Canada. A veterinarian in Winnipeg who had adopted one of the cats noticed that it had an unusual gait and would periodically collapse. She brought the cat, along with four other cats with the same odd gait and collapse issues, to the Veterinary Medical Teaching Hospital at MU in the hope that the cause of the cats' condition could be determined.

Daniel said the neurology service suspected that a disease of the muscle membrane was at fault. The cats were given an electrodiagnostic test that assessed the electrical activity of the muscle membrane. He said the needle test elicited a sound that the MU researchers had never heard during previous electrodiagnostic exams on other animals.

"It sounded like a swarm of bees," he said.

The unique sound became part of the clinical description the neurology team used for the cats' signs as it sought to diagnose the disease responsible. As the neurology team developed the clinical description of the cats' illness, Leslie Lyons, PhD, the Gilbreath-McLorn Professor for Comparative Medicine at the MU College of Veterinary Medicine and director of the Lyons' Feline Genetics Laboratory, analyzed the cats' DNA looking for a genetic mutation to explain their disease.

Lyons was able to determine that a unique mutation was present within the cats' DNA.

"The Lyons laboratory found the mutation in one of the same genes found in people with the disease myotonia congenita" Daniel said. "This was the first time we were able to identify the mutation in a group of cats with feline myotonia congenita. We now have a test available to screen for carriers of this disease."

While myotonia congenita can be mildly to severely debilitating in people, this feline version of the disease does not appear to affect the longevity of cats, Daniel explained. The cats may appear well-muscled and have enlarged tongues, but other than walking oddly and occasionally falling down, they can live normal lives. The enlarged tongues predispose the cats to dental problems, Daniel said. Therefore during the Winnipeg cats' visit to the VMTH, Curators Teaching Professor Richard Meadows,



Dr. Rob Daniel



Dr. Meredith Sherrill

DVM, performed cleanings and extracted a few decayed teeth before sending them back home to their families in Canada.

Daniel earned an honor's bachelor of science degree in genetics from the University of Western, Ontario. He received a doctor of veterinary medicine degree from the Ontario Veterinary College. Before beginning his residency at MU, Daniel completed a rotating internship at the Veterinary Emergency Clinic and Referral Center in Toronto, Ontario.

He will begin work at MSPCA Angell Animal Medical Center in Boston, Massachusetts in September.

Sherrill is in the second year of a three-year residency in small animal internal medicine at Mizzou. Her focus is immunology. The project she presented is a collaborative effort with CVM Professor Leah Cohn, DVM, PhD, ACVIM diplomate; Associate Professor Amy DeClue, DVM, MS, ACVIM diplomate; and researchers at Oklahoma State and North Carolina State universities. The investigation, "Infestation by *Amblyomma americanum* on Cats Leads to Increased Leukocyte Phagocytosis," looked at the effects tick bites have on cats.

"The purpose is to understand the immune response to ticks and pathogens," Sherrill said. The project focused on lone star ticks, which carry a number of diseases including *Cytauxzoon felis*, also known as bobcat fever, and tularemia. Both illnesses can be deadly to cats.

Because ticks inject saliva into the hosts they bite, the research team hypothesized that the bites themselves could trigger an immune response even when the tick is not carrying a pathogen to transmit.

"We looked at whether white blood cells can swallow or engulf bacteria as a measure of whether they're functioning. We did find increased function of the white blood cells," Sherrill said.

Sherrill described the study as a work in progress that will continue through her residency at MU. Sherrill graduated from Washington University with a bachelor of arts degree in biology. She went on to earn her DVM at Iowa State University. Before coming to MU, she undertook a rotating small animal medicine and surgery internship at Purdue University.

Research reports are presented during the ACVIM Forum by active researchers in any of the ACVIM specialties, cardiology, large animal internal medicine, neurology, oncology and small animal internal medicine.

CVM Student's Article Featured in Online News Magazine

University of Missouri College of Veterinary Medicine student Dane Foxwell aspires to become a consultant and established speaker someday. His mentor, Andy Roark, DVM, advised him that before becoming a speaker, one must first be a writer. Foxwell took the advice to heart, and with Roark's assistance, researched and wrote an article that he submitted to online news magazine Veterinary Economics, a dvm360 publication.

The article, "[Sell veterinary clients on your service](#)," was recently published with Foxwell and Roark sharing the writing credit. Foxwell said Roark asked him what he was passionate about, which led him to focus the article on providing excellent customer service.

"Veterinarians are doctors by training," Foxwell said. "One thing they are not trained in is customer service. I'm interested in customer service because I feel it's an area I can help veterinarians increase their value to clients while moving the profession forward as a whole."

A native of Maryland, Foxwell earned a bachelor of science in biochemistry at Mount St. Mary's University in his home state before beginning his veterinary studies at the University of Missouri. At the CVM he served as President of the Student Chapter of the American Veterinary Medical Association from 2012-2013, he also became active in the Dental Club and the Veterinary Business Management Association (VBMA). It was through the VBMA that Foxwell met Roark, who practices in South Carolina and is the founder and managing director of a veterinary consulting firm. Roark was a guest speaker at a VBMA meeting.

"I quite literally went up and asked him if I could come sleep on his couch and do an externship with him that would focus on the business and consulting side of veterinary medicine," Foxwell said. "Though I knew little about him at the time, I could sense that he was passionate about his work, improving the profession and veterinary medicine."

Now in his fourth year at the CVM, Foxwell said that after graduating next spring he would like to practice general small animal medicine with a focus on feline health. He also has an interest in orthopedic surgery as well as business. Foxwell plans to continue writing and is already at work on a second article.



Dane Foxwell

Treatment Helps Dog 'Live Long and Prosper'

Pamela Crawford of Washington, Missouri, doesn't think her mastiff cross, Mr. Spock, resembles his "Star Trek" namesake at all in personality.

"He's such a lover," she said, adding that he has more of a surfer boy mentality. "He's not like the character."

Crawford found Mr. Spock, who is nearly 2 years old, at the Humane Society in Maryland Heights when he was a puppy. She had seen a listing for him online and went to meet him. When workers brought him into the room, she realized how he'd gotten his name. His left front paw was split, resembling the Vulcan salute the television character makes when saying "Live long and prosper."

She quickly fell in love with his outgoing personality. Mr. Spock had been featured on a TV news segment promoting pet adoption, and the many visitors he received had made him comfortable around people.

"A lot of people had come to visit him, but they weren't interested in adopting him; they just wanted to see his foot," Crawford said. "He had been socialized quite a bit."

Crawford adopted him right away.

Uncommon condition demands creativity

Mr. Spock was born with ectrodactyly, a developmental abnormality. Often called split hand deformity when it occurs in people, the condition can cause a variety of problems.

In Mr. Spock's case, he was missing one row of carpal bones, the bones that comprise the upper part of the foot in dogs and are comparable to the wrist in humans. His metacarpals, located below the carpal bones, were split between the second and third digits and fused between the third and fourth digits. He had extra nails, and some of them were curled under and protruding into the pads of his paw.

It initially caused few problems, but as he grew larger Mr. Spock had difficulty putting weight on his foot and couldn't walk on hard surfaces.

"I noticed that the heavier and bigger he got, the more trouble he had with it," Crawford said.

Crawford's veterinarian referred her to the University of Missouri Veterinary Medical Teaching Hospital to explore Mr. Spock's treatment options.

The cause of ectrodactyly is unknown, and it seems to occur randomly, said Dr. James Tomlinson, a professor of veterinary orthopedic surgery at the MU College of Veterinary Medicine. Depending on the degree of deformity, the uncommon condition doesn't always need to be addressed. However, Mr. Spock's deformity was particularly severe. Like humans, he had begun walking plantigrade, meaning his entire foot touched the ground when he stepped.

Tomlinson said ectrodactyly cases can be complicated to fix because they're not that common and because the exact problems vary among animals with the condition.

"The problem is that we don't get to fix enough of them to really have a huge amount of experience as far as saying this is fixable," he said. "These are difficult cases. Since no two are the same, it's hard to just give an exact prediction of how well they're going to do (with treatment)."

Because the pads of Mr. Spock's foot were so deformed, efforts to reduce his walking problems would require a little bit of experimentation, Tomlinson said.

"The expectation is not for him to be 100 percent normal," Tomlinson said. "His gait's always going to be different. He's probably going to favor the leg a little bit, but if we can make him pain-free and allow him to use his leg in a reasonable manner, that's the goal."



Mr. Spock receives a hug from owner Pamela Crawford during an appointment at the MU Veterinary Medical Teaching Hospital.

Crawford thought the goal was a worthy one, especially considering Mr. Spock's reaction when he had the opportunity to play in the sand one day in her horse arena.

"I took him down to the sand arena for the first time, and he actually could run," she said. "And he ran and ran and ran and would not stop running. He was so happy. He was just going crazy. He ran until he collapsed.

"I just couldn't take that away from him. It was such a happy moment."

Series of surgeries leaves pup able to play

Tomlinson and other veterinarians at the VMTH devised a plan that would address Mr. Spock's deformity over a series of three surgeries. Spreading out the surgeries was important so he could heal and improve his strength through physical therapy between surgeries, Tomlinson said.

The first surgery involved amputating two of Mr. Spock's P1s, or the bones located in the tip of the finger in humans. They were in an abnormal position that caused them to become frequently irritated, Tomlinson said. The goal was to reduce the irritation so Mr. Spock could be more comfortable.

Two months later, veterinarians performed the second surgery, a carpal fusion. During this surgery, Mr. Spock's veterinarians implanted two bone plates with 20 screws to fuse the wrist joint and close the cleft between the bones in his foot.

After the post-surgery swelling had subsided, he had to wear a cast for about two months while his foot healed. Then he began physical therapy on an underwater treadmill to build muscle and become used to walking on that foot. During the recovery period, he began using his leg while walking on grass and sand, but he still couldn't use it on hard surfaces.

Finally, Mr. Spock was ready for his final surgery, called a podoplasty. The purpose of this soft-tissue surgery was to fuse the pads of Mr. Spock's foot together. Although they normally wouldn't be connected, this step was required because the bony formation on his foot was so abnormal and the pads were particularly separated, Tomlinson said. The goal was to make Mr. Spock more comfortable when stepping on his foot.

Following the podoplasty, Mr. Spock's veterinary team waited for his foot to heal and then restarted his physical therapy.

After multiple surgeries and months of physical therapy, Mr. Spock now runs and plays nonstop without pain, Crawford said. She said he can bear weight on his foot and shows much more confidence on hard surfaces.

Both Tomlinson and Crawford consider the treatment efforts a success.

"My goal was for him to be pain-free and that the leg be functional," Tomlinson said. "Now he can use it; he's comfortable with it. From where we started to where we are today, I'm happy."

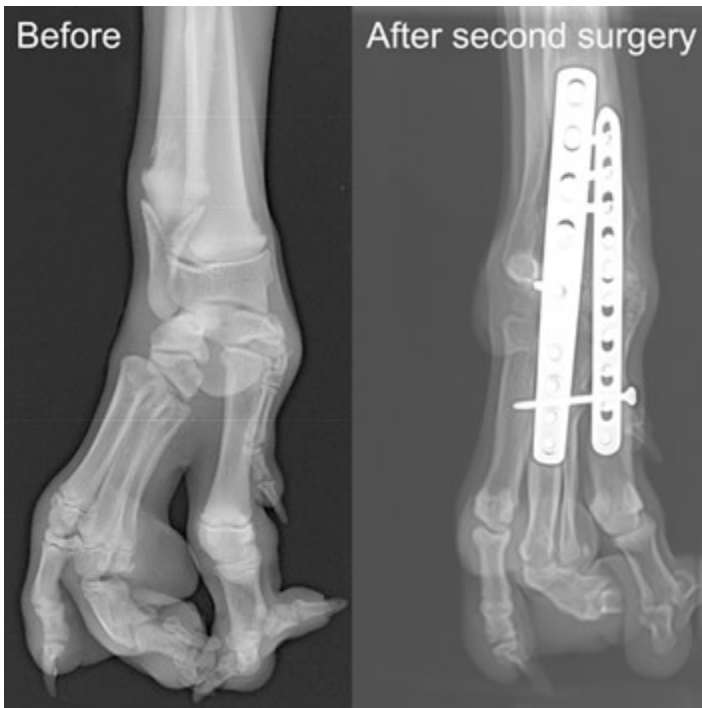


Mr. Spock's ectrodactyly led to difficulty walking as he grew larger. After three surgeries and months of physical therapy, he can finally bear weight on his foot without pain.



Tomlinson isn't the only one who is pleased.

"He's running, he's playing, he's digging holes," Crawford said about Mr. Spock. "He's happy."



In Mr. Spock's second surgery, veterinarians fused the wrist joint and closed the cleft between the bones in his foot.

Mr. Spock takes a break during a recent appointment at MU's veterinary hospital. He now enjoys running and playing without pain.



Researchers flex new muscle in SMA drug development

<http://decodingscience.missouri.edu/2014/07/16/researchers-flex-new-muscle-in-sma-drug-development/>

AVMA Honors Robert “Bud” Hertzog and AVMF with President’s Award

The American Veterinary Medical Association (AVMA) presented 2014 President’s Awards to MU College of Veterinary Medicine alumnus Robert “Bud” Hertzog, DVM, of Lee’s Summit, Mo., and the American Veterinary Medical Foundation (AVMF).

During the AVMA’s Annual Convention in Denver, July 25–29, the AVMA honored some of the nation’s top veterinarians, individuals and organizations during several events and ceremonies. Each recipient shared the same goal: to improve the lives of both animals and people worldwide. These recipients represent the very best in all areas of veterinary medicine, from education and public service to research and private practice.

The AVMA President’s Award is given annually to recognize individuals and groups inside and outside veterinary medicine who have made a positive impact on animal, human or public health, veterinary organizations and the profession. Both Hertzog and the AVMF received the award during the AVMA President’s Reception July 28.

Hertzog earned his Doctor of Veterinary Medicine degree from the University of Missouri in 1956. Nearly 60 years later, he is an active practitioner and manager of Lee’s Summit Animal Hospital in Missouri, with a 10-veterinarian staff including his son, David. In addition, he owns and operates livestock and grain farms in Jackson and Johnson counties with his sons and one grandson. Since 1992, Hertzog has been an animal consultant for the Kansas City University of Medicine and Biosciences Medical School Lab. He currently consults at the Kansas City Zoo, where he served as zoo veterinarian for 25 years.



Robert “Bud” Hertzog

Hertzog served on the AVMA Executive Board from 2000-2006 and was Executive Board chair from 2005-2006. He also served as AVMF chair in 2008. A two-year chairman and eight-year member of the Missouri Veterinary Medical Board, Hertzog is the recipient of numerous awards, including Missouri Veterinarian of the Year and the University of Missouri’s Distinguished Faculty and Alumni Award. He also served as a past president of the University of Missouri Veterinary Medical Alumni Association. Trustee and chairman of the Missouri 4-H Foundation, he is also a charter stockholder, director and past board chairman of Professional Veterinary Products.

Hertzog previously was named Humanitarian of the Year by the Truman Heartland Foundation and received Lee Summit’s Lifetime Achievement Award. He has served as a charter member, past president and Paul Harris Fellow of Lee’s Summit Rotary Club. In addition, Hertzog was elected to four terms to both the Jackson County Legislature and to the R-7 Lee’s Summit School Board. Bank director of the Farmers Trust Company for 30 years, Hertzog is an active member, deacon and corporate president of the First Baptist Church of Lee’s Summit.

Hertzog is a past president of the Missouri VMA and the Kansas City VMA. Executive board and charter member of the American Association of Zoo Veterinarians, he is a member of the American Association of Equine Practitioners and the American Association of Bovine Practitioners.

The second 2014 President’s Award honors the American Veterinary Medical Foundation, with AVMF President and immediate past chair Clark Fobian, DVM, also an alumnus of the MU CVM, accepting the award.

The AVMF is the charitable arm of the AVMA and is dedicated to embracing and advancing the well-being and medical care of animals. The highly rated organization was established in 1963 and has provided more than \$50 million in grants since its inception.

The Foundation supports programs that train for disasters, as well as other humane outreach and animal welfare efforts. It also funds veterinary education and animal research studies that explore the causes, treatments, and prevention of fatal and infectious diseases.

For more information about the AVMA, please visit www.avma.org.

Dr. Lisa Britt Competes in Transplant Games

Lisa Britt was a second-year veterinary student preparing for a final exam the weekend her heart failed. She had been experiencing fatigue for months, but had written it off as stress from school and deaths in her family, or maybe a virus. The cause turned out to be idiopathic cardiomyopathy, an enlarged heart due to failure of the heart's muscle.

After months in the hospital, she received a life-saving heart transplant in September 1991.

Today, Britt, DVM, MS, is an assistant teaching professor of radiology at the MU College of Veterinary Medicine. Britt is married to John Middleton, DVM, PhD, a professor of food animal medicine and surgery at the college, and they have two children, Benjamin and Jennifer Middleton.

In addition to her work at MU, she serves as an ambassador for Midwest Transplant Network, which is the organ procurement agency for Kansas and western Missouri, to increase awareness about the need for organ and tissue donors. In this role she works to educate the public about the benefits of organ donation to both recipients and donors, answer questions and dispel myths about organ donation, and lobby the legislature.

In 1996, while doing her residency training at Washington State University, Britt heard about the Transplant Games of America and decided to enter. Held every two years, the games are a multi-sport festival event aimed at spreading awareness about organ and tissue donation.

"After receiving my heart and realizing the extent of the limited energy I had been dealing with, I was eager to take on new challenges," she said.

That year she competed in the games in Salt Lake City, participating in the 5K walk, 25-meter freestyle swim and 1,500-meter racewalk, as well as running a leg of the 100-meter relay for a sick teammate.

"In 1996 the TGA meant so much to me because I finally felt completely normal and absolutely unremarkable for the first time in five years," Britt said. "Even when you are as eternally grateful as I was and am, a 24- to 29-year-old craves being looked at as just like everyone else — not the 'miracle friend.' At the '96 games I did not know to expect that, wasn't looking for that, but reveled in that feeling of being average again."

After facing acute abdominal pain that resulted in emergency surgery in October, Britt decided it was time to return to the games this year.

"It did serve as a further reminder that even when you are feeling great and in good overall health there are no guarantees for tomorrow," she said. "Therefore, I realized there would never be a good time to take off and go to the Transplant Games, so I decided that this was the year I did not let other things get in the way and to commit the money and time to return to the games."

In this year's competition, held in Houston, she walked in the 5K road race, an event open to the public, along with her husband and children. She also competed in the 1,500-meter race walk, in which she placed fifth in her age



Britt and the family of her heart donor, Jennifer Renee Davis, have stayed in touch in the 23 years since Britt's transplant. "I would do anything in the world for those people," Britt said.

group. Unfortunately, she suffered a severe muscle strain at the start of the 100-meter sprint, her best event. Britt didn't place but finished the race, not realizing until later how significant her injury was.



Lisa Britt, DVM, MS, and her children, Benjamin and Jennifer Middleton, pose with Blaze in Houston. Blaze, a phoenix, is the mascot of the Transplant Games of America.



Her team, Team MO-KAN from Kansas and western Missouri, placed fifth in the Team Cup Award out of more than 40 teams.

The games had more than 6,500 people in attendance.

While competing in the games in 1996, Britt felt her first real hope for longevity after meeting a competitor who had received a kidney transplant 25 years earlier, she said.

"This year I had another unique experience, which was to be able to give that example of a long future to several other people, including a newly transplanted young lady who looked up at her husband with hope when I pointed out my two healthy children busy playing that I had after receiving my transplant," she said. "This year I was both excited knowing that at the next games I will get to join the 'Quarter Century Club' and somber realizing that there are not that many heart transplant recipients attending the games that are out past 23 years."

She hopes to compete again in 2016 in Cleveland.

Britt's team, Team MO-KAN from Kansas and western Missouri, placed fifth in the Team Cup Award out of more than 40 teams.

The Need for Organ and Tissue Donors

Right now in Kansas and Missouri, 2,600 people need lifesaving organ transplants. Thousands more await tissue or corneal donations that can dramatically improve their lives. Across the nation, 18 people die every day awaiting a transplant they so desperately need. The Midwest Transplant Network is determined to meet those needs by encouraging more people to sign up as donors.

Everyone is an ideal donor – it doesn't take a perfect body to become someone's perfect match for organ and tissue donation. Factors like age, weight and even health conditions do not rule out anyone's potential to save or improve lives, so every "yes" carries the hope of a second chance.

To join the effort to increase donor registration in Missouri and Kansas, sign up online at YesTheyWantMe.com.

— Midwest Transplant Network

Britt has maintained contact with the family of her donor and visits them periodically.

"I would do anything in the world for those people," she said. "If it weren't for my heart donor, Jennifer Renee Davis, and the love of her mother and father, Rosita and Ronnie Davis, I certainly would not have been there and my children would not even exist. I wore a button with my donor's picture on it and was asked often if I was a donor mom. I replied that I was merely a recipient, and a very grateful mother."

Audience for Veterinary Surgery Book Expanding Internationally

The first book MU College of Veterinary Medicine Professor Tony Mann, DVM, MS, Diplomate ACVS, Diplomate ACVECC, authored was almost written by someone else. Now that book, *Fundamentals of Small Animal Surgery*, which was released in 2011, has been translated into Portuguese, and translations into Japanese and Chinese are also under way.

Mann wrote the book with several colleagues. Hun Young Yoon, DVM, PhD, was undertaking a fellowship in soft-tissue surgery at the MU CVM and is now a member of the faculty of Konkuk University College of Veterinary Medicine in Seoul, South Korea. Gheorge M. Constantinescu, DVM, PhD, Dr.h.c., is a professor of veterinary anatomy at Mizzou.

While Mann worked on the book from 2006 to 2010, he said the book's inception dates back to the 1990s. Mann explained that the idea for the textbook actually started with one of his veterinary school classmates, Dr. John Payne, who was a surgeon at the MU Veterinary Medical Teaching Hospital from 1989 to 1998. Payne approached Constantinescu about collaborating on a veterinary surgery book. Constantinescu, who is a skilled medical illustrator, agreed and got to work drawing hundreds of pictures. However, the text for the book remained unwritten.

Reluctant to let the illustrations in which he had invested so much time and energy go unused, Constantinescu approached Mann about taking up the project.

"I wasn't confident I would have the time for the project," Mann said. "Eventually, I started on it, but I had a lot of other things going on. I am grateful to Dr. Constantinescu for keeping me motivated and moving forward on the project."

By 2006, Mann finally had enough material together to submit an example chapter and outline to textbook publisher Wiley-Blackwell, which accepted it. Mann then began the task of writing the rest of the manuscript with assistance from Yoon and several other colleagues at the College of Veterinary Medicine who contributed chapters. Constantinescu meanwhile, was tasked with developing numerous additional illustrations.

"The book was written as a potential textbook for veterinary students and technicians and as a refresher book for practicing veterinarians who want to brush up on their basic techniques or use the book to assist in training their staffs," Mann said. "We don't go into specific disease conditions. We cover basic surgical principles, such as gowning, gloving, and identifying surgical instruments and prepping patients for surgery. We have chapters on preoperative assessments of patients and anesthesia. The book was written with didactic surgical instruction of veterinary students in mind." While Mann and his co-authors don't delve into specific conditions requiring surgery, the book does offer a step-by-step guide to performing a canine ovariohysterectomy, or spay.

Mann said he is unsure what has sparked the interest from foreign publishers in having the book translated, but noted that veterinary medicine in China, in particular, has been advancing in recent years.

Mann said he attempted to write the book in such a way as to avoid the material becoming dated, however, changes in technology mean that a second edition may become a necessity.



Dr. Tony Mann

For CVM Professor ALS Support Goes Beyond the Bucket Challenge

The recent ice bucket challenge that went viral on social media not only raised awareness of the neurological disease amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease, it also raised more than \$107 million in donations for the ALS Association. Among the many good sports at the MU College of Veterinary Medicine who cheerfully subjected themselves to an ice water bath was Professor Joan Coates, DVM. A veterinary neurologist and neurosurgeon, Coates has devoted more than 15 years to researching degenerative myelopathy (DM), a neurological condition that affects dogs. She was principal investigator of the team that determined the same genetic mutation that causes DM in dogs causes some forms of ALS in people.

Because most people choose euthanasia when their dog is stricken with DM, veterinary researchers had not seen the full spectrum of the disease in its end stages to note the similarity to symptoms such as paralysis and respiratory failure in late-stage ALS.

"When I began working with dogs with DM, we didn't know there was an ALS connection. The discovery of this mutation in the *SOD1* gene allowed us to know the human correlate of this disease," Coates said. Since the discovery of the *SOD1* gene mutation, Coates and her collaborators have worked closely with ALS researchers on a pilot study of a potential pharmacologic therapy, research that the ALS Association is helping to fund.

Coates said part of the reason she wanted to support the ALS Association by participating in the ice bucket challenge was because the organization has generously sponsored her DM research, and to bring awareness of ALS. Coates is also part of another team working to raise money for research to develop therapies to treat and cure ALS. Before the ice bucket challenge became a social media sensation, Coates, her colleague Dr. Teresa Lever, an assistant professor in the MU School of Health Professions, and second-year veterinary student Shelby Mancini, who has been studying DM as part of a Veterinary Research Scholars Program project, began working together to coordinate a fundraising walk for ALS. The walk is being organized in honor of Alan Allert, DVM, a former College of Veterinary Medicine instructor who succumbed to ALS earlier this year.

"When I was a veterinary student at MU, Dr. Allert was one of my professors and taught cardiovascular pharmacology," Coates noted. "He had a wonderful teaching style and really worked at connecting with all the students in the class."

In 2009, Allert became the executive director at the Central Missouri Humane Society and was instrumental in establishing a cooperative agreement with the CVM that allowed veterinary students to spay and neuter shelter animals. He also worked with college faculty on other programs, including "Walk a Hound, Lose a Pound," and a study in which armed forces veterans with post-traumatic stress disorder teach dogs from CMHS basic obedience skills.

From the initial team of three, the Mizzou CVM team now has 55 members on its roster who will take part in the [Columbia Walk to Defeat ALS](#) in Allert's memory. The walk takes place at 1 p.m. this Saturday, Sept. 6 at Stephens Lake Park.

Actualizing One Health:

The Role of Public-Private-Academic Partnerships

http://cvm.missouri.edu/news/Niemeyer_Lynn.pdf

CVM Alumnus Leading Feed Industry Group

University of Missouri College of Veterinary Medicine Alumnus Dr. Alan Wessler, has been elected as chairman of the Board of Directors for the American Feed Industry Association (AFIA). Wessler, a Tarkio High School graduate, was raised on a livestock and grain farm in northwest Missouri. He earned a bachelor's degree in animal husbandry from MU before going on to receive his DVM in 1977.

Wessler is the vice-president of feed operations and animal health at MFA Incorporated in Columbia, Missouri, where he has been employed since 1988. He is a previous recipient of AFIA's Member of the Year Award for his efforts as chairman of the AFIA Centennial Task Force and has served two terms on the association's Board of Directors.

AFIA, based in Arlington, Virginia, is the world's largest organization devoted exclusively to representing the business, legislative and regulatory interests of the U.S. animal feed industry and its suppliers. Founded in 1909, AFIA also is the recognized leader on international industry developments. Members include more than 575 domestic and international companies and state, regional and national associations. Member-companies are livestock feed and pet food manufacturers, integrators, pharmaceutical companies, ingredient suppliers, equipment manufacturers and companies which supply other products, services and supplies to feed manufacturers.



Dr. Alan Wessler

In Tenth Year, VET Orientation Thrives

The clock is ticking.

On a hot summer day at the Lake of the Ozarks, a group of MU College of Veterinary Medicine students struggles to complete an activity called Search and Rescue. Using only a few supplies, including a rope and two long, wooden boards, the students have a limited amount of time to navigate an obstacle course composed of horizontal telephone poles with large gaps between them. If that isn't challenging enough, they must carry a fellow student, representing an injured victim, in a rescue basket.

Students walk across a narrow board, holding onto a rope overhead for balance.

"You've got it, Abby," one calls out. "You've got it, girl."

With one second to spare, the final group member reaches the end of the course. The team erupts in cheers.

It probably doesn't sound like your typical veterinary school lesson. But for the past 10 years, incoming University of Missouri veterinary students have come together before classes begin for the Veterinary Enrichment and Teambuilding (VET) orientation.

The program provides students the opportunity to develop their leadership, teambuilding and communication skills. Students travel to Windermere Conference Center, which hosts conferences, camps and seminars at its large resort on the edge of the Lake of the Ozarks. Through 3 ½ days of obstacle courses, other small-group activities and discussions, students bond with their peers and learn to trust each other before classes begin.



A Windermere staff member supports James Lee of Chicago while he and other students from the MU College of Veterinary Medicine Class of 2018 work to complete the Search and Rescue activity during the 2014 Veterinary Enrichment and Teambuilding orientation.

Building a Better Veterinarian

In 2004, Ron Cott, DVM, associate dean for Student and Alumni Affairs, attended the Veterinary Leadership Experience, a national retreat for veterinary students and faculty that helps develop skills in servant leadership, self-awareness and emotional intelligence. Upon completing the program, he asked himself, "Why can't we do this at Mizzou?"

"I've always felt like the scientific program that we offer the students here at the University of Missouri is extremely well done, a very good, balanced program, but when you have that type of a program it is so full you don't have time to put into it the nontechnical portion of training to become a professional in a career that is so respected as veterinary medicine is," Cott said. "Over the years organized veterinary medicine and many involved with promoting the profession have recognized that we needed to emphasize the nontechnical side because it's so important when you get out in practice, when you get into industry, when you get into research. Every component of our profession has a nontechnical side to it."

Cott and Rebecca Jones, a business and management consultant who focuses on communications, leadership and training solutions, began developing a curriculum that would ease incoming students' anxieties about veterinary school while also teaching them important nontechnical skills such as communication techniques and self-awareness.

"The desire was growing to graduate professional DVMs that were more than just technically astute," Jones said. "Seasoned practice owners and their clientele wanted more in a DVM than just the ability to spay a dog or assess a disease. They wanted a vet that made them feel good about themselves, their pet and the experience."

In the summer of 2005, the college hosted its first VET orientation.

Life Lessons

In addition to obstacle courses and other group challenges, the program features a "Wellness 101" session and a discussion about students' communication styles.

Wellness 101 addresses ways to balance life during veterinary school. As Cott explains, the schedule is similar to a full-time job, which many of the students haven't experienced.

"We're asking them to change their lifestyle," he said.

In addition to information about maintaining balance, the students learn about available resources at the college, including a financial aid adviser and a counselor.

The communication session focuses on helping students understand their own styles of communication, as well as other styles they may encounter. Prior to attending VET, students complete a DiSC assessment, a test that measures their communication and behavioral styles.



Class of 2018 students work together to cross an imaginary river using wooden tiles. Although nontechnical skills in teamwork, leadership and communication are essential to the veterinary profession, they are difficult to teach in a classroom setting.



MU veterinary students work as a team to complete the helium stick activity. The challenge, in which all students must hold the rod as they place it on the ground, encourages students to think about how they deal with frustration and communicate under stressful conditions.

DiSC profiles describe human behavior in various situations, such as how people respond to challenges, how they influence others, their preferred pace and how they respond to rules and procedures.

The students discuss characteristics of the styles, how to be more effective communicators and how to collaborate successfully with people who have different styles. Not only will that knowledge pay off as they embark on their careers, it also helps them prepare for the frequent group work they encounter in school.

“They think it’s an individual effort here, but there’s a lot of teamwork, so setting that tone of working as a team and knowing the people you’re going to be working with is very important for their academic careers and beyond, when they become practitioners or any other part of the profession,” said Chuck Wiedmeyer, DVM, PhD, associate professor of veterinary pathobiology. Wiedmeyer is a facilitator for VET.

VET facilitators, composed primarily of faculty from the college, are each assigned a small group of students throughout the orientation. After each activity, they lead a debriefing session in which the students reflect on the lessons they learned and how those apply to veterinary school.

“A lot of (being a facilitator) is understanding the group dynamics, making sure that one student doesn’t necessarily dominate whole activities, making sure that everyone participates and really can gain what they need to out of this experience and that they develop the leadership, the bonding and the communication that is going to be so critical when they start their (classroom work) as well as in their clinical rotations and out in the real world,” said facilitator Ruthann Lobos, DVM, a senior manager of training for Nestle Purina in Austin, Texas.

Students aren’t the only ones who grow from the experience.

“They’re walking in with a lot of anxiety but also a lot of enthusiasm,” said facilitator Craig Franklin, DVM, PhD, professor of veterinary pathobiology. “They’ve worked all their lives to get to this point. So that enthusiasm is sort of a nice little refresher. It keeps me enthusiastic as well.”

Lobos echoed that sentiment.

“These students — having their perspective, their passion and their excitement every year reminds me of why I got into this great profession in the first place,” she said.

Measuring Success

It isn’t easy to assess outcomes for a project like VET, Cott said, because many of its benefits are non-tangible. However, student surveys taken after completing the orientation show, among other improvements, increases in knowledge of communication styles, understanding of what to expect in veterinary school and familiarity with their peers. Student feedback given during this assessment is overwhelmingly positive.

Another indicator of success is its growth in popularity. Incoming students are increasingly hearing about the benefits of attending VET from current students. One student in the Class of 2018 said she heard about the orientation when she was interviewing for admission to the college. This year, for the first time in VET’s 10-year history, every student in the class attended the program.

“For this to be our 10th year and to have 100 percent (participation), I think it speaks highly of the momentum of the program and its success,” Cott said. “It’s sticking around. It’s not slowly going away. I do believe that it is probably one of the strongest orientation programs in the country.”



Laura Fogg gives a thumbs-up while taking on the high-ropes course during VET. Student feedback about the program has been overwhelmingly positive.

When citing the positive changes VET has elicited in students, Cott points to a telling anecdote.

"The phone calls I got prior to VET taking place indicated to me that a lot of our graduates were really uncertain about their careers and what they wanted to do with them because the practitioners and the alumni calling me would say, 'Ron, I just interviewed three of your new graduates, and none of them know what they want to do,'" he said.

After the first VET class graduated, the context of those calls changed.

One practitioner called Cott and told him, "'I interviewed three of your new grads. I would hire all three of them if I had a spot,'" Cott recalled. "'They're determined, they're goal-oriented, they know what they want to do. They know how to communicate. They can talk to my clients. They can work with my team.'"

Class of 2018 Takes on the Challenge

Sponsored by the College of Veterinary Medicine, Merial, Purina, Hills, Zoetis and the Missouri Veterinary Medical Association, the Class of 2018's orientation in August brought together 120 students with diverse backgrounds. Half of the students come from outside Missouri, including two from Puerto Rico. They range in age from 21 to 31.

Some of those students, such as Kathryn Notch of Chesterfield, Missouri, knew several other students in the class before attending VET. Notch received her undergraduate degree at MU.

Others, such as Chad Landes of Waunakee, Wisconsin, knew none of their classmates before the orientation began.

"I was really excited for this week just to start to meet people in my class and start building friendships and relationships that will last strong for the next four years and then beyond," he said. "I know after today I'll be leaving with a few friends."

Several students said they were nervous about attending VET and meeting so many new people. During the past 10 years of VET, the students' DiSC profiles have revealed that a large percentage of them tend to be introverted.

Jackie Burrell of Chicago, who knew only one of her classmates before VET, said she and her friend were apprehensive about the experience.

"We were kind of nervous, like, 'Oh, are we gonna talk to anybody?' or 'Are we gonna get to know other people?'" she said.

In the end, Burrell achieved one of the primary goals of VET: making new friends and becoming comfortable with her classmates.

"I've learned that I'm not as shy as I thought I was," she said. "I've learned that I have great classmates. Everyone's easy to talk to, and I'm really excited to go to vet school with these guys and spend the next four years with them. I think it's gonna be a pretty awesome four years."



The Class of 2018 comes together for a group hug during VET. "They're going to be together as a family for four years," said Ron Cott, DVM, associate dean for Student and Alumni Affairs.



All 120 members of the Class of 2018 attended the 2014 VET orientation. It was the first time in VET's 10-year history that all students participated.

VET 2014

What Students, Facilitators Say About VET



"I really enjoyed meeting my fellow classmates before classes start, getting to know them. That way, you kind of already feel like a family."

— Jerica Moore, Class of 2018 student



"I know we're all scared. I know I sure was coming into this, so I'm just glad that we have that useful information. This is a tool to prepare ourselves."

— Ben Sims, Class of 2018 student



"It's a great leg up being able to know a lot of our classmates and being able to trust each other going in instead of having to figure everyone out while you have your studies packed on top of it."

— Jeremiah Conn, Class of 2018 student



"(VET is) not about just sitting in a lecture room and saying, 'You're gonna do this, this and this in the curriculum.' It's giving them a chance to grow while they're there, to understand who their classmates are, to know that the faculty are humans and are normal people and they're not people to be scared of."

— Ron Cott, DVM;
associate dean for
Student and Alumni
Affairs



"I think that these types of programs are so crucial to our profession, to the future of our profession, but also to those of us who are currently active as veterinary colleagues, and I just wish that we as a profession would spend more time and invest more money and resources and ourselves into making sure that we're focusing on these skills along with our technical, our scientific and our medical acumen."

— Lauren Olavessen,
DVM; VET facilitator and
Merial technical service
veterinarian



"VET is a fabulous program. I think it shows in our students and our faculty. We have a culture here that, in talking to other veterinary schools, this is very unique. It's sort of a family environment, and that's what we embrace and promote. It really sets the University of Missouri apart."

— Craig Franklin, DVM,
PhD; VET facilitator and
professor of veterinary
pathobiology

Dr. Karen Campbell Named Alumna of the Year

Karen Campbell, DVM '79, MS, is the University of Missouri College of Veterinary Medicine 2014 Alumna of the Year. Campbell was honored during the college's Alumni Reunion Weekend held Sept. 12 and 13. The award recognizes outstanding professional and personal achievements and contributions to the enhancement of the veterinary profession.

Campbell earned her doctor of veterinary medicine degree in 1979 at MU. She spent the summer following graduation working for Asheville Veterinary Associates in North Carolina. That fall she moved to Auburn University to do an internship in small animal surgery and medicine. Campbell stayed in the South to complete a residency in small animal internal medicine and an MS in clinical pathology at the University of Georgia, and she later completed an additional residency in dermatology at the University of Illinois.

Since 1983, Campbell has served on the faculty of the University of Illinois, where she is currently department head of veterinary clinical medicine. She is board-certified in veterinary internal medicine and dermatology.

While accepting her award, Campbell thanked her family.

"Nobody gets here by themselves," she said. "I have always been tremendously supported by my family."

Campbell said she felt fortunate that she received her veterinary education at MU.

"I truly believe that we have all received an excellent education here at Missouri that prepared us to be successful, and I hope each of you enjoy your jobs as much as I do," she told the alumni in attendance.

Campbell has taught dermatology to thousands of students and has mentored 15 dermatology residents, 10 of whom have spent at least a portion of their careers as faculty members teaching veterinary dermatology at various universities. Her research and academic interests include dermatology, endocrinology, immunology and bacteriology. She has received more than 70 research grants to date during her career, has published more than 100 scientific papers and more than 40 book chapters, and has taught numerous lectures domestically and globally. She has authored or co-authored six textbooks, two of which were written with her father, which she said made them extra special.

Most recently, Campbell was one of three co-authors of the Seventh Edition of Small Animal Dermatology working with Craig Griffin, DVM, whom she first met at MU while he was an intern in small animal medicine and surgery and she was a third-year veterinary student.

Campbell has served the profession through a variety of national offices including two years as the president of the American College of Veterinary Dermatology. She was the 2013 recipient of the ACVD Award of Excellence for Outstanding Contributions in Service and Education in the field of veterinary dermatology. She has served as secretary of the Mu Chapter of Phi Zeta at Illinois for 18 years and is also a member of Phi Kappa Phi, Alpha Zeta, Gamma Sigma Delta, Sigma Xi, Society of Comparative Endocrinology, American Academy of Veterinary Dermatology, American Animal Hospital Association, American Association of Veterinary Clinicians, Illinois State Veterinary Medical Association and the American Veterinary Medical Association. She is a lifetime member of the Missouri 4-H Alumni Association and an honorary member of the Missouri Guernsey Breeders Association.

Campbell's father taught animal and dairy science courses at MU. Her favorite activities during childhood were spending time with Guernsey cattle and ponies. During her pre-veterinary years, she worked with Joseph Swink Jr., MU DVM '72. Swink taught her that veterinary medicine is more about helping people than animals and that if you love what you are doing you will always work to the best of your capacity, she said.



CVM Dean Neil C. Olson, DVM, PhD, presents the 2014 Alumna of the Year Award to Karen Campbell, DVM '79, MS. Campbell is department head of veterinary clinical medicine at the University of Illinois.

Campbell is married to Lawrence Motsinger. They have two children, Sarah Motsinger, a member of the MU CVM Class of 2015, and Jason Motsinger, a student in agricultural engineering at the University of Illinois. They live on a six-acre mini-farm with horses, cats and shelties.

The announcement of Campbell's award was made during the reunion banquet at the Adams Conference Center. The following day alumni were invited to have breakfast with retired faculty members, tour the Veterinary Medical Teaching Hospital and attend a tailgate party before the football game against the University of Central Florida.

Class of 1954



Several members of the CVM Class of 1954 returned to Columbia for the 2014 Alumni Reunion Weekend. Pictured, from left, are B.M. Baker, Ireatess Keeney, Newell Netsche, George Fischer, A.E. Blum, Leslie Williams and Venton Goodnight.

Niemeyer Lecture Addresses Importance of One Health Partnerships

Tracey Lynn, DVM, MS, presented the lecture “Actualizing One Health: The Role of Public-Private-Academic Partnerships” Sept. 17 at the Bond Life Sciences Center. Held as part of MU’s 175th Anniversary Commemorative Week, the presentation was sponsored by the MU College of Veterinary Medicine’s Niemeyer Lecture Series.

As the One Health science and policy academic liaison at the U.S. Department of Agriculture Animal and Plant Health Inspection Service(APHIS), Lynn is part of a team coordinating the agency’s animal health component of One Health.

The One Health concept emphasizes that the health of animals, the health of people and the viability of ecosystems are inextricably linked. This approach embraces the idea that disease problems affecting the health of humans, animals and the environment can only be solved through improved communication, cooperation and collaboration across disciplines and institutions.

The USDA has a long history of partnering with public and private organizations. Lynn discussed how the USDA and the One Health Collaboration Center (OHCC) are building upon that framework to develop innovative partnerships with academia to address challenges using a One Health approach.

There is tremendous value in such partnerships, Lynn said.

“Creativity is better as a team sport than as an individual process,” she said. “In order to address these grand challenges, we really have to find new ways to work effectively together.”

Working with a variety of organizations, including international partners, academia and state and federal agencies, the OHCC focuses on such priorities as zoonotic disease engagement, global health security, antimicrobial resistance, pandemic and animal disease preparedness and preharvest food safety.

Goals include building new collaborations and partnerships, sustaining existing relationships in the One Health community and spearheading outreach and communication to build credibility, trust and respect in the community.

Lynn described the center as a “One Health Match.com” that helps organizations find partners they might not be aware of.

Lynn earned her DVM at Auburn University and her MS in epidemiology at Washington State University. Prior to joining APHIS, she spent seven years as an epidemiologist in federal and state public health agencies working across the spectrum from outbreak investigation and response to policy development. Initially hired into APHIS Veterinary Services to assist in building effective collaborations and methods for coordinating zoonotic disease surveillance and data sharing with the CDC, Lynn specializes in developing innovative partnerships with federal agencies, academia and industry to increase efficiency and effectiveness in managing complex health threats through cross-disciplinary collaboration.

The Kenneth and Margaret Niemeyer Visiting Lecture Fund sponsored her presentation. The Niemeyers established the fund in 1986 to defray expenses of individuals brought to the CVM to deliver scientific lectures to veterinary students, faculty and other interested individuals. Kenneth Niemeyer was a 1955 graduate from the MU CVM. A long-time faculty member at the college, he also served as associate dean of academic and student affairs until the time of his retirement. He passed away in December 2011.



Dr. Tracey Lynn

Bacterial “Communication System” Could Be Used to Stop Spreading and Kill Cancer Cells, MU Study Finds

Sept. 24, 2014

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<http://munews.missouri.edu/news-releases/2014/0924-bacterial-%E2%80%9Ccommunication-system%E2%80%9D-could-be-used-to-stop-spreading-and-kill-cancer-cells-mu-study-finds/>

MU Students Compete at AABP Quiz Bowl

Two teams of students represented the MU College of Veterinary Medicine in the American Association of Bovine Practitioners Quiz Bowl on Sept. 19 in Albuquerque, New Mexico. The event was held during the AABP annual meeting.

Both MU teams, each consisting of four students, placed second in their respective opening rounds. Each opening round pitted four teams against each other, with the winner moving on to further competition. Twenty-three teams of veterinary students from colleges across the country entered the competition, which was ultimately won by a team from Texas A&M.

The MU students split into two teams based on gender. The women's team featured second-year students Jill Abel, Brienne Bishop, Elena Esparza and Alyssa Thomas. Competing on the men's team were fourth-years Lynn Barton and Logan Williams and third-years Cody Dalton and Clint Eastburn.

Although the MU team members didn't do any special preparation before the competition, they said they had a great time and were pleased with their performance.

"I wish I could do it again," said Williams, the MU CVM AABP senior delegate. "It was a lot of fun."

The questions addressed topics such as reproduction, pathology and production. Esparza said she was surprised that even though her team of second-year students was still completing their preclinical classroom curriculum they knew many of the answers.

It can be hard to tell how relevant some of the information learned in the classroom is when applied to clinical settings, she said, and the questions made her realize that many of those issues are important in the field.

Thomas and Dalton said the students who aren't graduating would like to return to the Quiz Bowl again next year and hope to perform even better now that they know what to expect.

"We're taking home the trophy next year," Dalton said.

Despite some disappointment at not winning the competition, the students said they had a fantastic time at the conference, especially because of the networking opportunities.

Besides the ability to meet potential employers and future colleagues, Dalton said networking events offered the chance to have dinner with people whose research articles he has been reading for years.

Sponsors of the students' trip included the Wolff Fund and Zoetis.



The men's team was made up of (from left) Logan Williams, Cody Dalton, Clint Eastburn and Lynn Barton, who is not pictured.



The women's team included students: (from left) Brienne Bishop, Jill Abel, Alyssa Thomas and Elena Esparza.

CVM Welcomes New Faculty Members

This fall, the MU College of Veterinary Medicine welcomes one new faculty member to the Department of Biomedical Sciences and 10 new members to the Department of Veterinary Medicine and Surgery (VMS).

Shawn Bender, PhD

Shawn Bender, PhD, is the newest biomedical sciences faculty member. In addition to being an assistant professor in the department, Bender has an appointment as a research health scientist at the Truman Veterans Hospital.

Bender earned a PhD in physiology at Ohio University before coming to the CVM as a postdoctoral fellow in biomedical sciences. In 2011, he joined the MU School of Medicine as a research assistant professor in the Department of Medicine.

Bender's primary research interest is understanding the mechanisms underlying coronary blood flow regulation and what contributes to the impairment of coronary blood flow regulation in obesity and diabetes. His research utilizes cell culture and molecular techniques, tissue culture techniques and whole animal experiments, allowing an integrative approach to hypothesis testing.

In addition to research, Bender's duties will include teaching veterinary pharmacology.

"I'm a detail-oriented person who enjoys science, so academic research was a pretty natural fit," he said. "I enjoy the process of discovery in research and how unexpected or paradoxical results often end up being the most exciting. I also enjoy sharing my passion about science with students and engaging them with real-world applications of what they're learning."

Megan DuHadway, DVM

Megan DuHadway, DVM, has joined VMS as a clinical instructor of small animal emergency and critical care.

DuHadway earned her doctor of veterinary medicine degree at MU. She then completed an internship in small animal medicine and surgery at North Carolina State University and a residency in emergency and critical care medicine at Michigan State University.

DuHadway said she was happy to return to MU.

"It's exciting to see some of the changes that have been made," she said, such as updated buildings and technological equipment.

Her duties will involve predominantly clinical work with some research and teaching responsibilities. In addition to working with patients, DuHadway is excited about the opportunity to work on the forefront of research and teaching.

"I like working with the next generation of veterinarians," she said. "I'm excited to work with students, interns and residents. I love the collaborative approach at universities."

DuHadway has three pets: a Newfoundland, a fox terrier and a cat. In her free time she enjoys being active, especially running and hiking, and she is hoping to devote time soon to planning her wedding and learning to cook.



Colleen Koch, DVM

As a veterinarian, Colleen Koch, DVM, loves that each day brings new challenges and opportunities to help her patients. She is joining VMS as a resident in veterinary behavior at the Mizzou Animal Cancer Care facility in Wentzville. She works with patients who exhibit problematic behavior to identify the causes and develop behavior modification programs. She sees a variety of species, including dogs, cats, horses, birds and pigs.

"I love helping owners reconnect with their pets and animals, helping to re-establish their bond and improve their relationship," she said. "Relieving the suffering that the animal is feeling results in an improved quality of life for everyone."

Koch earned her DVM at the University of Illinois, where she later completed the executive veterinary program. A graduate of the Karen Pryor Academy for Animal Training and Behavior, Koch is pursuing a residency program that leads to board certification in veterinary behavior through the American College of Veterinary Behaviorists.

"It is my hope to not only help my patients but also educate owners and other animal care professionals to identify individuals in their care that need appropriate behavior intervention early — ideally, keeping these pets in their homes, facilitating medical and husbandry needs in such a way that is stress- and fear-free for everyone," she said.

Koch co-owns Lincoln Land Animal Clinic in central Illinois with her husband, who is also a veterinarian. She has two daughters and two dogs. In her spare time, she enjoys spending time with family, reading, gardening and photography.



Jill Luther, DVM, MS

Jill Luther, DVM, MS, loves the tangible nature of surgery.

"You can often see immediate improvement in a patient's quality of life following a surgical procedure," she said.

Luther, who has joined VMS as an assistant teaching professor of small animal surgery, said the ability to influence future veterinarians drew her to pursuing an academic career.

"The people who have made the most impact in my life were those mentors who saw the potential that I could go out and make a difference," she said. "I want to perpetuate that mentorship ripple effect."

Luther completed her DVM, MS and a residency in small animal surgery at MU. Before returning this fall, she worked as an associate surgeon at Midwest Veterinary Referral Center in Chesterfield.

"When I made the decision to return to an academic career, it made sense to go back to an institution I already knew and respected," she said. "There are many exciting things going on in the CVM and in general at MU. Of course, my husband and I both love Columbia and are excited to raise our family here."

Luther's primary responsibility will be training students, interns and residents in soft tissue surgery. Her interests include minimally invasive surgical techniques, hepatobiliary surgery and oncologic surgery.

Luther's family includes her husband, two children, a cocker spaniel and two cats.



Charles Maitz, DVM, PhD

Charles Maitz, DVM, PhD, has joined VMS as an assistant professor of radiation oncology. He holds a joint position with the School of Medicine's Department of Radiology and the International Institute of Nano and Molecular Medicine.

"My favorite thing about radiation oncology is that it is sort of a hybrid of biology and engineering, where we have the ability to use state-of-the-art equipment and technology to directly treat cancer," Maitz said. "It is the ability to be constantly learning and staying on the cutting edge of discovery that draws me to radiation oncology."

Although a portion of his time will be devoted to clinical work, Maitz will spend most of it continuing his research on boron neutron capture therapy of cancer.

He earned his DVM at MU before completing a residency in radiation oncology and a PhD in radiochemistry at MU.

"I like to think that this makes me a good example of the Mizzou Advantage," he said. "Not only does my research and training cross between the veterinary school, the medical school, the MU Research Reactor and the Department of Chemistry, but I am also a home-grown product of the University of Missouri."

In addition to being appointed the chapter adviser of the Beta Beta Chapter of Delta Sigma Phi Fraternity at MU, Maitz recently passed his certifying exam to become a diplomate of the American College of Veterinary Radiologists in the subspecialty of radiation oncology.

Hans Rindt, PhD

Hans Rindt, PhD, has joined VMS as a research associate in the Comparative Internal Medicine Laboratory.

His duties will be split between research with Associate Professor Carol Reiner, DVM, PhD, and with Associate Professor Jeff Bryan, DVM, PhD. Reiner's research focuses on feline asthma, and Bryan's addresses oncology, including efforts to identify how spontaneous tumors arise and ways to treat them.

Rindt will have the opportunity to work with residents, veterinary students and undergraduates in the lab, something he said he looks forward to.

"It's gratifying to see how someone picks things up and develops interest in research," he said.

Rindt said he enjoys the hands-on work of doing experiments, optimizing protocols and even "failing miserably and trying again."

Rindt completed a PhD in biology at the University of Heidelberg in Germany. Before joining VMS, he worked for nine years at MU as a research assistant professor at the CVM, first in the laboratory of biomedical sciences Professor Richard Tsika, PhD, and later in the laboratory of veterinary pathobiology Professor Christian Lorson, PhD.

In addition to reading, Rindt loves cats. He volunteers and fosters cats for Columbia animal rescue organization Second Chance.



Joshua Schaeffer, DVM

Joshua Schaeffer, DVM, has joined VMS as a clinical instructor of food animal medicine and surgery.

Originally from near Oregon, Missouri, Shaeffer grew up on a small family farm.

“I have lived in Missouri my whole life and am very proud of our state,” he said. “I enjoy that my job plays a role — usually small — in supporting the diverse and successful Missouri agriculture.”

Schaeffer’s new position involves collaborating with students on veterinary farm calls to provide care at both the individual and herd levels, including sick animal work, outbreak investigations and herd health. He said he enjoys training students and finds fulfillment in watching them enter into productive practice. In addition, he appreciates the ability to help producers increase their productivity and profitability while providing safe quality products.

“This is not only for them, but for our state and country as well,” he said. “American agriculture is a key component to our national security.”

Schaeffer’s main interest is swine health and production, and he is interested in developing herd health and biosecurity plans.

“This is an excellent way to prevent disease and increase the profitability of the operation for the producer,” he said.

Schaeffer completed his veterinary education, a rotating food animal internship and a production medicine residency at MU. He recently finished coursework at the university for a master of public health degree.

Eva Ulery, DVM

For as long as she can remember, Eva Ulery, DVM, has been interested in working with animals. As a first-grader, she discovered a kitten in her aunt and uncle’s barn and carried him home in her pocket to keep him warm. In high school and college, her teachers fostered her interests in biology and medicine.

“Becoming a veterinarian was an easy decision for me,” she said.

Ulery has joined VMS as a clinical instructor in community practice and shelter medicine.

She earned her DVM at Iowa State University, interned in Connecticut and then worked as an associate veterinarian in Connecticut and Chicago.

Ulery said her teaching goals involve empowering students and preparing them for small animal general practice. Her interests include dentistry, medicine and spaying and neutering.



Allison Wara, DVM

Allison Wara, DVM, was first drawn to veterinary medicine because of her love for animals and science.

“Although my love for animals was my initial motivator, I have since found this profession very rewarding because of the opportunity to also help people,” she said.

Wara has joined VMS as a clinical instructor of veterinary nutrition. She will direct the new ReNu Clinic, a combined nutrition and rehabilitation/physical therapy clinic for the treatment of companion animal obesity and to optimize patient outcomes after surgery or illness.

As the director for the ReNu Clinic, Wara will coordinate day-to-day activities with other specialty services and establish clinic protocols. She also will be involved in the clinical instruction of third- and fourth-year veterinary students, nutritional consulting for internal and external cases, clinical practice and research.

Her research interests include feline diabetes and obesity in canines and felines.

Wara earned her DVM at Atlantic Veterinary College in Canada and completed a residency in small animal clinical nutrition at MU.

She has a 3-year-old female Greater Swiss Mountain Dog named Regan and two cats that she said have finally managed to forgive her after an 18-hour car ride from Ottawa. In her free time she enjoys outdoor activities such as biking, hiking and skiing, as well as visual arts such as painting and drawing.



Dorothy Whelchel, DVM, MS

Dorothy Whelchel, DVM, MS, has joined VMS as an assistant teaching professor of equine medicine.

Whelchel, who has been riding horses since age 11, said she became interested in veterinary medicine in high school after her horse had an episode of colic that required surgery.

“As I watched the veterinary specialist evaluate my horse, take him to surgery and ensure his recovery, I was amazed by the whole process,” she said. “I think this was the moment I knew I wanted to pursue a career as an equine veterinarian.”

Originally from Atlanta, Whelchel earned her master’s and DVM degrees at the University of Georgia in Athens, where she completed a residency in large animal medicine. Before coming to MU, Whelchel worked in private practice in South Carolina for three years as an equine ambulatory practitioner and equine internal medicine specialist. She is board-certified in large animal internal medicine by the American College of Veterinary Internal Medicine.

As an assistant teaching professor, Whelchel’s duties will include teaching fourth-year veterinary students on their clinical rotations, caring for sick horses in the equine clinic and providing routine care for ambulatory clients. Her clinical interests include equine infectious diseases, respiratory diseases, endocrine diseases, cardiology and neonatology, as well as ambulatory medicine.

In addition to riding horses, Whelchel enjoys bike riding and hiking.



Jennifer Willcox, DVM

Jennifer Willcox, DVM, a clinical instructor of oncology in VMS, always knew she wanted to be a veterinarian. It was during an internship, however, that she discovered her love for working in oncology.

Willcox earned her DVM at The Ohio State University. After internships in California and Florida and a bone marrow transplant fellowship at North Carolina State University, she completed her residency in medical oncology at North Carolina State University. She is board-certified in oncology by the American College of Veterinary Internal Medicine.

Willcox's duties primarily will involve clinical work, though 25 percent of her time will be devoted to research and teaching. Her clinical interests include lymphoma and leukemia, and her research interests include translational medicine and clinical trials.

Although Willcox mostly has lived in urban areas, she's excited about living in Columbia and calls it "a neat little gem of a town." In her free time, she enjoys running, biking, yoga and gardening and hopes to learn to play the guitar soon. She has a cat named Theo Huxtable.



CVM Students Place Second in Veterinary Innovation Challenge

Imagine a pet sitter is caring for your dog while you are out of town when the dog suddenly develops severe breathing problems. The sitter rushes him to a veterinary hospital. In an emergency, time and health history are of the essence. But the sitter probably won't know the pet's full history, and quickly gathering medical records from your pet's regular veterinarian can be nearly impossible.

To address this and related problems, MU College of Veterinary Medicine students Brandon Thornberry and Nick Harrison have developed a veterinary innovation, MyDVM. They recently won second place for the business idea in the Veterinary Innovation Challenge, an international competition designed to encourage entrepreneurial thinking and innovative ideas among veterinary students to help drive the future of the industry.

The third-year students won \$5,000 in the competition, which was founded by University of Pennsylvania veterinary students. Veterinary students from American Veterinary Medical Association-accredited schools had to lead the teams, but people from other disciplines could be team members.

Developing their business plan was a time-intensive process, Thornberry and Harrison said. Thirty-four teams submitted proposals in May, and in June the top eight finalists were announced. They had until August to submit a more formal and detailed business plan. In September they traveled to Philadelphia to present their ideas before judges who evaluated the quality of the business plans and viability of the ideas.

Although he admitted the finals competition was a little nerve-wracking, Harrison said he and Thornberry prepared extensively for their presentation and were confident their idea could succeed. They were extremely impressed by all of the ideas presented during the finals, and both said they were somewhat surprised when the winners were announced.

"We were confident going into the finals and knew we had given a strong presentation," Thornberry said. "It was so neat to see all our hard work culminate" in a second-place finish.

Because they plan to develop their idea into an actual business, the duo isn't divulging many details right now. Their general description is as follows: "MyDVM is on the forefront of the next generation of communication, information sharing and diagnostics within veterinary medicine. Through MyDVM services, pet owners will be able to engage with their veterinarian in a manner unlike anything that currently exists within the animal health industry."

"Our business idea centers on addressing a need to enhance communication between the veterinarian and pet owner, as well as addressing a need in emergency medicine for information in a pet's medical history to be more immediately available," Thornberry said.

The idea developed from real-world experience, lessons learned in veterinary school and research.



Nick Harrison and Brandon Thornberry, third-year students at the MU College of Veterinary Medicine, placed second in the Veterinary Innovation Challenge, an international competition designed to encourage entrepreneurial thinking and innovative ideas among veterinary students.

"Each of us had a vision for how we wanted to help the veterinary industry, and when we started thinking together, we merged our ideas into one business plan," Thornberry said. "We started getting into the entrepreneur mindset about how to bring our ideas to fruition, and entering this competition helped us to really work out the details."

Both students had an interest in business before the competition. Harrison and Thornberry are members of the Veterinary Business Management Association, which provides business education to veterinary students all over the world. Thornberry was the president of Missouri's VBMA chapter last year and is now the association's national marketing director. Harrison served as secretary of the Missouri VBMA board.

To supplement their classroom and VBMA education, the team did extensive research about the veterinary industry, business management and finances, and how to connect with and penetrate the market, Harrison said. The process was extremely educational, Thornberry said.

"Just like veterinary medicine in the classroom, you can really only learn so much from a Powerpoint," he said. "You have to get out there and try and not be afraid of failure."

Thornberry's father, a St. Louis veterinarian, and his uncle, a certified public accountant, served as mentors for the team. Ron Cott, associate dean of Student and Alumni Affairs and director of Advancement, also gave the students guidance as they prepared their presentation.

"The college is extremely proud of having two of our students represent us in a nonscientific area in regards to entrepreneurship," Cott said. "It speaks highly of their commitment to their education and their understanding that it goes beyond their scientific knowledge base."

Over the summer the students filed a patent and began investigating resources to make their idea a reality. They intend to file for a business license by the end of the year and immediately begin creating the product and service once they gather the necessary investor capital.

"The ultimate goal is to get it into the marketplace," Harrison said.

Personal Protection Seminar to Teach Safety Skills

Nearly 2 million American workers report having been victims of workplace violence each year, according to the Occupational Safety and Health Administration. Outside law enforcement, health care workers are more likely to experience workplace violence than any other profession.

To teach practical protection skills to faculty, staff and students, the MU College of Veterinary Medicine, in conjunction with Havoc Enterprises, will offer a one-day seminar on Oct. 18.

The daylong seminar aims to teach participants to recognize aggressive behaviors, defuse and de-escalate a situation, and extract themselves. It will be split into two portions. A morning segment will focus on what the organizers call "software" skills, such as situational awareness and how to avoid dangerous situations. In the afternoon, attendees will learn "hardware" skills, or the physical approach for managing potential threats.

Megan Grobman, DVM, a second-year internal medicine resident, organized the seminar, which will be led by David Rice. Rice has worked in state law enforcement since 1996 as a uniformed trooper, polygraph examiner, homicide investigator and SWAT team paramedic. He holds a black belt and instructor rank in several martial arts including aikido and ground fighting. Grobman, who has performed situational risk assessment in Northern Ireland specializing in paramilitary organizations, also has trained in martial arts.

Increasing safety skills is an effort Grobman finds particularly important.

"This is my personal passion and soapbox," she said.

Risk factors in a veterinary setting include access to controlled substances, being open late or 24 hours, and especially heightened emotions, Grobman said.

"Their best friend is sick," she said. "The language we speak is completely foreign. We're all going to deal with an upset client."

These factors, coupled with a lack of skills for recognizing and de-escalating potentially dangerous situations, can lead to trouble, she said.

"Ninety percent of personal safety is awareness and the ability to recognize your own vulnerability and address it," Grobman said. "The best thing we can do is train people with the tools and hope it never becomes an issue."

Physical tools are a last resort, she said.

Funded in part by the CVM Office of Academic Affairs, the seminar is appropriate for any adult regardless of physical ability. Attendees should wear comfortable clothes and closed-toed shoes.

To register, email Connie Sievert at SievertC@missouri.edu.



Megan Grobman, DVM, a second-year internal medicine resident, organized the Oct. 18 seminar to teach protection skills to MU College of Veterinary Medicine faculty, staff and students.

Personal Protection Seminar

Oct. 18, 2014

Adams Conference Center

8 to 11:30 a.m.: Protection "software" skills;
free

1 to 5 p.m.: Physical skills; \$30

Afternoon session participants must have
attended the morning session.

To register, email Connie Sievert
at SievertC@missouri.edu.

Agencies Share Ebola Information with Pet Owners

The spread of the Ebola virus from Africa and into the United States has raised concerns about how prepared local, state and federal agencies are to deal with the disease. The Missouri Department of Health and Senior Services late last week announced that the Missouri State Public Health Laboratory in Jefferson City has been designated as an Ebola virus disease testing laboratory. The laboratory will be able to perform presumptive testing of possible Ebola samples to help local health providers make treatment decisions while confirmation tests are performed at the Centers for Disease Control and Prevention in Atlanta.

In addition to the human and public health aspects of the disease, focus has also been on the handling of dogs and cats who may have been exposed to a human being with the disease. Our understanding of the disease in dogs and cats is limited, but the CDC is working to provide the public with as much information as possible. The CDC is working with the U.S. Department of Agriculture, the American Veterinary Medical Association, and other partners to develop additional information for pet and livestock owners. The USDA National Veterinary Services Laboratory is currently developing plans for laboratory testing of exposed animals.

Class of 2016 Receive White Coats, Begin Clinics

The MU College of Veterinary Medicine held a White Coat Ceremony Sunday, Oct. 19, 2014, to celebrate the transition of Class of 2016 members from classroom to clinics. The event marked the midpoint in the students' professional curriculum. The first two years of preclinical training provided them with a foundation in biomedical sciences and included courses in anatomy, physiology, cell and molecular biology, pathology, pharmacology, microbiology, virology and toxicology. They also learned fundamentals in clinical disciplines, including anesthesiology, clinical pathology, radiology, public health and medicine and surgery, that they will need for the rest of their veterinary education. They will now spend nearly two years working in the Veterinary Medical Teaching Hospital in the Small Animal, Food Animal and Equine clinics, as well as undertaking preceptorships in private practices or with public agencies on their way to completing their Doctor of Veterinary Medicine degrees.

The 108 students who took part in the ceremony selected a family member, friend or mentor to present their white coats and assist in donning them.

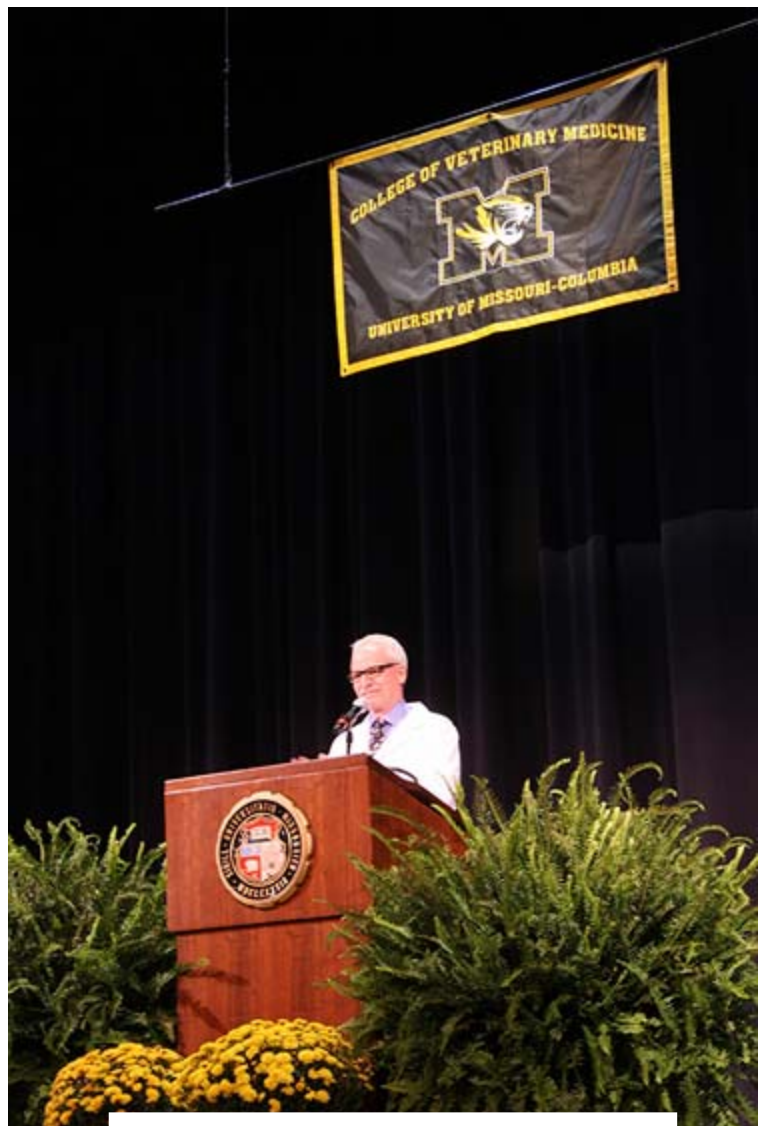
Dean Dr. Neil C. Olson congratulated the class members on their success in reaching this milestone and reminded them they were closer to the end of their DVM education than the beginning. Dr. John Dodam, chairman of Veterinary Medicine and Surgery Department, welcomed the students to the Teaching Hospital. Dr. Ron Cott, director of Advancement and associate dean of Student and Alumni Affairs, serve as the emcee for the ceremony. Dr. David Prigel, president of the Missouri Veterinary Medical Association (MVMA), and Richard Antweiler, executive director of MVMA, presented each student in the class with a veterinary medicine lapel pin from the MVMA. The platform party also included Dr. Linda Berent, associate dean of Academic Affairs, Dr. David Wilson, director of the Veterinary Medical Teaching Hospital, and Dr. Shuping Zhang, director of the Veterinary Medical Diagnostic Laboratory.

Lacy Jones, president of the Class of 2016 gave the response on behalf of her classmates.

Following the ceremony, which was held at the Missouri Theatre, a reception was held in the students' honor.



Veterinary student Lauren Geiger receives a white coat from her fiancé, Alex Callow.



Dr. Ron Cott serves as emcee for the 2014 White Coat Ceremony.



This year's White Coat ceremony set a record with the number of people in attendance. It was held in the Missouri Theatre in downtown Columbia.



Lacy Jones gives the response on behalf of the Class of 2016.



Dr. John Dodam congratulates student Stephanie Loden as Dr. David Wilson and Dr. Shuping Zhang await their opportunity to greet her. Dean Neil C. Olson congratulates her father, Don Loden, who presented her white laboratory coat.

Army Veterinary Corps Honors CVM Alumnus

U.S. Army Maj. Troy Creason, DVM '04, received the 2014 Lt. Col. Daniel Holland Leadership Award. The award is given annually to recognize one U.S. Army Veterinary Corps officer who best exemplifies and has made significant contributions in leadership within the U.S. Army Veterinary Corps. Creason serves as the executive officer of the Veterinary Corps Chief Office based at Fort Sam Houston, San Antonio, Texas.

In documenting Creason's accomplishments deserving of the award, his nominator, Capt. Jason Crawford, cited the major's service as the deputy commander for the 218th Medical Detachment Veterinary Services during the unit's one-year deployment to Iraq.

"Major Creason's actions contributed to the introduction of contractor veterinarians to ethically continue protecting the remaining non-Department of Defense working dog population," according to the nomination. "His actions reduced the dependence on U.S. military veterinarians in Iraq expediting the Presidential-directed retrograde of U.S. forces."

Creason was also credited with supervising an investigation into a potential foodborne illness outbreak. After the investigation identified multiple hazardous pathogens, Creason drafted an executive summary that led to a theater-wide order prohibiting local vendors on U.S. bases throughout Iraq. This eliminated a significant public health risk for all Department of Defense personnel deployed to Iraq.

Creason's contributions extend beyond his combat deployment, according to the nomination.

"He has worked with the U.S. Department of Agriculture to improve the military relevance of Foreign Animal Disease Diagnostician training given to VC officers. This training prepares officers across the government for worldwide mobilization to potentially catastrophic domestic and bioterrorism events."

Upon receipt of the award Creason stated, "It is a true honor to be recognized by subordinates, peers and superiors alike with this award not only for what it represents but also for whom it represents. Lt. Col. Holland exemplified the concept of reliable and strong, yet compassionate, leadership. I will continue to strive for that type of impact throughout my life."

Creason earned a bachelor of science degree in 1995 at the United States Military Academy at West Point. He went on to receive a master of engineering management in 2000 from the University of Missouri – Rolla, now known as Missouri University of Science and Technology. After completing his doctor of veterinary medicine at MU, he undertook a master's degree in public health at the University of Tennessee in Knoxville, which he received in 2010. Shortly thereafter he became a diplomate of the American College of Veterinary Preventive Medicine.



Brig. Gen. John Poppe (right), the current chief of the U.S. Army Veterinary Corps, presents the 2014 Lt. Col. Daniel Holland Leadership Award to MU CVM alumnus Maj. Troy Creason during the American Veterinary Medical Association convention held in July in Denver.

Creason has received a number of military decorations, including a Bronze Star Medal, Meritorious Service Medal, Army Commendation Medal, Army Achievement Medal, National Defense Service Medal, Iraq Campaign Medal, Global War on Terrorism Service Medal, Army Service Ribbon and Overseas Tour Award.

His most recent honor is named for Lt. Col. Daniel Edward Holland, who died May 18, 2006, while on a civil affairs mission in Iraq. Holland, who served in the Veterinary Corps, was killed, along with three other soldiers and an Iraqi interpreter, by a roadside bomb near Baghdad.

Maj. Creason credits his wife, Joy Creason, from Dixon, Missouri, and their five children, with his opportunity for success in his career.

- **Lindquist honored as Missouri's top vet**
- **Veterinarian owns practices in Kirksville and Edina.**

<http://www.kirksvilledailyexpress.com/article/20141025/NEWS/141029284/1994/NEWS>

Students Explore Opportunities, Veterinary Products

Many domestic and foreign U.S. military installations have veterinary clinics on the post to provide care for soldiers' pets, working dogs, horses and local livestock. Those clinics need veterinarians to staff them, and that need brought U.S. Army Staff Sgt. Marcus Bates to the MU College of Veterinary Medicine's 18th annual Veterinary Products Day on Oct. 21.

"We're hoping to provide scholarship opportunities to students who are still looking for funding opportunities," Bates said of the Army's presence at the event.

Veterinary Products Day once again proved a big draw with approximately 375 veterinary students attending. In addition to the Army booth, 19 other vendors came to the College to display their products, offer samples and answer student questions.

As Bates and two of his fellow servicemen discussed benefits, such as tuition, books and a monthly stipend of more than \$2,000, veterinary students could earn by joining the Army's Veterinary Corps, Josh Norsworthy talked about the animal health care products his company has to offer.

Norsworthy, who was attending his first Veterinary Products Day, was present to represent Ceva Animal Health, headquartered in Lenexa, Kansas. The seventh-largest animal health company in the world, Ceva produces a wide variety of products, including Vectra 3D, an anti-parasitic for dogs, a line of dermatological treatments and synthetic pheromones to help pet owners when their dogs and cats are experiencing periods of stress. Norsworthy hoped to expand the company's future clientele by explaining the available products to future veterinarians.

"We're here because we want to partner with veterinarians," he said.

Students who attended the event learned about the products and services offered by a variety of animal health and food companies, including Addison Biological Laboratories, Banfield, Boehringer-Ingelheim, Dechra Veterinary Products, Elanco, Hill's Pet, iVet, Merial, MWI Veterinary Supply, Norbrook Inc., Nutramax Labs, Pet King Brands, Platinum Performance, Purina, Royal Canin and Zoetis. ProPartners Wealth - AVMA GHLIT, which provides insurance for veterinarians, and the U.S. Department of Agriculture Food Safety and Inspection Service also sponsored the event and had representatives on hand.

A buffet-style dinner was provided, and drawings were held for several prizes including a stethoscope, with Sarah Wilken as the winner, a Roku player, which Stacie



The 18th annual Veterinary Products Day brought together 375 students with 20 representatives of animal health products, food, professional insurance and government services.



Virginia and Joe Shetler, representing AVMA GHLIT, discuss available insurance products with fourth-year veterinary student Sarah Hover.



At the U.S. Army table students were able to make dog tags for themselves or their pets. Sgt. 1st Class Paul Walter holds up a dog tag for student Angela Garcia to inspect.

Stilinovic won, a tailgating gift basket, which went to Liz Farnan, and three \$50 Visa gift cards, won by William Meyers, Nicole Freeman and Jacqueline Burrell.

ACVO Meeting a Success for Ophthalmology Group

The MU College of Veterinary Medicine Comparative Ophthalmology Service recently made a successful trip to Fort Worth, Texas, for the American College of Veterinary Ophthalmologists annual conference.

Kevin Donnelly, DVM '10, who completed his residency at MU this summer and recently achieved his ACVO diplomate status, won the 2014 Dr. Cynthia Wheeler Memorial Award for best case report or review article by a resident.

With Donnelly's win, the CVM has earned the most ACVO resident manuscript awards of any institution in the nation.

Donnelly received his award for his case report, "Surgical correction of congenital entropion in related Boer goat kids using a combination Hotz-Celsus and lateral eyelid wedge resection procedure." The article was published in the November 2014 issue of *Veterinary Ophthalmology*.

Donnelly's co-authors were Jacqueline Pearce, DVM, MS; Elizabeth Giuliano, DVM, MS; Pamela Fry, DVM, MS; and John Middleton, DVM, PhD. Pearce is an assistant teaching professor of veterinary ophthalmology, and Giuliano is an associate professor of veterinary ophthalmology and section head of the MU ophthalmology service. Fry is a postdoctoral fellow in food animal medicine and surgery, and Middleton is a professor in food animal medicine and surgery.

Donnelly's case report detailed five cases of entropion in related Boer goat kids that were patients at the MU Veterinary Medical Teaching Hospital. Entropion, a condition in which the eyelids roll inward and damage the cornea, is a significant problem when it occurs in newborn animals, Donnelly said.

Although it likely is not an uncommon condition in goat kids, there have been no reports of entropion in goats in the scientific literature, he said. Veterinarians at the VMTH performed a surgical procedure called a Hotz-Celsus and lateral eyelid wedge resection to correct the problem.

Donnelly said he was honored by the award.

"I had a lot of help from my mentors, Dr. Pearce and Dr. Giuliano, and Dr. Pam Fry and Dr. Middleton in the food animal department," he said. "It was a big collaborative effort, and to be recognized for that effort is a great honor."

After receiving his doctor of veterinary medicine degree from MU in 2010, Donnelly completed a rotating internship at the University of Pennsylvania. He then returned to MU for his residency.

Donnelly is finishing a master's degree and temporarily serving as a clinical instructor at the CVM. In December he will head to Oklahoma City to work in a private practice.

Giuliano Elected ACVO Board of Regents Vice President

Preceding the conference, Giuliano was elected vice president of the ACVO board of regents.



Dr. Kevin Donnelly

Giuliano, who has been a board member for three years, said she was honored to continue serving the ACVO. The organization, which promotes excellence in veterinary ophthalmology through advanced training, certification, research and education, strives to advance ophthalmology patient care to all animals.

Giuliano credited her mentor, Cecil Moore, DVM, MS, a professor emeritus in the Department of Veterinary Medicine and Surgery, with inspiring her to give back to the ACVO.

Since becoming board-certified in 2002, Giuliano has served on numerous ACVO committees. As she takes on the role of vice president, she hopes to continue making improvements in member services and increasing awareness of who members are and what they do.

Veterinary ophthalmology is an extremely rewarding field, Giuliano said. In addition to benefitting patients directly, it provides the opportunity to study animal models of human disease, she said.

Giuliano's primary research emphasis is the investigation of photodynamic therapy for the treatment of periocular tumors in horses. She also is currently involved in the investigation of corneal wound healing and tear-deficient abnormalities, as well as maintaining a keen interest in surgical advances in veterinary ophthalmology.

Giuliano completed her DVM at the University of Wisconsin-Madison, followed by a small animal rotating internship at the Animal Medical Center in New York and a comparative ocular pathology fellowship at the University of Wisconsin-Madison. She completed a residency in comparative veterinary ophthalmology and a master's degree in conjunctival immunity at MU in 2002 and then joined the faculty.

Giuliano has served as an editorial reviewer for a number of veterinary journals and speaks regularly at local, national and international veterinary meetings and conferences. She received the MU Golden Aesculapius Award for Teaching Excellence in 2003 and 2011, as well as the Gold Chalk Award, an MU Graduate and Professional Council campuswide teaching award, in 2007.

Ophthalmology Faculty, Residents Present Abstracts

At the conference, MU presented four abstracts, as well as a collaborative abstract with colleagues at the University of Wisconsin. *Dr. Elizabeth Giuliano*

The abstracts presented were:

Effects of Topically Applied 0.2% Hyaluronic Acid on Corneal Epithelial Wound Healing in Dogs: EA Giuliano, KM Gronkiewicz, RR Mohan

Role of Fetal Microchimerism in Maternal Corneal Wound Healing: MK Fink, EA Giuliano, JN Bryan, A Sharma, RR Mohan

Ocular and Systemic Safety of Topical Suberovlanilide Hydroxamic Acid (Saha) in Dogs: KM Gronkiewicz, EA Giuliano, A Sharma, RR Mohan

Efficacy and Safety of Pirfenidone in the Treatment of Canine Corneal Fibrosis: MK Fink, EA Giuliano, A Sharma, RR Mohan

Retinal Detachment Post-Phacoemulsification in Bichons Frises: A Retrospective Study of 54 Dogs: SG Pryor, E Bentley, GJ McLellan, EA Giuliano, RA Allbaugh, AJ Rankin, AL Labelle, KA Buhr



Dr. Elizabeth Giuliano

\$1 Million Gift to Fund Exercise Physiology Research at MU

Nov. 20, 2014

Story Contact(s):

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<http://munews.missouri.edu/news-releases/2014/1120-1-million-gift-to-fund-exercise-physiology-research-at-mu/>

CVM Alumnus Welcomes New Chancellor

Dr. James Nave, a 1968 graduate of the MU College of Veterinary Medicine, recently hosted a reception for MU Chancellor R. Bowen Loftin at Nave's Henderson, Nevada, home. The social function was held as part of the new MU chancellor's outreach to alumni and other friends of the university. Loftin was inaugurated as the 22nd chief executive officer of the university on Sept. 18. The gathering hosted by Nave created an opportunity for Loftin to introduce himself to veterinary alumni and University of Missouri supporters in the Las Vegas area and beyond.

Nave, a Missouri native, served in the United States Army from 1968 to 1971 before entering private practice in Las Vegas in 1971. In 1974, he established the Tropicana Animal Hospital, an accredited member hospital of the American Animal Hospital Association. He continues to own and manage Tropicana Animal Hospital as well as 14 other veterinary hospitals in the Las Vegas area. He was joined at the reception by approximately 30 other people, including MU College of Veterinary Medicine Dean Neil C. Olson.



MU Chancellor R. Bowen Loftin offers an update about the university to alumni and friends gathered at a reception hosted by CVM alumnus Dr. James Nave. The chancellor talked about the university's budget and the importance of private support for higher education in the face of diminishing state funds.



Chancellor Loftin shares a laugh with Dr. James Nave and Jan Dils during a reception held in the chancellor's honor in Henderson, Nevada. Loftin presented Nave with a few host gifts, including a copy of "Mizzou 175, The Remarkable Story of Missouri's Flagship University from 1839 to 2014."



CVM Dean Neil C. Olson (right) visits with Dr. Roger Kuhn, a member of the CVM Class of 1968, and his wife, Lynn. Kuhn, one of the co-founders of Banfield Pet Hospitals, owns several veterinary hospitals in California.

Selting Elected President-Elect of Veterinary Cancer Society

Kim Selting, DVM, MS, DACVIM (oncology), DACVR (radiation oncology), assistant professor of oncology at the MU College of Veterinary Medicine, has been elected president-elect of the Veterinary Cancer Society. Selting was installed as president-elect during the 2014 Veterinary Cancer Society annual conference in St. Louis.

Formed in 1976, the VCS has a membership of nearly 1,000 people, including specialists in medical, surgical and radiation oncology, internists, pathologists, pharmacologists and general practitioners worldwide. The nonprofit's mission is to disseminate information to members, inspire collaboration by connecting individuals with diverse interests in oncology, and foster awareness of scientific information among the public, cancer care providers and investigators.

Selting will serve the VCS executive committee for two years as president-elect before becoming president. After two years in that role, she will spend another two years on the committee as the past president.

She said the committee has recently made some positive changes to the structure of its annual conference, and she hopes to continue modifying the meeting to ensure that it is as productive and informative as possible for attendees. The conference is one of the largest veterinary oncology meetings in the world.

Selting's additional goals include pursuing ways to identify standards of common practice among members and boosting involvement by less-represented groups of care providers.

"We are a cross-specialty, international organization, and I would like to find ways to better incorporate our international colleagues as well as encouraging even more participation by related specialties, such as surgery, radiation and pathology," Selting said.

Selting has been involved in the VCS since becoming a member in 1994. She is part of the organization's Veterinary Cooperative Oncology Group, a group of members who share an interest in veterinary and comparative oncology. She previously served as the group's president and was also a member-at-large on the executive committee for three years. This year she was co-chair of the annual meeting.

Selting, who joined the CVM faculty in 2002, completed her doctor of veterinary medicine degree and a master's degree in clinical sciences at Colorado State University. She is a diplomate of the American College of Veterinary Internal Medicine in the specialty of oncology and of the American College of Veterinary Radiology in radiation oncology.

Her clinical research interests include biomarkers of cancer, particularly thymidine kinase and vitamin D, new cancer treatments including radioactive substances, and detection of cancer by breath analysis. Among tumor types, Selting is interested specifically in the treatment of lung and bone cancer.



Dr. Kim Selting

In addition to her teaching and clinical duties at the Veterinary Medical Teaching Hospital, Selting travels twice weekly to Mizzou Animal Cancer Care, a satellite clinic in Wentzville where radiation therapy is offered along with clinical trials of anti-cancer drugs.

CVM Ophthalmology Research Wins Second Place

Jonathan Tovey, MD, recently won second place at the annual Table Rock Regional Roundup competition for research he performed under the supervision of Rajiv Mohan, PhD. Mohan is the Ruth M. Kraeuchi Endowed Professor in Veterinary Ophthalmology at the MU College of Veterinary Medicine, and Tovey is a third-year ophthalmology resident at the School of Medicine.

The researchers studied the impact of a cancer drug on non-cancer-related corneal scarring and haze. They tested the anti-scarring effect of Vorinostat in the eye in plated cornea cells (in a petri dish) as well as in animal models. Vorinostat, also known as SAHA, is an FDA-approved drug for the treatment of cutaneous T-cell lymphoma, a general term for T-cell lymphomas that involve the skin.

“We found that SAHA is a safer, effective alternative to current therapies including Mitomycin C in the treatment and prevention of corneal scarring and haze, a top cause of preventable blindness globally,” Tovey said.

In addition to Tovey and Mohan, the principal investigator, other researchers involved with the project included Ajay Sharma, PhD; Elizabeth Giuliano, DVM, MS; Kristina Gronkiewicz, DVM; Prashant Sinha; Saad Siddiqui; and Justin Brooke. Sharma is an assistant research professor of veterinary ophthalmology, Giuliano is an associate professor of veterinary ophthalmology and section head of the MU ophthalmology service, and Gronkiewicz is an ophthalmology resident. Sinha, Siddiqui and Brooke were students who contributed to the project while working in the One Health/One Medicine Ophthalmology Research Laboratory.



Dr. Jonathan Tovey and Dr. Rajiv Mohan

Testosterone May Contribute to Colon Cancer Tumor Growth

Dec. 10, 2014

Story Contact(s):

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<http://munews.missouri.edu/news-releases/2014/1210-testosterone-may-contribute-to-colon-cancer-tumor-growth/>

Presenting Visiting Lecturer Jingsong Zhou, PhD

http://cvm.missouri.edu/news/Zhou_presentation.pdf

Food Animal Medicine Postdoctoral Fellow Becomes ACVIM Diplomate

Pamela Adkins, DVM, MS, recently became a diplomate of the American College of Veterinary Internal Medicine in the specialty of large animal internal medicine. Adkins is a postdoctoral fellow in food animal medicine and surgery at the MU College of Veterinary Medicine.

ACVIM is the international certifying organization for veterinary specialists in cardiology, large animal internal medicine, neurology, oncology and small animal internal medicine. To become a diplomate, specialists must complete an internship and residency in their field following veterinary school. This takes an additional three to five years of training, after which they must pass rigorous examinations to become board-certified.

Adkins completed her veterinary studies at The Ohio State University, where she also received a master's degree in veterinary preventive medicine. After an internship at Ohio State, she came to MU in 2011 to complete a food animal medicine and surgery residency and pursue a doctorate in pathobiology.



Surgical Resident Wins Research Award

Ryan McCally, MS, DVM, a third-year resident in small animal surgery at the MU College of Veterinary Medicine, received an award for Best Clinical Abstract at the Small Animal Residents' Forum during the 2014 [American College of Veterinary Surgeons](#) Surgery Summit in San Diego.

McCally's abstract, "A Comparison of the Analgesic Efficacy of Epidural Anesthesia and Two Peripheral Nerve Blockades After Tibial Plateau Leveling Osteotomy," was co-authored with faculty members Alex D. Bukoski, DVM, PhD; Keith R. Branson, DVM, MS; Derek B. Fox, DVM, PhD; and James L. Cook, DVM, PhD.

Bukoski is an assistant professor of anesthesiology, and Branson is an assistant teaching professor of anesthesiology and small animal emergency and critical care. Fox is an associate professor of small animal orthopedic surgery, and Cook is the William and Kathryn Allen Distinguished Professor in Orthopaedic Surgery and director of the Comparative Orthopaedic Laboratory.

McCally's study compared the effectiveness of three methods of pain management in dogs following a tibial plateau leveling osteotomy (TPLO). A TPLO is a surgery used to treat cruciate ligament tears, a common degenerative injury in dogs.

McCally said that for hind-limb surgical procedures such as a TPLO, epidural injections have been a common choice for adjunctive pain relief in the past. However, he said, the injections can be technically demanding to administer and can risk complications.

McCally's study compared epidural injections to femoral nerve blocks (FNB) and femoral and sciatic nerve blocks (FSNB). In the past several years, the scientific literature has documented that providing a local anesthetic to target nerves produces similar results as an epidural but fewer complications. Although these studies were primarily in humans, a handful of veterinary studies have found similar results, McCally said.

Over the eight-hour period following the surgery, McCally measured level of pain, time until the first dose of pain medication was needed and number of doses of pain medication needed for each of the three methods. Dogs receiving the FSNB had significantly lower pain scores when they awoke than dogs with the FNB. Although each of the treatments provided appropriate pain relief, McCally's research showed that either nerve block would be an acceptable alternative to an epidural injection. Nerve blocks could reduce the risk of complications and the use of controlled drugs, plus they might be easier to administer in a private practice, McCally said.

McCally's research was funded by a 2013 ACVS Surgeon-in-Training Research Grant and a grant from the MU chapter of the Phi Zeta Veterinary Honor Society.

He completed his veterinary studies at Washington State University in 2010.



Children with Autism Who Live With Pets Are More Assertive

Dec. 30, 2014

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By Fran Webber

<http://munews.missouri.edu/news-releases/2014/1230-children-with-autism-who-live-with-pets-are-more-assertive/>

Dr. Charles Maitz Becomes Board-Certified in Radiology

Charles Maitz, DVM, PhD, recently became a diplomate of the American College of Veterinary Radiology in the subspecialty of radiation oncology. Maitz, an assistant professor of radiation oncology, joined the MU College of Veterinary Medicine faculty in July. He holds a joint position with the School of Medicine's Department of Radiology and the International Institute of Nano and Molecular Medicine.

The ACVR is an American Veterinary Medical Association-recognized organization of veterinary specialists in radiology and radiation oncology. Its mission is to enhance and promote the highest quality of service in diagnostic imaging and radiation oncology, to optimize veterinary patient care and to advance the science of veterinary radiology and radiation oncology through research and education. To become a board-certified specialist, diplomates generally complete an additional three to five years of training after veterinary school and must pass a certifying examination.

Maitz earned his DVM at MU before completing a residency in radiation oncology and a PhD in radiochemistry at MU.



Dr. Charles Maitz