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CVM Graduates

108 New Veterinarians

The University of Missouri College of Veterinary Medicine graduated 108 new veterinarians May 13 during the college's 67th annual commencement.

Michelle Haven, DVM, PhD, a business development and strategic planning consultant for animal healthcare companies, gave the commencement address. Using Guy Clark's song "The Cape" as an acronym, Haven urged the graduates to believe in themselves. She said the "C" was for "Choice," and that success depends on making hard choices and risking failure. The "A" signifies "Anxiety," which can accompany any new opportunity. The "P" serves as a reminder to "Persevere," Haven said. Finally, the "E" stands for "Evolve." Haven told the graduates that they would grow as people and develop new skills and capabilities.

"All of you graduates today had to trust your cape to get to where you are, right? Haven said. "You had to make some hard choices. You took a chance. I mean, it's not easy to get in vet school and it's not easy to succeed in vet school, but you did it," she said.

Haven recounted her own career path and how she had intended to be an equine surgeon, but had instead found she enjoyed the pace of research and business development in the veterinary healthcare industry. She also told the new DVMs that they are joining their profession during a time of rapid change, and she urged them to embrace the opportunity to make the world a better place.

"Spread your wings, hold your breath and always trust your cape," she said.

CVM Dean Neil C. Olson, DVM, PhD, served as the master of ceremonies for the event, which was live streamed and can be viewed [online](https://livestream.com/mizzou/VeterinaryMedicineCommencementSpring2016). (<https://livestream.com/mizzou/VeterinaryMedicineCommencementSpring2016>)

Jill Luther, DVM, MS, assistant teaching professor, encouraged the graduates to join the MU Alumni Association to keep in touch with the college. "Don't forget that this is where it all began," Luther said.

Mel Falk, DVM, president of the Missouri Veterinary Medical Association, led the graduates in reciting the Veterinarian's Oath. Angela Tennison, DVM, associate dean for Student Affairs, presented the graduating class for investiture, which was conducted by Linda Berent, DVM, PhD, associate dean for academic affairs, Meghan Harmon, DVM, clinical instructor, and Timothy Evans, DVM, PhD, associate professor. Donald Cupps, a member of the UM Board of Curators, conferred the doctor of veterinary medicine degree to the class members.

Members of the Class of 2016 selected Justin Nash to give a response on their behalf.

Nash noted that for some of his classmates the day represented the culmination of years of hard work, while for others, it was a milestone on their way toward becoming a veterinary specialist. He told his classmates that they had



Prior to the start of the MU CVM Class of 2016 graduation ceremony, soon-to-be veterinarian Makenzie Wilder gets her cap adjusted by her mother, Gina Martin, who drove to Columbia from South Carolina to watch her daughter receive her DVM.



Members of the platform party listen to speaker Michelle Haven, DVM, PhD, during the CVM graduation ceremony.



Michelle Haven urges the 2016 graduates to continue to expand their education and seek out a mentor they trust.



The CVM Class of 2016 recites the Veterinarian's Oath.



Justin Nash, DVM, gives the response on behalf of his classmates.



Alicia Finger receives her hood from (left) Linda Berent, associate dean for academic affairs, and Meghan Harmon, DVM, clinical in-



CVM graduates celebrate receiving their doctor of veterinary medi-



New veterinarian Laurel Marshalek gives Tim Mule a hug after the graduation ceremony. Each year the CVM Mule Team attends a post-ceremony reception for new graduates who want photographs with the college mascots.

The Case of the Foal with Two Mothers

<https://mizzomag.missouri.edu/2016/05/the-case-of-the-foal-with-two-mothers/>

Collaborative effort leads to unique informatics program

Posted By: [Ryan Owens](#) on Tuesday, May 10th, 2016

<http://engineering.missouri.edu/2016/05/collaborative-effort-leads-unique-informatics-degree-program/>

Dean Presents Impact and Service Recognition Awards

MU College of Veterinary Medicine Dean Neil C. Olson selected two individuals from within the college and a state senator for recognition to receive a 2016 Dean's Impact Award May 18. The awards, established in 1993, are presented for outstanding and sustained impact on the College of Veterinary Medicine. One to three individuals, usually a staff member, faculty member and individual from outside of the college, may be selected annually based on major contributions that have had significant positive impact on college programs.

The honorees received an engraved crystal 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 Debbie Tate, Jeffrey Bryan, DVM, MS, PhD, and Missouri Senator Dan Brown, DVM.

Tate is an oncology technician and clinical trials coordinator for the oncology service. She joined the college in 1990. She has served on numerous committees, including the hospital advisor board, and has been asked to moderate the technician exam for the American College of Internal Medicine 2016 Conference. Commended by her nominators for working to further her own knowledge and skills, Tate earned a Veterinary Technician Specialist certification in oncology in 2015.

Bryan is an associate professor of oncology and serves as the director of both the Comparative Oncology and Epigenetics Laboratory and the Scott Endowed Program in Veterinary Oncology. He is also the president of the American College of Internal Medicine specialty of oncology. Bryan was credited with improving the quality and recognition of the oncology department, as well furthering collaboration at MU and bringing the college to the forefront of nuclear medicine research.

Brown earned his DVM at the college in 1977. He was elected to the Missouri House of Representatives in 2008 and the Missouri Senate in 2010 representing District 16. He has served on numerous legislative committees including Agriculture, Food Production and Outdoor Resources; Appropriations; Education; Veterans Affairs and Health; Joint Committee on Life Sciences and Joint Committee on MO Health Net. He has been an advocate for veterinary medicine and a supporter of the college, and is credited with helping to fund the Dr. Merrill Townley Large Animal Veterinary Student Loan Program.



Debbie Tate was the recipient of the Dean's Impact Award presented to a staff member.



CVM Dean Neil C. Olson presents the Dean's Impact Award for faculty to Associate Professor Jeffrey Bryan.



Dean Olson also honored Missouri Sen. Dan Brown with the Impact Award presented to an individual from outside the CVM.

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

Dean's Office:

Bob Atkins, 5 years
Barb Calvin, 10 years
Doug Tindall, 10 years
Jennifer Hamilton, 15 years
Tim Nieuwenhuizen, 15 years
Kathy Seay, 35 years
Dale Lenger, 40 years

Biomedical Sciences:

Tom Childs, 15 years
Miles Tanner, 15 years
Karol Dinwiddie, 20 years

Veterinary Diagnostic Laboratory:

Kirk Thompson, 5 years
Cheryl Rojas, 20 years
Karen Huggins, 25 years

Veterinary Medicine and Surgery:

Melody Canote, 5 years
Kevin Lunceford, 5 years
Raquel Riddle, 5 years
Elizabeth Wood, 5 years
Kassia Miller, 10 years
Leslie Simmons, 10 years
Nora Vance, 15 years
Mary Romesburg, 30 years
Bonita Hyler, 35 years

Veterinary Pathobiology:

Jamie Rhoades, 5 years
Shelly Nail, 10 years
Juyuan Guo, 15 years
Miriam Hankins, 15 years
Kim Livingston, 15 years
Armedia O'Neill, 15 years
Darlene Ward, 30 years

Student Researchers Capture Grants

Two MU students working with Department of Biomedical Sciences researchers have been awarded grants to support their studies.

Jake Young, a senior majoring in biological sciences with a minor in psychological sciences, was one of six recipients of an American Physiological Society (APS) 2016 Undergraduate Research Excellence Fellowships.

The fellowship program awards a \$4,000 stipend to full-time undergraduate students allowing them to work for 10 weeks in the laboratory of an established APS member during the summer. In addition, fellows receive a travel grant of \$1,300 to allow them to attend and present their research at the following year's APS annual conference, Experimental Biology. Experimental Biology 2017 will be held in Chicago and is expected to attract more than 14,000 attendees.

Young is working in the lab of biomedical sciences Assistant Professor Kevin J. Cummings, PhD. Young said the fellowship will allow him to further pursue his current research project into the regulation of sleep and breathing by neurons in the brainstem that release serotonin.

"We believe that new information in this area will lead to new treatments or prophylactic approaches that will help reduce the worldwide incidence of Sudden Infant Death Syndrome," Young said. "This summer I plan to write and publish a manuscript describing the important role of brainstem serotonin in promoting arousal from sleep in response to increasing carbon dioxide and decreasing oxygen, as occurs when babies stop breathing while asleep," Young said.



UGRE Fellows participate in hands-on research and learn to develop a hypothesis, design and troubleshoot experiments, collect and analyze data, and write and present results. Fellows have some additional opportunities:

- Network with other undergraduates interested in biomedical research.
- Explore the nature of research and the scientific process.
- Investigate career options and what it takes to find career success.
- Pose their career questions to members of the APS Career Opportunities in Physiology Committee.
- Learn about common ethical issues in figure and text preparation.
- Write a mini-manuscript based on previous data.

Kristal Gant, who is part of the MU Post-Baccalaureate Research Education Program (PREP), which is funded by the National Institute of General Medical Sciences of the National Institutes of Health, was awarded the Larry Ewing Memorial Trainee Travel Fund. The fund is a travel fellowship awarded to trainees to assist in travel costs associated with presenting their research at the Society for the Study of Reproduction meeting. Awardees are selected based on their submitted abstracts. The award honors Larry Ewing, PhD, for his major achievements in male reproductive biology and his instrumental role in establishing and furthering the society.

Gant, who is conducting research under the mentorship of biochemistry Professor R. Michael Roberts, PhD, and biomedical sciences Associate Professor Cheryl S. Rosenfeld, DVM, PhD, will present her findings on how the widely prevalent endocrine disrupting chemicals (EDCs), bisphenol A (BPA) and ethinyl estradiol (estrogen present in birth control pills, EE) affect human placental cells derived from embryonic stem cells at the society's meeting in San Diego, California, in July.

"Literature in the reproductive toxicology field indicates BPA has been implicated in various pregnancy complications, reproductive diseases, and placental deficiencies, but the current data are controversial and inconclusive," Gant said. "The placenta serves as a protective barrier to the developing fetus and as an endocrine organ throughout pregnancy. However, its normal function can be compromised by the presence of EDCs in maternal blood circulation. EDCs may subsequently cause a deficiency in the normal differentiation and function of trophoblast cells, which are in direct contact with maternal uterine cells.



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"My work seeks to determine whether BPA target these trophoblast cells and affect their ability to produce and to secrete hormones essential for pregnancy. As part of these studies, I have learned to convert human stem cells into trophoblast cells. After exposure to environmentally relevant concentrations of BPA or EE, I assess whether these chemicals affect the cells' ability to produce hCG and progesterone, two hormones essential for maintaining pregnancy in humans. I am also in the process of determining whether these EDCs alter key gene expression by these placental cells."

Gant earned a bachelor of science in biology with a minor in chemistry from Elizabeth City State University of Elizabeth City, North Carolina, in 2014. MU PREP provides opportunities for members of groups underrepresented in the biomedical sciences who hold a bachelor's degree to obtain individualized professional development and academic/professional preparation before entering a PhD program. Gant will continue her education at the University of Wisconsin-Madison to pursue a doctorate in endocrinology and reproductive physiology.

[Promising New Drug Could Help Treat Spinal Muscular Atrophy](#)

July 25, 2016

<http://munews.missouri.edu/news-releases/2016/0725-promising-new-drug-could-help-treat-spinal-muscular-atrophy/>

Girl Passes on Presents, Asks Friends to Join Fight Against Canine Cancer

Bailey Dean, a 4-year-old golden retriever, was not so much a family pet, but more of a third musketeer to sisters 10-year-old Maddie and 8-year-old Emma.

"No matter where the kids were, Bailey was right there next to them," said Maddie and Emma's mother, Emily Dean, of Cape Girardeau, Missouri. "The kids would get home from school and she was always there waiting for them to come through the door. She would knock everything over with her tail just to get to them," she recalled. "Bailey would sit in the living room and the girls would dress her up — bows, sunglasses and whatever they found in a box. Every night the kids would go to bed she would lie next to the bed and stay there all night," Dean said.

Bailey enjoyed nothing more than joining the family on mule rides around the farm and to the creek.

Late last summer Bailey developed a hot spot, — a patch of dermatitis — on her right foreleg. Although the lesion healed, the active dog began to show signs of a limp. In October, the Deans took Bailey to their local veterinarian, MU CVM alumnus Jeff Shively, DVM '96. Suspecting that the hot spot had developed into a bone infection, he initially treated Bailey with antibiotics. But the limp didn't improve, and a lump soon became evident. By November, the Deans received a grim diagnosis, Bailey had osteosarcoma — a rapidly growing cancerous tumor in her bone.

In January the Deans said good bye to their beloved dog.

"Maddie took it hard," Emily Dean said. "After Bailey died, Maddie and I talked about it. She didn't want other families to go through what we went through. She wanted to help find a cure."

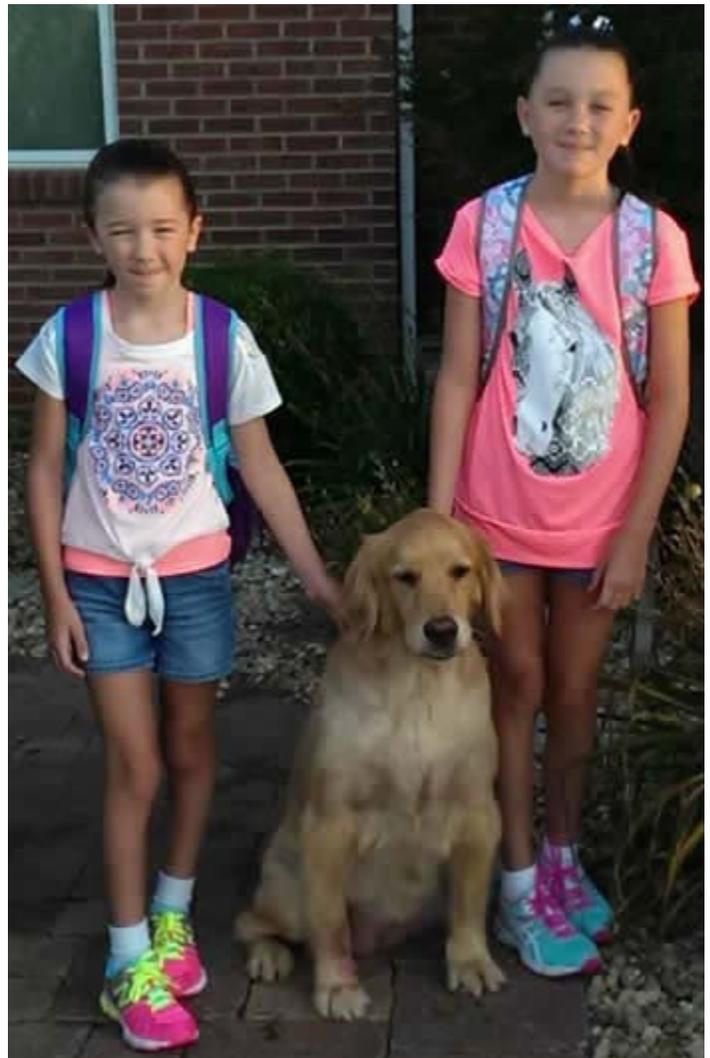
While Emily Dean investigated studies that are being conducted to find treatments for osteosarcoma, Maddie came up with ways she could help. With her 11th birthday approaching, she had an idea: She asked her birthday party guests not to bring any presents for her, but instead to make a donation to canine osteosarcoma research.

Following her birthday party, she and Emma organized a second fundraiser to take place during a competition at a local CrossFit gym. Maddie sold hotdogs, hamburgers and other snacks, Emma ran a lemonade stand, and their cousin, Evan Farrow, age 8, joined in the effort and sold cupcakes.

Between the two fundraisers, the girls collected a total of \$476. Based on their mother's research they decided to make a gift to the MU College of Veterinary Medicine Comparative Oncology Support Fund. The two girls, their mother, and their father, Richard Dean, traveled from Cape Girardeau to Columbia to present the gift to Jeffrey Bryan, DVM, MS, PhD, DACVIM (Oncology), as-



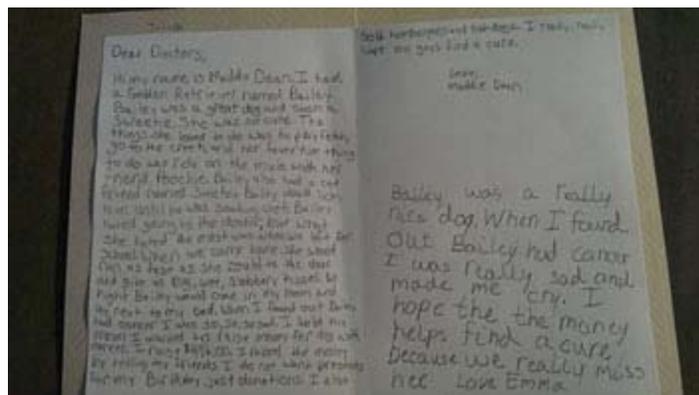
Associate Professor of Veterinary Oncology Jeffrey Bryan, DVM, gave the Dean family a tour of the MU Veterinary Health Center, and showed them equipment used in diagnosing and treating cancer in animals. Emily Dean said one of the highlights for her daughters was seeing a pug undergoing an ultrasound.



Emma and Maddie Dean with their dog, Bailey.

Continued on next page....

“Osteosarcoma always has been a terrible scourge for dogs and children,” Bryan said. “The timing is fortuitous, as we are in the midst of the largest ever clinical trial to try to improve outcome for dogs with osteosarcoma. We will find a worthy niche in this fight for their donation.”



Maddie and Emma Dean wrote letters to the veterinarians at the MU Veterinary Health Center telling them about their dog, Bailey, and why they had raised funds for cancer research.



Associate Teaching Professor of Medical Oncology and Radiation Oncology Kim Selting, DVM, MS, DACVIM-Oncology, DACVR-Radiation Oncology, offers Emma Dean a high-five after she and her sister presented the money they raised for research into canine osteosarcoma.

New Farm Director Says Job Fulfills Longtime Dream

Mike Glascock has always had a passion for farming, but he never considered it as a means to earn his living. Glascock spent most of his career with Boone County Public Works, starting as a general laborer and advancing to the position of superintendent. While he raises cattle, hay and grain on a family farm in Ashland with his father and sisters, he thought farming would remain just a hobby.

However, when Dale Lenger, longtime supervisor of the MU College of Veterinary Medicine's Middlebush Farm, retired earlier this year, Glascock decided to throw his hat in the ring, applied, and was hired as the new director.

"My background is in heavy equipment operation," Glascock said. "I've wanted to farm my whole life, but could never make it happen. I thought this would be a great job."

Middlebush Farm comprises 288 acres south of Columbia just off Highway 63. The farm houses the college's teaching herd of 22 horses and between 40 and 50 head of cattle. Glascock leads a crew of three people tasked with ensuring the animals' well-being, maintaining the buildings and fences, cutting and baling hay and fertilizing the fields where crops are raised.

Since taking the reins, he said he has immersed himself in evaluating the operation's needs.

"I'd like to see us utilize some of the fields for different crops and possibly expand the cattle herd a little bit," he said. "I'm also looking at the feasibility of updating some of the equipment, but we need to assess the needs, versus the cost, and what the prospects are for efficient utilization."

In his free time, Glascock and his wife, Callie, enjoy helping with community events and traveling the country to watch their daughter, Ashton, compete in college rodeos.



Mike Glascock moves some hay that will be used to feed the teaching herds at Middlebush Farm.

Morris Animal Foundation Funds Student Research

A University of Missouri College of Veterinary Medicine student received funding from Morris Animal Foundation to conduct a summer research project. Zoe Koestel, a second-year veterinary student, is investigating whether dietary exposure to the chemical bisphenol A is causing health problems in dogs. In this study, Koestel is working in the laboratory of Cheryl Rosenfeld, DVM, PhD, at the Bond Life Sciences Center to examine whether consumption of one of two brands of dog food that may contain varying amounts of bisphenol A due to how each food is packaged could affect the gut microbiome and lead to other health disturbances. The investigators are not deliberately exposing dogs to this chemical.

Since 2005, Morris Animal Foundation has encouraged veterinary students to pursue research experience through its Veterinary Student Scholars program. This year, the program is funding 25 students to conduct mentored research projects at 25 different schools of veterinary medicine across the nation and abroad.

"The Veterinary Student Scholars program provides summer research opportunities that ignite an interest in research careers for our students," said Barbara Wolfe, DVM, PhD, chief scientific officer of Morris Animal Foundation. "The students learn from top-notch researchers how to design and conduct animal health research; we are excited to see the outcomes of this summer's work."



The scholars program was created to tackle the growing shortage of animal health scientists needed to pursue answers to complex questions impacting animal health. In 2016, the foundation is funding \$125,000 in Veterinary Student Scholars grants. Other funded studies include:

Morgan Halley, University of California, Davis, is studying the effect of environmental enrichment on body weight in obese cats.

Sophie Eiger is developing novel stromal cell-targeted approaches to treat canine mammary gland tumors.

Sydney Davis, Ross University, is looking at the metabolic and immune system responses to physical activity in bottlenose dolphins.

"By offering research training opportunities for veterinary students, the Foundation is helping to build the next generation of scientists who will be asked to tackle some highly challenging health problems," Wolfe said. "These include

Veterinary Diagnostic Laboratory Earns Five-Year Full Accreditation

The American Association of Veterinary Laboratory Diagnosticians (AAVLD) has awarded another full accreditation to the University of Missouri Veterinary Medical Diagnostic Laboratory (VMDL). The accreditation period is from January 2017 to December 2021.

"Our faculty and staff take pride in what they do," said MU College of Veterinary Medicine Dean Neil C. Olson. "Receiving another full accreditation affirms their dedication and commitment to veterinary diagnostic service, teaching and research."

The VMDL was initially awarded full accreditation from 2015 through 2016.

The AAVLD accredits public veterinary diagnostic laboratories in North America relative to technical and operational competence compatible with appropriate standards. The agency also provides an administrative assessment. An accredited laboratory is one that is capable of providing a full range of diagnostic services year-round in a majority of essential disciplines: necropsy, histopathology, clinical pathology, bacteriology, virology, mycology, parasitology, serology and toxicology.



The VMDL performs more than 85,000 tests each year in fulfilling its mission to provide in-depth laboratory diagnostic support to veterinary practitioners and pet owners, livestock and poultry industry interests, wildlife conservationists, researchers throughout the University of Missouri, state and regulatory officials, and veterinary clinicians in the MU Food Animal, Equine and Small Animal Hospitals. The lab is a member of the National Animal Health Laboratory Network, which responds to animal disease outbreaks, such as the recent outbreak of avian influenza, and other adverse animal health events of significant consequence. It is also a Tier I laboratory of the Food and Drug Administration Veterinary Laboratory Investigation and Response Network, which investigates cases of potential foodborne illness in animals.

The AAVLD accreditation process is based on the Requirements for an Accredited Veterinary Medical Diagnostic Laboratory, Version 5.0 (2010), which incorporates the World Organization for Animal Health, or Office International des Epizooties, (OIE) document "OIE Quality Standard and Guidelines for Veterinary Laboratories: Infectious Diseases," from the Standards Commission of the OIE 2008. OIE was authorized to establish the international standard by the World Trade Organization, and input into development of the OIE Quality Standard is international in scope.

AAVLD accreditation ensures a high-quality laboratory diagnostic program for veterinary education and research. It also assures VMDL clients that results are accurate, faculty and staff are competent, facility and equipment are ade-

[BPA Can Disrupt Painted Turtles' Brain Development Could be a Population Health Concern](#)

Research could help determine how BPA affects male and female brains

Aug. 23, 2016

<http://munews.missouri.edu/news-releases/2016/0823-bpa-can-disrupt-painted-turtles-brain-development-could-be-a-population-health-concern/>

College of Veterinary Medicine Announces Recent Promotions

The University of Missouri College of Veterinary Medicine congratulates the following faculty members on reaching career milestones:

- Sandra Marie Bechtel, an assistant professor in the Department of Veterinary Medicine and Surgery, was awarded associate professor with tenure
- Michael Calcutt, an associate professor in the Department of Veterinary Pathobiology, was awarded professor.
- Craig A. Emter, an assistant professor in the Department of Biomedical Sciences, was awarded associate professor with tenure.
- Patrick Pithua, an assistant professor in the Department of Veterinary Medicine and Surgery, awarded associate professor with tenure.
- Shannon Reed, an assistant teaching professor in the Department of Veterinary Medicine and Surgery, was awarded associate teaching professor.
- Marlyn Whitney, an associate clinical professor in the Department of Veterinary Pathobiology, was awarded clinical professor.

New Counselor Offers a Comprehensive Approach to Wellness

The MU College of Veterinary Medicine has created a full-time position to help veterinary students succeed as they advance through the four-year curriculum. Kerry Karaffa, PhD, a psychological resident, was recently hired to serve as the mental health and wellness coordinator with the MU Counseling Center and College of Veterinary Medicine.

Karaffa offers confidential counseling to all MU College of Veterinary Medicine students and fellows, with services tailored to fit individual needs and goals.

“My goal is to provide quality counseling services to help students manage stressors both in and out of vet school and ultimately support their ability to be successful,” Karaffa said. “I think it is important to recognize that although attending vet school is a challenging experience in itself, many students also face ongoing challenges in other areas of their lives, including in their personal and family relationships. I believe that supporting positive mental health and wellness is an ongoing process, and to effectively address the needs of students, we must take a comprehensive approach.”

In addition to providing counseling services, Karaffa plans to offer seminars on special topics related to psychology and mental health, and also conduct research on mental health needs among students in veterinary medicine.

Previously, the college had a psychologist available on a part-time basis. Angela Tennison, DVM, said that one of her priorities when she was appointed associate dean for Student Affairs in 2015 was to increase the emphasis on a proactive approach to student wellness.

“We want to give our students the tools to recognize when circumstances are creating extra challenges to their physical or emotional health and help them work through difficult times,” Tennison said. “Some of the issues that exacer-



CVM's Fales Becomes Only Non-DVM Inducted Into Honor Roll

MU College of Veterinary Medicine Professor Emeritus William H. Fales, PhD, was inducted into the Missouri Veterinary Medical Foundation (MVMF) Veterinary Honor Roll on Sept. 10.

The Veterinary Honor Roll was developed to recognize veterinarians who have been nominated for inclusion by people whose lives they have touched. Fales is the only individual who is not a doctor of veterinary medicine ever to be inducted. MVMF Board members nominated him for inclusion. His name and photograph will be added to a display within the foundation's museum at Missouri Veterinary Medical Association offices in Jefferson City.

Fales is also the only non-DVM to be an active voting member of the MVMA. He was elected to full membership in the MVMA in 1991 and was elected to honorary membership in the Missouri Academy of Veterinary Practice in 1999.

A native of Redding, California, Fales served in the U.S. Army Medical Service Corps from 1966-69. He then pursued a master of science and a doctorate in bacteriology at the University of Idaho, Moscow. He began his career at the University of Missouri in 1974 as a research associate in the Department of Veterinary Microbiology. From 1975 to 1981 he was an assistant professor in the Department of Microbiology and served as a clinical microbiologist for the Veterinary Medical Diagnostic Laboratory and the Veterinary Medical Teaching Hospital. In 1981 he became a tenured associate professor, and in 1986 was named a full professor of veterinary pathobiology. He was elected as an honorary diplomate of the American College of Veterinary Microbiologists in 1992. In August of 2015 he retired from MU, but accepted an adjunct appointment and was named professor emeritus.

Fales was one of three people inducted into the Veterinary Honor Roll during the September ceremony. Joining him were MU CVM alumni Melanie Grundy, DVM '98, of Carthage, and Charles Monsees, DVM '54, inducted posthumously. His widow, Joan, accepted the honor on behalf of her late husband.



William Shore, DVM, chairman of the MVMA Foundation, reads the nomination of MU CVM Professor Emeritus William Fales to the Missouri Veterinary Medical Foundation (MVMF) Veterinary Honor Roll Sept. 10.



Susan Fales looks at her husband's plaque after a ceremony inducting William Fales into the Veterinary Honor Roll.

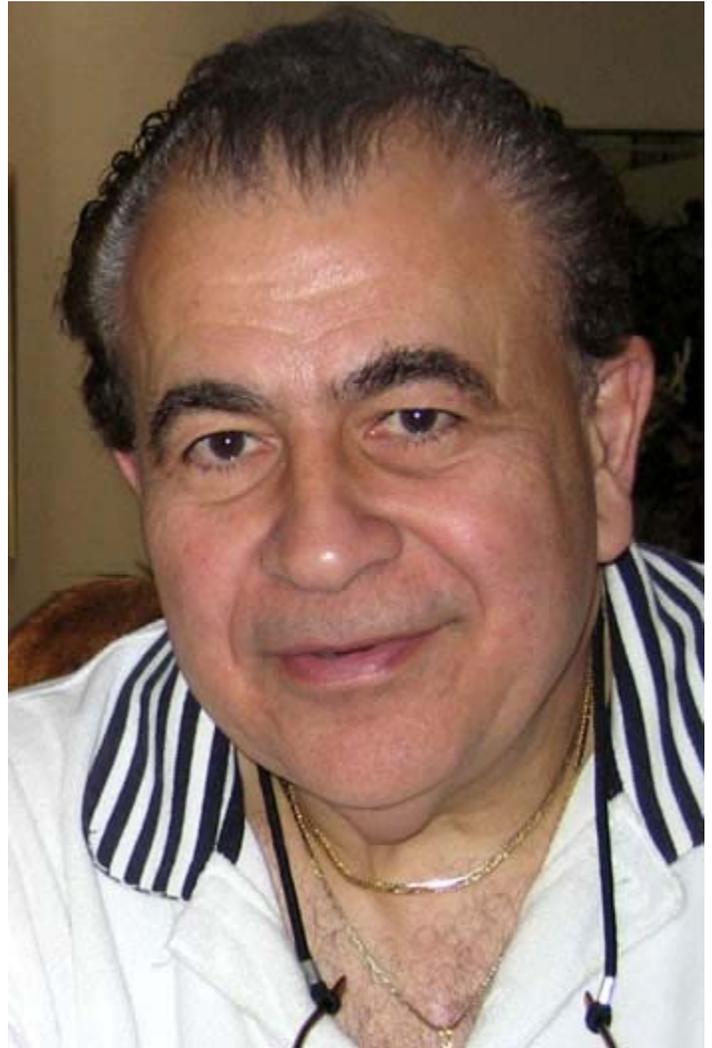
Former Head of Small Animal Surgery Passes Away

M. Joseph Bojrab, DVM, MS, PhD, of Las Vegas, Nevada, former faculty member at the University of Missouri College of Veterinary Medicine, passed away on Sept. 13, 2016, at the age of 76.

He was born on Aug. 4, 1940, in Fort Wayne, Indiana, to the late Joseph and Julia (nee Ferrah) Bojrab. Bojrab graduated from Central Catholic High School in Fort Wayne in 1958. He earned a doctor of veterinary medicine degree from Purdue University in 1964. He accepted a position as instructor in the Department of Veterinary Surgery at Oklahoma State University, where he earned a master of science in physiology in 1968. He received a National Science Foundation Science Faculty Fellowship in 1969 and traveled to the University of Bristol, England, where he studied veterinary anatomy and received his PhD in 1971.

Bojrab was then appointed associate professor and head of small animal surgery at Oklahoma State in 1973, before joining the faculty at the MU College of Veterinary Medicine as a professor and head of small animal surgery. In 1987 he moved to Las Vegas and began a surgical consulting practice.

He was a diplomate of the American College of Veterinary Surgeons and delivered more than 550 seminars and presentations on veterinary surgery to international, national, regional, state and local associations, including visiting lectureships to Japan, England, France, Canada, South Africa, Australia, New Zealand, Denmark, Finland, the



Small Animal Surgeon, Educator Fingland Named Alumnus of the Year

Roger Fingland, a 1981 graduate of the University of Missouri College of Veterinary Medicine, was named the 2016 Alumnus of the Year during the CVM's Alumni Reunion Weekend held Sept. 23-24.

Originally from Sedalia, Missouri, Fingland began working in a local veterinary clinic as he was 14. Fingland said his original goal was to drive a big four-wheel drive truck to farm calls. However, his first surgery rotation in veterinary school convinced him that he wanted to be a surgeon. He also developed a desire to teach others. He recalled asking his mentor James Coffman, a professor of equine medicine at MU, how he had become such a great teacher?

'Well, Roger,' Coffman responded. 'I guess I remember what it was like when I didn't know,' Fingland recounted.

After earning a bachelor of science with honors at Mizzou, he went on to graduate with a doctor of veterinary medicine. He completed a master's degree in surgery and a surgical residency at the Ohio State University, and an MBA from Baker University in Kansas

He served as professor of surgery and chief of Small Animal Surgery at Kansas State University College of Veterinary Medicine. While there, he became internationally recognized for his work on surgical management of tracheal collapse in small breed dogs. He trained many veterinary students, interns and surgery residents before becoming executive associate dean and hospital director at Kansas State.

Earlier this year he returned to Ohio State as executive associate dean and professor of surgery for the College of Veterinary Medicine, and executive director and chief medical officer of the Veterinary Medical System.

Fingland is a diplomate of the American College of Veterinary Surgeons. He has published numerous scientific articles and book chapters and delivered hundreds of continuing education presentations at local, national and international meetings. He serves as the secretary-treasurer and member of the executive committee of the American Association of Veterinary Clinicians and the director of the Veterinary Intern-



CVM Alumnus of the Year for 2016 Roger Fingland (right) shares a laugh with Dean Neil C. Olson following the presentation of Fingland's award.



Senior Director of Advancement Janie Harmon welcomes Alumni Weekend attendees to the Friday evening dinner.



CVM alumni compare their photographs in their class composites to how they appear now.



Both mule teams, Tim and Terry and Kate and Molly, worked together to provide wagon rides to reunion attendees.

Jasper's Legacy: Love and the Search for a Cure

Newly married in 2005, Diane Civetta and her husband, John, wanted to expand their family with a dog. They agreed upon a labradoodle based on the breed's temperament and reputation for being hypoallergenic. While the Civettas planned to acquire their pet from a breeder, they decided they would first visit a pet store near their home in Scarsdale, New York, so that John Civetta, who was unfamiliar with labradoodles, could see what they look like.

"When I walked into the pet store, I saw my beautiful Jasper running around his cage," Diane Civetta recalled. "I walked right over to him and fell in love with him."

At the time, Diane Civetta's daughter, Emily Yankowitz, was at a sleep-away camp. Yankowitz asked her mother to wait until she returned before bringing Jasper home. Civetta agreed, but began making daily visits to the pet store.

"I would come into the pet store and Jasper would start barking and running around his cage," Civetta said. "The store owner would take him out and we would go into an empty room together. I would sit on the floor and Jasper would run around me, sit on my lap and make humming sounds."

After several days, Civetta entered the pet store and found Jasper's cage empty. The store owner told Civetta the bad news: Jasper had pneumonia and she planned to return him to his breeder in Missouri.

"I was stunned and told her that Jasper was my boy and I still wanted him," Civetta said. "The pet store owner told me that she would only pay a nominal amount for Jasper's medical care, and once again, I told her that I still wanted Jasper. I will never forget when the pet store owner brought me into the back and Jasper was using a nebulizer and he had the mask on his snout. He looked so weak and sad. I stayed with him the whole day and felt guilty leaving him."

Once the Civetta family took Jasper home, he required twice-weekly treatments for his pneumonia until he fully recovered.

For nearly 11 years, Jasper was a central part of the Civetta family. Jasper's vitality and utter joy filled their lives with excitement and love. He relished running with other dogs at the park, chasing rabbits, and greeting the mailman. In particular, Jasper enjoyed snuggling and getting his belly rubbed.

However, in December 2014, during Jasper's annual exam, the veterinarian discovered a lump. Diagnosed with anal sac carcinoma, Jasper faced a grim prognosis. Anal sac adenocarcinomas are aggressive tumors that often spread to nearby lymph nodes and organs including the liver, spleen and lungs. To give him the best chance for survival, Jasper underwent surgery to remove his tumor, followed by radiation using a linear accelerator with 3-D conformal therapy, and chemotherapy at the Veterinary Cancer Center in Norwalk, Connecticut.



Diane Civetta created Jasper's Legacy of Love Fund in honor of her dog who was treated for anal sac carcinoma.



Diane Civetta and her daughter, Emily Yankowitz, cuddle their labradoodle Jasper.

Jasper was in a tremendous amount of pain and had become incontinent. During his chemotherapy sessions, Jasper developed radiation recall, a skin condition resembling a burn that can be triggered when chemotherapy follows radiation treatments. To help manage the pain, Jeanne Budgin, DVM, a veterinary dermatologist who helped care for Jasper, suggested the family seek treatment for him at Cummings School of Veterinary Medicine at Tufts University in North Grafton, Massachusetts. In addition to care at Tufts, Jasper received help from a veterinary nutritionist who recommended a special diet that minimized his incontinence, and an acupuncturist, who provided pain reduction therapy. With treatment and care from his doctors, and love from his family, Jasper defeated cancer.

Shortly thereafter, he had a minor dorsal laminectomy. The surgery was successful, but Jasper developed aspiration pneumonia. While the Civettas hired around-the-clock technicians to stay with him and were told he had an excellent chance of recovery, Jasper died on May 2, 2016, a month shy of his 11th birthday. The family was heartbroken that Jasper, who had gone through so much to defeat cancer, had ultimately died from unrelated causes.

Diane Civetta decided to channel her grief into helping other dogs and their owners. She began looking for researchers who were investigating anal sac cancer, and with the assistance of Budgin, Civetta learned about research under way at the University of Missouri College of Veterinary Medicine.

"I wanted to make a donation in Jasper's name. When I found the study at MU, because Jasper had come from a breeder in Missouri, I felt like I had come full circle," she said.

On Civetta's behalf, Budgin reached out to Jeffrey Bryan, an associate professor of oncology, director of the Scott Endowed Program in Veterinary Oncology, and director of the Comparative Oncology Radiobiology and Epigenetics Laboratory, to learn more about the research. Bryan and his team are working with researchers in human medicine on a novel treatment to attack anal sac carcinoma and melanoma, two cancers that are common in dogs. Working with client-owned dogs with naturally occurring cancers, Bryan and co-investigator Gary Clark, PhD, a research associate professor of Obstetrics, Gynecology and Women's Health, have created a process in which they develop a vaccine using cells from a patient's own tumor.



Jasper as a playful puppy.

"Essentially, we are creating a vaccine against the tumor that works by re-educating the immune system," Bryan said. "By this approach we count on the immune system to control the tumor."

To honor Jasper's life and work to end anal sac carcinoma in dogs, Civetta created the Jasper's Legacy of Love Fund with a donation of \$25,000, which will support Bryan and Clark's research. The gift has been used to purchase equipment critical to creating an improved vaccine and has so far funded the treatment of one dog with anal sac carcinoma, Bryan said.

"The patient we treated is doing well since we received the gift for this enhancement. There has been no recurrence of the cancer, which typically, we would have expected to see," Bryan said.

The oncology group is looking to recruit patients that need treatment for anal sac carcinoma. The program can now treat patients more quickly because of the equipment purchased through Civetta's generosity. The program will move forward more efficiently in loving memory of Jasper.

CVM Students Capture Honors at One Health Conference

The University of Missouri, Washington University School of Medicine in St. Louis and Auburn University have developed a collaborative partnership to advance research into the one health concept. The three institutions held an inaugural One Health Conference on Sept. 30 at the St. Louis Zoo.

As part of the conference, a student poster contest was held. Students working on research in areas such as environmental health, comparative medicine, zoonotic diseases, translational medicine, natural resource management and conservation were invited to present a poster.

MU College of Veterinary Medicine students captured both first place and runner-up honors. The winner was CVM second-year student Geraline Arroyo for her poster, "Comparison of MALDI-ToF and PFGE for Strain-Typing *Staphylococcus aureus* Isolated from Cow's Milk." The runner-up was Lori Lind, also a second-year, for her poster, "The Effects of Tongue Injection of CTB-SAP on Ventral Hypoglossal Motor Neurons: A Novel Model of ALS."



MU CVM students attended the WAMCOH inaugural One Health Conference with faculty members Carolyn Henry, DVM, MS, DACVIM (oncology), FNAP, professor of oncology and associate dean for Research and Graduate Studies; and Jeffrey Bryan, DVM, MS, PhD, DACVIM (oncology), associate professor of oncology, director of the Comparative Oncology Radiobiology and Epigenetics Laboratory and director of the Scott Endowed Program in Veterinary Oncology.



Geraline Arroyo discusses her research with an attendee at the WAMCOH inaugural One Health Conference.



Lori Lind's research poster involving amyotrophic lateral sclerosis received runner-up honors during the student

Retired CVM Professor Robert “Bob” Miller Passes Away

Dr. Robert Bruce “Bob” Miller of Columbia, Missouri, a retired veterinarian and University of Missouri College of Veterinary Medicine faculty member, passed away at his home on Tuesday, Oct. 4. He was 85 years old.

He was born on March 17, 1931, in rural Eureka, Kansas, where he lived with his parents and brothers on their farm. He rode his horse to grade school and, against his parents’ wishes and without their knowledge, hitchhiked to a nearby airfield where he earned his pilot’s license. He attended Baker University in Baldwin, Kansas, and then transferred to Kansas State University in Manhattan, where he earned his undergraduate degree and a doctorate in veterinary medicine. He was a member of the Acacia Fraternity, served in the Missouri National Guard, and was a member of the Missouri United Methodist Church, where he had many valued friendships.

In his early professional life, Dr. Miller and his family lived in Warrensburg, Missouri, where he was co-owner of the B&B Animal Hospital for nearly 20 years. In 1973, he accepted an appointment at the University of Missouri and earned a master’s degree in veterinary pathology and a PhD in pathology. He had an extensive body of research and published works, lectured throughout the world, and received tenure in 1980. He retired from full-time work in 1999, but remained active in furthering the advancement of veterinary medicine at the university and through national and international organizations.

Countless veterinarians across the country and world were taught and influenced by Dr. Miller during his more than three decades at the CVM and through his continuing education efforts. Veterinary clients across mid-Missouri depended on his keen diagnostic skills and his quiet understanding and connection to the animals he treated. He was awarded the prestigious Veterinarian of the Year Award in 2012 by the Missouri Veterinary Medical Association.

“Veterinary medicine has allowed a Kansas farm boy to travel widely and to daily meet wonderful people from all walks of life,” he once wrote.

He was active in more than 15 professional organizations, including serving as president of the Western Veterinary Conference, director of the Missouri Cattle Institute, diplomate emeritus and president of the American Board of Veterinary Practitioners, district director of the American Association of Bovine Practitioners, and an honorary member of the Missouri Academy of Veterinary Practice. He was called a “leader in his field demonstrating dedication to veterinary medicine and continuing education” by Kansas State University College of Veterinary Medicine when he was honored with the Alumni Recognition Award in 2004.

Dr. Miller is survived by his wife of 60 years, Dr. Phyllis A. Miller; daughter Deborah M. Clark and son-in-law Stephen E. Clark, of Anchorage, Alaska; son Raymond R. Miller and daughter-in-law Deanne R. Crewse of Cairo, Egypt; daughter Karen M. Pensiero and son-in-law F. James Pensiero of Verona, New Jersey; and grandchildren Gina N. Pensiero and her wife, Anika Pensiero, Madeline R. Pensiero, and Samuel J. Pensiero.

A celebration of Dr. Miller’s life will be held at 11 a.m. on Monday, Oct. 10, at the Missouri United Methodist Church at 204 S. 9th St., Columbia, Missouri. The family suggests donations to the Missouri United Methodist Church Elevator fund, which may be sent to the church, or to the Bob Miller Food-Animal Proficiency Award, c/o the Office of Advancement, W210 Veterinary Medicine Building, College of Veterinary Medicine, University of Missouri, Columbia, Missouri, 65211.

Condolences may be left online for the family at www.ParkerMillard.com.



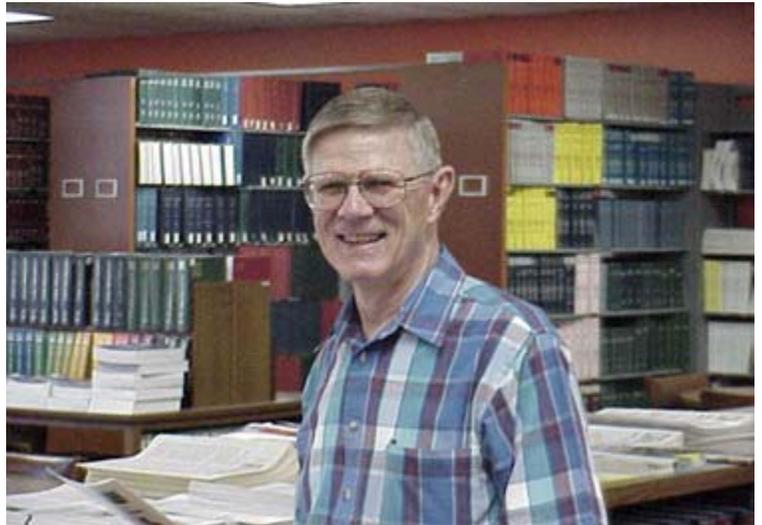
Dr. Robert Bruce “Bob” Miller

CVM Professor Emeritus John Berg Passes Away

John N. Berg, DVM, PhD, passed away early on Friday, Oct. 7, at the age of 80. He was born in North Dakota on June 19, 1936.

Dr. Berg received his doctor of veterinary medicine from Iowa State University in 1960. He proceeded to obtain a master's degree in veterinary microbiology in 1970 and doctorate in area microbiology in 1972 at the University of Missouri.

Following graduation, Dr. Berg accepted a position as assistant professor in veterinary microbiology at MU. He held the position until 1976 when he was promoted to associate professor. In 1984 he was named professor of microbiology. Additionally, Dr. Berg served as the director of Graduate Studies and Postdoctoral Education for the CVM from 1984 to 1986, and he served as graduate director for the area microbiology program from 1987 through the 1990s. In mid-1990s, microbiology consolidated with pathology to form the Department of Veterinary Pathobiology. Dr. Berg retired in 2000 with emeritus faculty status.



Dr. John Berg

He continued to serve as lead instructor of the veterinary bacteriology and mycology courses through this year. His research interests were in animal infectious diseases, particularly those of the bovine pathogen *Fusobacterium necrophorum*.

He is survived by his second wife, five sisters, one daughter, three sons, six grandchildren, one stepdaughter, and a step-grandchild.

CVM Students Transition to Clinical Training



Class of 2018

The MU College of Veterinary Medicine celebrated the progression of third-year students from classroom to clinics during the annual White Coat Ceremony on Oct. 16. The event, held at the Missouri Theatre, marked the midpoint in the professional curriculum for 113 students.

The first two years of preclinical training included courses in anatomy, physiology, cell and molecular biology, pathology, pharmacology, microbiology, virology and toxicology. The doctor of veterinary medicine candidates also learned fundamentals in clinical disciplines, including anesthesiology, clinical pathology, radiology, public health and medicine and surgery.

During the ceremony each student had a white laboratory coat, presented to them by a family member, friend or mentor who then assisted their student in donning the coat.

The ceremony marked the next step in the students' education as they will spend the remaining 19 months of the DVM curriculum working in the Veterinary Health Center in the Small Animal, Food Animal and Equine hospitals and the Veterinary Medical Diagnostic Laboratory, as well as completing preceptorships in private practices or with public agencies.

CVM Dean Neil C. Olson, DVM, PhD, told the class that they are entering veterinary medicine at an exciting time that is marked by rapid change. He urged them to embrace that change, but also reminded them that they are entering a people-oriented profession.

"Your success as a veterinarian will have more to do with your interaction with people than any other variable," Olson said.

Department of Veterinary Medicine and Surgery Chairman John Dodam, DVM, MS, PhD, welcomed the students "across the parking lot," and advised them that they would no longer be able to ask if the material they were learning would be on a future test as their future pop quizzes would be assisting during a difficult calving and caring for a pet that had been hit by a car.

"Every conversation with an (animal) owner reflects on our school and on our profession," Dodam said.



Erik Kleeman receives his white coat from his father



Dean Neil Olson congratulates Heidi Burgos after she is coated by her mother, Heidi Zayas.



Moe Buder coats his granddaughter Jordan Hilton.



Phillip Digasbarro assures his classmates that they will continue to support each other.



Associate Dean for Student Affairs Angela Tennison, DVM, serves as the emcee for the White Coat Ceremony.



The White Coat Ceremony platform party (from left): Richard Antweiler, executive director, Missouri Veterinary Medical Association, Mel Falk, DVM, president, Missouri Veterinary Medical Association, Daniel Shaw, DVM, PhD, professor, Veterinary Medical Diagnostic Laboratory, David Wilson, DVM, MS, director, Veterinary Health Center, John Dodam, DVM, MS, PhD, chairman, Department of Veterinary Medicine and Surgery, Neil C. Olson, DVM, PhD, dean, College of Veterinary Medicine, and Angela Tennison, DVM, associate dean for Student Affairs. Also participating in the ceremony, but not visible in the image, was Linda Berent, DVM, PhD, associate dean for Academic Affairs.

Collaboration between College of Veterinary Medicine and the School Of Medicine Develops Revolutionary Treatment for Canine Megaesophagus

The Veterinary Health Center (VHC) at the University of Missouri's College of Veterinary Medicine is pioneering a new approach to treat one type of canine megaesophagus, a devastating disease of dogs.

A partnership between the VHC's Small Animal Internal Medicine, Radiology, Surgery, and Nutrition services and an investigator in the Otolaryngology-Head and Neck Surgery department at the university's School of Medicine has resulted in the discovery of a breakthrough treatment for a subpopulation of dogs with megaesophagus. The Mizzou team has identified a defect of the lower esophageal sphincter (LES) as a potential treatable cause of megaesophagus.

Megaesophagus (ME) refers to a large, dilated esophagus with poor or no motility preventing normal passage of food and liquid into the stomach. With ingesta not reaching the stomach to produce the sensation of being full, the dog will continue to eat. As a result, the esophagus enlarges greatly. Dogs end up not getting enough calories so they waste away. Dogs with ME also regurgitate large amounts of undigested food and some of that material can be inhaled into the lungs. This inhalation can result in aspiration pneumonia, a dangerous additional symptom that kills many affected animals.

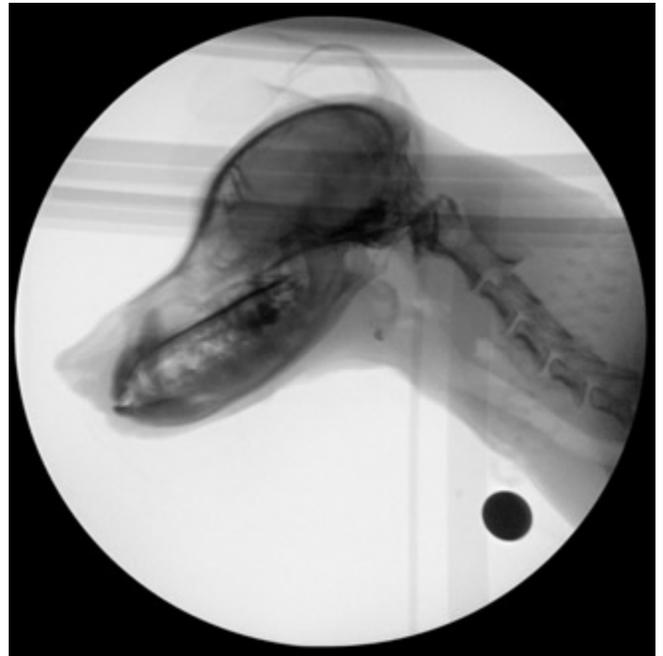
"In general, dogs with megaesophagus typically die of malnutrition, aspiration pneumonia, or are euthanized because the owners are told they have a terrible prognosis," according to Associate Professor Carol Reiner, DVM, PhD, an internal medicine specialist helping coordinate the efforts of the multidisciplinary team. "We're taking a closer look at a subpopulation of dogs with idiopathic megaesophagus, which means we don't know what causes it. We run all of our traditional tests, but we've never been able to find an underlying cause. Now with our video fluoroscopic swallow studies, we have identified an abnormality that we believe is driving the problem: an LES-achalasia-like syndrome."

The LES acts as a valve between the esophagus and the stomach, opening when food and water are swallowed, then clamping tight so food doesn't come back from the stomach into the esophagus. In dogs afflicted with megaesophagus caused by an achalasia-like syndrome, the LES remains closed.

"Video fluoroscopic swallow studies have been around a long time," Reiner said. "The problem with prior protocols is they did not represent normal eating and drinking behaviors. Those tests had very little to do with reality. A dog had to be restrained, lying on its side, and syringe-fed barium, which was not palatable even when mixed with food. If dogs don't eat during the swallow study you're not going to get a diagnostic study."

In order to receive a better diagnostic result, the Mizzou collaborative research team blended innovation with adaptation, developing new techniques and tools while borrowing procedures from human medical practices to diagnose and treat this type of canine ME.

Assistant Professor Teresa Lever, MS, PhD, from the Otolaryngology-Head and Neck Surgery department, spearheaded the development of trapezoidal holding chambers or kennels — which are now patented — where dogs walk in and are funneled to the narrow end of the enclosure. The animals are more naturally restrained and are given food that they consume while standing upright. Lever's lab, in cooperation with an independent company that conducts feeding trials in dogs, also developed a number of different recipes and consistencies of food and liquid to optimize how well the dogs could take it down and discover which contrast agent was more palatable and effective.



This image shows a canine patient during a video fluoroscopic swallow study. These studies, performed by members of a collaborative research project at the University of Missouri, were a major component of revolutionary techniques developed for the diagnosis and treatment of megaesophagus, a devastating disease of dogs.

"So, now we have these chambers, we have optimized palatable recipes, and we have experience in normal, healthy dogs without swallowing disorders, as well as lots and lots of patients coming in with other swallowing disorders," Reiner said. "It was in the process of developing this protocol and having clinical patients come in when we recognized that LES-achalasia-like syndrome was the underlying cause of megaesophagus in some dogs. That's when we began to adapt what they do with humans, a therapy where we're opening or dilating the LES with Botox and/or balloon dilation.

"We perform an endoscopy to first dilate the LES and then administer Botox, which paralyzes the sphincter muscles that formerly wanted to remain closed. While we are still evaluating this procedure, we've had dogs with remarkable clinical improvement. Additionally, when we repeat the fluoroscopic studies, we can document an open LES. The patients that show improvement can be candidates for surgery, and that surgery is potentially curative," Reiner said.

During a patient's recovery, residents in the Nutrition Service monitor the dog's weight and food intake. The amount of food an owner may give a pet might need to be altered every couple of days.

James Schachtel, Bvet Med, MRCVS, is a Radiology resident and key collaborator in the study.

"This approach gives these dogs a chance, whereas a lot of them didn't have much of one," Schachtel said. "At this time, it is early in the evaluation process, but it's a novel approach that shows promise.

"This subpopulation can receive a really significant benefit from our direct ability to detect their malady. It can give them a really good quality of life. This is a revolutionary diagnostic technique for a disorder identified with a pathological outcome. It offers us the opportunity to use therapies that have been successful in people, so we're optimistic we can experience similar success with canines," Schachtel said.

Schachtel will present an oral abstract of the swallowing protocol and early identification of the LES achalasia on Oct. 20 at the American College of Veterinary Radiation Annual Scientific Conference in Orlando.

The Missouri team encourages veterinarians, pet owners and breeders to contact the VHC for information about the new diagnostic and treatment. To have a pet evaluated, contact the Small Animal Hospital at 573-882-7821.

Veterinary Products Night is a 20-Year Tradition

Twenty-one companies and agencies participated in the 20th annual MU College of Veterinary Medicine Veterinary Products Day held Oct. 18 in the Adams Conference Center. The networking event brings together veterinary students with representatives from animal care and nutrition companies, veterinary interest businesses and the government. The forum, which allows students to learn about animal nutrition and care products, careers opportunities and professional services, attracted approximately 400 veterinary students.

Companies and agencies attending included, Addison Biological Laboratory, Banfield Pet Hospital, Boehringer Ingelheim, Ceva Animal Health, Dechra Veterinary Products, Hero Braces, Hill's Pet Nutrition, iVet, Merck Animal Health, Merial, MWI Animal Health, Nestle Purina Pet Care, Norbrook Inc., NutraMax Laboratories Laboratories Veterinary Sciences, Inc., Pet King Brands, ProPartners Wealth — AVMA Life, Radiologic Resources, Royal Canin, U.S. Army



Hill's Pet Nutrition representative Dave Rosen talks to second-year veterinary student Abby Romano as her dog, Rooney, eyes some of the treats Rosen has available at his table during the CVM Veterinary Products Night.



MU CVM alumnus Nicholas Perez, DVM, a member of the class of 2013, represents Merial. He discussed the company's products with second-year students (from left) Jerrienne Whittmore, Jordan Flewellyn, Jet Jones and Andrea Ernst.



Jamie Huff, VM-2, meets with Royal Canin representative Jenny Sandler.

Genome Society Honors Mizzou Grad Student

A doctoral student at the University of Missouri College of Veterinary Medicine received two prestigious awards from the International Mammalian Genome Society (IMGS). The IMGS is a professional scientific organization that promotes and coordinates the genetic and genomic study of mammals.

Jake Moskowitz, DVM, and graduate student in the Comparative Medicine Program, won the Lorraine Flaherty Award in recognition of his outstanding student presentation. Flaherty was a geneticist and professor of biomedical sciences who focused her career on the mouse as a model system for human disease.

Moskowitz, whose faculty mentor is James Amos-Landgraf, PhD, also received the Verne Chapman Young Scientist award, the highest honor given to a trainee or postdoctoral student by the IMGS. The award makes him a member of the society's governing secretariat for two years, and includes two international trips to those meetings, along with a cash award. Chapman was a leading mammalian geneticist whose work led to the development of chromosome maps of laboratory mice, considered a crucial step in identifying and analyzing the molecular defects often associated with cancer. Chapman was a cofounder of IMGS.



Jake Moskowitz

Vet Med Researcher Receives Fellowship to Study Cancer in Small Animals

Lauren Young, DVM, who recently completed a clinical nutrition residency at the University of Missouri College of Veterinary Medicine, was awarded a two-year research fellowship to improve understanding of how vitamin D status influences cancer in small companion animals.

Young, along with her fellowship mentor, Robert Backus, MS, DVM, PhD, are investigating the use of a vitamin D metabolite as an adjunct treatment for various forms of canine cancer at the MU CVM. Young was awarded the fellowship by Morris Animal Foundation, the Blue Buffalo Foundation and the Petco Foundation at the conclusion of her clinical nutrition residency.

“Nutrition plays a critical role in keeping our pets healthy, but also can improve outcomes for dogs undergoing cancer treatment,” said Barbara Wolfe, chief scientific officer for Morris Animal Foundation, a leading non-profit funder of research to advance animal health.

“This fellowship helps us advance our knowledge in small animal nutrition, particularly as it relates to cancer, while providing a valuable opportunity for us to invest in the career development of a new veterinary researcher.”

In addition, a grant application submitted by Young and Backus won the 2016 American Academy of Veterinary Nutrition Research Award. The award means the grant application for a specific aim of the fellowship will be fully funded. Young presented some of her research on that topic, “Oral vitamin D supplementation at five times the recommended allowance does not efficiently increase Vitamin D status in adult dogs,” at the 2016 AAVN Clinical Nutrition and Research Symposium in Denver.

Young presented another of her studies titled, “Vitamin D supplementation in dogs: D3 vs. 25 OHD3,” on Oct. 20 at the Waltham International Nutritional Sciences Symposium in Chicago. Waltham presented Young with an early career researcher award.



CVM Alumni Bullish for Scholarship Fund

A bronze statue of a bull, which symbolizes a friendly rivalry, is beginning a tour of veterinary schools within the Southeastern Conference at the University of Missouri. A group of MU CVM alumni who call themselves the Southern Crescent Syndicate purchased the statue during an auction that is part of the [American Association of Bovine Practitioners'](#) (AABO) annual conference. Proceeds from the auction benefit [the Amstutz Scholarship Fund](#) for students interested in working in the bovine industry.

The bull statue has become a returning feature of the yearly auction with veterinarians competing against each other to win the bid and claim bragging rights for their alma mater. University of Missouri alumnus Marvin Smith, DVM '75, of Eau Claire, Wisconsin, purchased the statue for Mizzou during the conference two years ago. The bull was a resident of the MU CVM for the subsequent year. However, last year alumni from the Ohio State University got together and outbid the competition for the right to display the statue. The Ohio State alumni enhanced the statue with a base that has space for plaques to be added each year with the name of the winning institution.

This year, the bull statue returned to the MU CVM thanks to the efforts of the alumni who offered the winning bid of \$8,000. The statue spent several weeks back at Mizzou, but has now been sent to its next stop on a tour of SEC institutions. The goal of the SEC tour is to raise awareness of the AABP and increase donations to the scholarship fund. Seven scholarships of \$7,500 each are awarded each year to third-year veterinary students involved in AABP.



This year's MU CVM Bovine Club members are (from left) Annie Callahan, vice-president, Kimberly Clem, secretary, Sonja Perry, president, Ashley Ziegler, treasurer, and Alex Jackson, historian.



The bull statue began his tour of SEC institutions at Mizzou.

Mizzou Study Explores Link to Colon Cancer

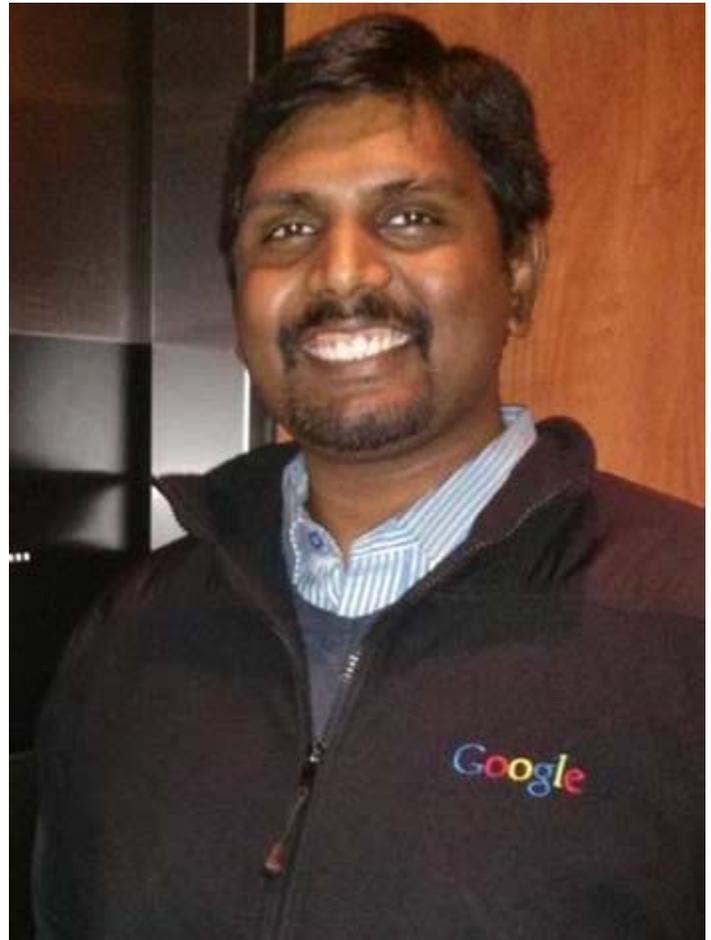
Research by a University of Missouri graduate student has been highlighted in the ALN online science magazine, www.alnmag.com.

Susheel Busi, MS, doctoral candidate in the university's Molecular Pathogenesis and Therapeutics program, presented the study during the Cancer and Immunology Symposium at the Allied Genetics Conference in Orlando, Florida. The conference was a joint meeting of the Genetics Society of America and International Mammalian Genome Society.

The investigation by Busi and his research partners, Aaron Ericsson, DVM, and Elizabeth Bryda, MS, PhD, further explored the possible relationship between cancer and the gut microbiota, which is the collection of all the gut bacteria that animals and people have living in their digestive tract. He studied how the gut bacteria in a rat model of colon cancer correlates with susceptibility to colon cancer.

Busi's study bolsters the growing body of evidence that the complex mix of microorganisms found in gut microbiota could influence a human's likelihood of developing colon cancer. This study was supported by the MU Rat Resource and Research Center, headed by Bryda, and a faculty research grant awarded to Assistant Professor James Amos-Landgraf, PhD, of the College of Veterinary Medicine. Amos-Landgraf, who is Busi's faculty mentor, developed the rat model of colon cancer.

The Molecular Pathogenesis and Therapeutics curriculum is a joint graduate program of the veterinary college's Department of Veterinary Pathobiology and the School of Medicine's Department of Molecular Microbiology and Immunology.



Bandit: Help, Hope and Healing

Military service can change people. Service members may be away from family, friends and home for long periods of time. They may be at risk of injury or death. They may see comrades killed or wounded. They may have killed or wounded others, or been wounded themselves. Stress can become distress. Not all scars are visible.

Bandit understands. He endured a lot before he became a therapy dog and a comforting companion to thousands of troops at Fort Leonard Wood, Missouri.

Bandit was a rescue, a puppy-mill puppy no one wanted. He was malnourished, had a misshapen front leg, mange, and what was believed to be a large tumor on his neck that turned out to be an abscess. At 16 weeks old, he was facing imminent euthanasia.

Kelly Brownfield and David Gist of Waynesville, Missouri, had recently adopted Bandit's brother, Duke. When Brownfield looked into the doomed dog's eyes, she refused to let him be put down and adopted him too.

"I named him Bandit because he stole my heart." — Kelly Brownfield

For Brownfield, who shoulders considerable responsibilities as the director of the Fort Leonard Wood USO center, nearly every day became take-your-dog-to-work day.

"I found myself with two rambunctious Great Danes while I was working long hours at the USO," Brownfield said. "Our incredible executive director, Kathy O'Connor, suggested I bring them to the USO on longer days. The troops enjoyed having puppies running around, but something funny started happening — Bandit kept disappearing. I would always find him rolled up in the lap of a soldier, a soldier who was crying, or a soldier who had lost a loved one. After several such encounters, I realized Bandit had something bigger to give to others."

Dogs can feel the energy of other beings around them. They seem to understand human emotional needs and respond appropriately. A study published in the journal "Animal Cognition" found that a dog was more likely to approach someone who was crying than someone who was humming or talking. Additionally, dogs respond to weeping with submissive behavior. Dogs seem to try to placate a person who is upset. Further, dogs will approach anyone who is upset, regardless of whether that person is their owner. Dogs have big hearts.

Bandit's heart proved to be even bigger than his imposing stature: 3 feet tall at the shoulder and 170 pounds. Having healed from his own ordeals, Bandit was now healing others. He became a certified therapy dog in 2012.

Brownfield estimates Bandit cheers about 1,500 troops every week at the USO center. He's a regular at the base hospital as well. On Wednesdays, Brownfield and Bandit visit the St. James Veterans Home. He's an official USO Comfort Dog.



Bandit was invited to Arlington National Cemetery to oversee a wreath laying ceremony.



Bandit returned to the MU Veterinary Health Center to visit Jessica Knapp, DVM, a resident in small animal surgery who helped treat the dog following a cranial cruciate ligament rupture.

Susan Hinkle, Missouri Patriot Paws coordinator and Bandit's tester at Therapy Dog, Inc., nominated Bandit for an American Humane Association Hero Dog Award for the unconditional love he shares throughout his regional community and the military community.

In 2014, the University of Missouri College of Veterinary Medicine had the opportunity to return the care and comfort Bandit offers to so many.

"I always tell everyone Mizzou saved his life." – Kelly Brownfield

Bandit had developed a cranial cruciate ligament tear in a back leg. His veterinarian referred him to MU's Veterinary Health Center for surgery. The VHC's Small Animal Surgical Service is based in a state-of-the-art facility with exceptional resources and personnel.

"I was told Mizzou had the best program in the nation, and if anyone could help Bandit, it would be them," Brownfield related. "We went to the VHC and they immediately took him in to surgery."

VHC veterinarians performed a tibial plateau leveling osteotomy. Due to the steep slope dogs have on the tops of their knees, the surgery involved making a circular cut in the top of the shin bone — the tibial plateau. Then, the contact surface of the bone was rotated until its orientation was relatively level. The surgeons then stabilized Bandit's shin bone with an eight-screw plate and a 10-screw plate.



Bandit at Arlington.

"Bandit pulled through, but recovery was rough and he had to stay at Mizzou for some time. During that period, I received a call from the VHC, informing me that Bandit had several visitors who wanted to go back and see their buddy. Some were in uniform, some were amputees," Brownfield recalled. "They told her they were there to comfort their buddy during his time of need, just as he did for them. Wounded warriors from Fort Leonard Wood had taken a van to Columbia to see Bandit, their brother."

"The incredible work of Mizzou's Veterinary Hospital Center allowed Bandit to continue to work and make a difference." – Kelly Brownfield

After two months, Bandit was back on duty, helping others through hardship. Bandit and Brownfield traveled to Washington, D.C., to visit troops at Walter Reed Military Medical Center. Bandit and Brownfield spent several days there with amputees who were learning to walk on their new prosthetic legs. Bandit walked alongside, as if to say, "Lean on me."

While in Washington, Brownfield and Bandit visited the Pentagon and USO national headquarters. They also received an invitation to the Washington offices of *National Geographic* for a photoshoot. The iconic magazine had selected Bandit as one of the world's extraordinary dogs and planned to devote a chapter in a forthcoming book to stories from wounded warriors about what the Great Dane with the great big heart meant to their recovery.

"It was a hard time, not just for Bandit or me, but for many." – Kelly Brownfield

Then, in November 2015, the cranial cruciate ligament in his other back leg ruptured. Brownfield again rushed the hero dog to MU's VHC. This time, Bandit battled several complications and barely survived. During the months of recovery, the dog's Facebook page was flooded with posts from people around the world, pulling for him, praying for him.

A letter arrived from members of an elite unit of the French National Police. Their own hero dog, Diesel, was shot and killed during the Paris terrorist attacks of November 13, 2015. With the letter was a patch. They asked that the patch be added to Bandit's therapy dog vest, to carry on Diesel's name and to symbolize hope and humanity. The letter read, in part, "When Bandit wears these colors, let him know that the many voices from France cheer for him. Let him know that he is a guiding light. Bandit, you are magnificent and a true symbol of hope."

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Bandit's therapy dog vest is now festooned with so many unit patches, buttons and other symbols of appreciation, Brownfield had to get a second vest to accommodate the overflow. Among the badges is a MU College of Veterinary Medicine pin, which Brownfield says, "he will wear forever."

"I had to remember that Bandit doesn't belong to just me, he belongs to the hearts of thousands, and many were breaking as he struggled to survive," Brownfield recalled.

Bandit recovered. After dropping to less than 100 pounds, he's back to 170, a whole lot of dog on a selfless mission.

"Dogs are extraordinary creatures and do extraordinary things when given the chance." – Kelly Brownfield

The elite 3rd U.S. Infantry Regiment — The Old Guard — performs a special mission. The unit provides military funeral escorts about 20 times a day at Arlington National Cemetery and guards the Tomb of the Unknown Soldier, 24 hours a day, 365 days a year. These superlative soldiers make up the Arlington Honor Guard. They were so impressed by Bandit's service, they invited him to oversee a wreath-laying ceremony at the Tomb of the Unknown Soldier. He is the first dog ever granted this honor. They also asked that he work with families of the fallen, helping them cope with grief and loss.

Many nations remember the sacrifices of the fallen, the veterans and those currently serving in the military, perhaps one or two days a year. Bandit offers his special treatment to members of the military almost every day.

Brownfield has many stories of disconsolate troops and wounded warriors who say Bandit brought them light when they were lost, love when they were lonely, and hope when they believed they were hopeless.

Military Personnel Use Challenge Coins for Kudos



Bandit's challenge coin serves as a fundraiser for the USO.

Military units began using challenge coins as far back as World War I, first as a recognition tool, later as a discreet way for service members to show pride their specific unit. A challenge coin would exhibit that the holder is a member of a group that shares a bond of commitment, loyalty and dedication.

When members of the military want to show appreciation, sympathy or professional connection, they often distribute challenge coins. The coins can symbolize anything from a nod of appreciation to a deep, personal connection.

Challenge coins are not currency. They don't look like regular coins. Challenge coins are literally tokens of gratitude. They aren't flashy displays of accomplishments, they are proof of special relationships.

Bandit has his own challenge coin, which he uses to raise funds for USO Missouri. Bandit's distinctive red and gold coin features his photo and the moniker, "Bandit the Therapy Dog, Comforting Our Nation's Heroes." The coins, and

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Monument Honors Service Dogs

Dogs play a large role in the lives of soldiers and veterans. Military working dogs serve as scouts, sentries, trackers and in search-and-rescue operations. Some see duty at prison installations, others are trained to detect and locate explosives. Many military units adopt dogs as mascots. Guide dogs provide safety and companionship for wounded veterans.

Working dogs have saved thousands of American lives and continue to impact the lives of thousands of veterans. To commemorate their service, the U.S. Military Working Dog Teams National Monument was dedicated in 2013 at Lackland Air Force Base in San Antonio, Texas.

CVM Ophthalmologist Honored for Service

University of Missouri Professor of Veterinary Ophthalmology Elizabeth Giuliano, DVM, MS, DACVO, was recently honored for her six years of service to the American College of Veterinary Ophthalmologists (ACVO) Board of Regents. She has served the organization as president for the past year.

During the ACVO's 47th annual conference held Oct. 26-29, in Monterey, California, incoming ACVO President and MU CVM alumnus Ralph Hamor, DVM '87, MS, DACVO, presented Giuliano with a bronze Horus statue in recognition of her service. Horus is the falcon god of ancient Egypt whose role was to conquer darkness.

Giuliano earned her DVM at the University of Wisconsin-Madison and completed a master's degree and her ophthalmology specialty training at MU. She joined the MU faculty in 2002.



CVM Partners with Tourin' Tigers to Offer Continuing Education Opportunity on Costa Rica Journey

The Mizzou Alumni Association through its Tourin' Tigers program is partnering with the College of Veterinary Medicine to offer the chance to earn 10 continuing education credits by joining colleagues on a trip to Costa Rica June 19-24, 2017. Enrollment is now open and participation priority will be given to MU CVM alumni and/or licensed Missouri veterinarians.

Richard Meadows, DVM, DABVP, Curators Distinguished Teaching Professor at the CVM, will lead the CE portion of the trip.

For details on the Costa Rica: Coast to Coast itinerary and cost, visit the [Classic Journey's website](#).

(<https://www.classicjourneys.com/mizzou-costarica#introduction>)

Licensed veterinarians can obtain 10 hours of CE credit, which will be issued by the MU College of Veterinary Medicine. This CE credit is recognized by the state licensing board of Missouri. MU graduates practicing in other states are encouraged to check with their state licensing boards before signing up for the trip to ensure that the CE hours will be accepted.

No more than 24 individuals can participate on this trip, therefore interested individuals are encouraged to enroll early to ensure a spot on this unique CE opportunity. Spouses and older children are welcome on the trip. The same rate applies to all individuals.

Common Probiotics Can Reduce Stress Levels, Lessen Anxiety

Nov. 21, 2016

Story Contact(s):

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LINK:

<http://munews.missouri.edu/news-releases/2016/1121-common-probiotics-can-reduce-stress-levels-lessen-anxiety/>

20 Years of Giving Thanks

It started with a dog, and then it grew into an institutional tradition. The year 2016 will mark 20 years that Barbara Levy has celebrated the meaning of Thanksgiving Day, bringing an attitude of gratitude — and a big, tasty meal — to those on the Veterinary Health Center duty roster at Mizzou's College of Veterinary Medicine.

"Yes, I started this when I was 12," Levy said with a laugh. "The idea came to me in 1996, during a sad point in my life. I had lost my parents and our Cavalier King Charles spaniel was in bad health. It seemed especially unhappy when we ate our Thanksgiving meal at a restaurant in St. Louis."

Driving back to Columbia, she vowed to her husband, Ken, "I'm not doing this again."

The following spring, an idea came to her: That November, she and Ken would show and share Thanksgiving by providing a meal for the faculty, staff and students who spend their holiday handling emergency cases at MU's VHC. The VHC is open 24 hours a day every day for veterinary emergencies.

"They must have thought we were crazy when we showed up that first year and asked for a cart to be brought out front to carry the food into the building," Levy said with a hearty chuckle. She and Ken prepared the entire home-cooked meal.

Confusion may have reigned that first year, but the hungry veterinarians and students were ready and waiting by year three. The Levys were greeted at the hospital door by a medical team with a gurney, ready to roll the food back to the lounge.

"It was never meant to be a sit-down dinner, but something for a hospital staff that can be pulled away at any time to handle an emergency. And, we wanted something that accommodated late-shift staff," Levy said. "It has gradually moved to a more table-friendly menu."

For many years, the entire meal was homemade by the Levys. Now retired, Barbara Levy has local businesses prepare the meal: ham, turkey, salads, specialty breads and pies for \$35. "Everything is prepared and delivered fresh that day."

Barbara Levy's background may make her especially sympathetic to healthcare professionals working holidays. She graduated from the Jewish Hospital School of Nursing in St. Louis, Missouri, as an RN before earning a business administration degree from Lindenwood College. She retired with more than 30 years of experience in healthcare management and consultation.

"They sacrifice their time to care for these animals, instead of having a holiday at home with their families," she said.

One Thanksgiving morning, the Levys had a holiday emergency of their own. Barbara Levy had to rush one of her Cavalier King Charles spaniels to the veterinary hospital. She delivered Mikey to a clinician, promised to return in a few hours, then went home to continue cooking.



Barbara and Ken Levy's relationship with the University of Missouri College of Veterinary Medicine began when one of their Cavalier King Charles spaniels needed medical care. The Levys have been giving back to the college ever since. Barbara Levy, pictured with her dogs, Nessa and Sophie, came up with the idea of serving dinner to the faculty, staff and students on duty Thanksgiving Day at the Veterinary

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The Levys' relationship with the VHC began with a dog, a tricolor Cavalier King Charles spaniel named Lady Jane.

Cavaliers are susceptible to juvenile cataracts and "dry eye," but the condition plaguing Lady Jane was something else.

"Meeting Dr. Cecil Moore planted the seed for a 30-year relationship with the College of Veterinary Medicine," Levy said.

Moore, DVM, MS, DACVO-Ophthalmology, diagnosed and successfully treated herniated tear ducts. Moore is now a Professor Emeritus in ophthalmology.

"They did such a stellar job on her little eye," Levy said, "that the only problem was the dog was getting better service here" than her husband was receiving in St. Louis, where he was undergoing treatment for eye conditions of his own. The Levys eventually sold their home in St. Louis and moved to Columbia.

"We didn't so much collect Cavalier King Charles spaniels as they collected us," Levy observed, while Cavaliers number 10 and 11 sat nearby: Nessa, the mother, and Sophie, the daughter.

"One of our Cavaliers, Mikey boy, was adopted from the VHC," Levy recalled. "He came from a puppy-mill situation and required brain surgery.

"When our black-and-tan was treated for lymphangiectasia, the care she received from Dr. Tony Mann and Dr. Marie Kerl saved her," Levy said. "We received calls from owners of Cavaliers across the nation, asking about the treatment they were getting at Mizzou. She lived another six years. We lost her to lymphoma, not the disease she was treated for at the VHC."

Tony Mann, DVM, MS, DACVS, DACVECC, is a professor of Small Animal Surgery and Small Animal Emergency and Critical Care. Marie Kerl, DVM, MPH, DACVIM – Small Animal Internal Medicine, DACVECC, is a teaching professor in Small Animal Emergency and Critical Care.

The Levys' Cavaliers seem to surpass the breed's average lifespan.

"It's all because of the great care they receive at the VHC," Levy said.

Another important factor would seem to be an owner who cares deeply and passionately for her pets. Barb Levy has loved 15 dogs through the past 50 years. In addition, she is the author of "Be Your Pet's Best Friend," a book published in 2013.

"Many veterinarians there (at the VHC) edited the book, and they picked all of my sidebars," Levy said. "I could not have afforded expert and editorial assistance like that. They did it just because they love animals and were interested in the book."

The event we know as "The First Thanksgiving" was a one-time affair, not a tradition. It became an official holiday 200 years later. In the years since, Thanksgiving may seem to be disconnected from its historical origins as a public, community-wide sharing of abundant fall harvests. In many American homes, it has become a family gathering focused on a dazzling meal, while the elaborate pomp of parades and the collision physics of professional football play out on television.

This year, the Levys' Thanksgiving for VHC staff becomes a 20-year tradition. And, a holiday meal isn't the only thing the Levys have shared; the couple has contributed to eye-related research and other programs at the CVM. They have also given generously to nursing and medical programs at the university.

That attitude of gratitude is alive and well in Columbia.

MU's College of Veterinary Medicine Offers Online Master's Degree Program

Online learning has made a major impact in the world of education. In 2014, distance learning accounted for nearly three-quarters of enrollment increases in U.S. higher education. The University of Missouri College of Veterinary Medicine (CVM) is blazing a trail in this transformative enhancement of the educational experience.

"Here at Mizzou, we have the nation's first totally online graduate programs for veterinarians and veterinary technicians," says Laurie Wallace, DVM, MVSc, DACVIM, director of the CVM's Veterinary Online Programs. "There is no other college that has these programs or the scope of classes we have."

In fact, until recently, MU has been the only veterinary college offering a master's program that can be completed entirely online. This year, the Florida University College of Veterinary Medicine began offering an online program that is limited to shelter medicine.

"Ours is a master of biomedical science degree with an emphasis in veterinary sciences," according to C.B. Chastain, DVM, MS, DACVIM, and an emeritus/adjunct professor in the Department of Veterinary Medicine and Surgery. "Candidates for our program would be veterinary technicians who have a bachelor's degree and who want to work in academia, research, or veterinary medical industries: pharmaceuticals, surgical supplies and animal feeds.

"The average veterinary technician will have an associate degree. Some choose to go on and get a bachelor's degree; some of those aspire to a master's degree," Chastain said. "We can offer them a master's degree that's relevant to their field. It's asynchronous, 100 percent online, so they can continue to work full time and do the coursework during their discretionary time. They can fit it in as best suits their schedule.

"We also have students who are veterinarians. They are primarily interested in working toward board certification," Chastain continued. "Our program can help guide some of their study, that would otherwise be self-study. They'll have support while they're working toward certification. Plus, they end up with a master's degree, so they get more reward for their efforts and more bang for their buck."

"We have a student who is a DVM practicing in the Nashville area," Wallace said. "She is a board-certified specialist in canine and feline practice. She also has an MBA. And now, she's about two-thirds of the way through our master's program. She's doing a really good job."

Students enrolled in online graduate training tend to be more mature and experienced, and frequently more motivated too. Many have already established a career and some, a family. Relocation is usually not an option, so they value the lack of geographic constraints that distance learning offers.

The CVM's online master's program has a long reach. Chastain has had students from nearly every mainland state, Hawaii, and Guam in the Mariana Islands. Wallace has had a student who was deployed to Afghanistan.



David Liss resides in California, but is able to work on a master's degree in biomedical science with an emphasis in veterinary science through the MU CVM's distance learning program.

"All exams are proctored. We contract with a company that uses a lockdown server and web cams to constantly monitor the exam process. The student must take the exam alone, in a quiet room, with no other materials present. If any crib notes are detected, or even other voices or noises, the exam is terminated; the student is locked out. It's vital that we maintain academic integrity during testing."

C.B. Chastain

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David Liss is currently earning his online master's degree from MU while working in California.

Liss, BA, RVT, VTS, CVPM, is board-certified in both emergency/critical care and small animal internal medicine. He has worked as a technician manager and emergency room/intensive care unit manager. He is a technician educator who lectures internationally and the author of numerous articles and book chapters. Liss has received some notable awards, including Veterinary Technician Educator of the Year from the Western Veterinary Conference and Southern California Technician of the Year. For nearly six years, he has served as director of a veterinary technology associate's degree program in Los Angeles.

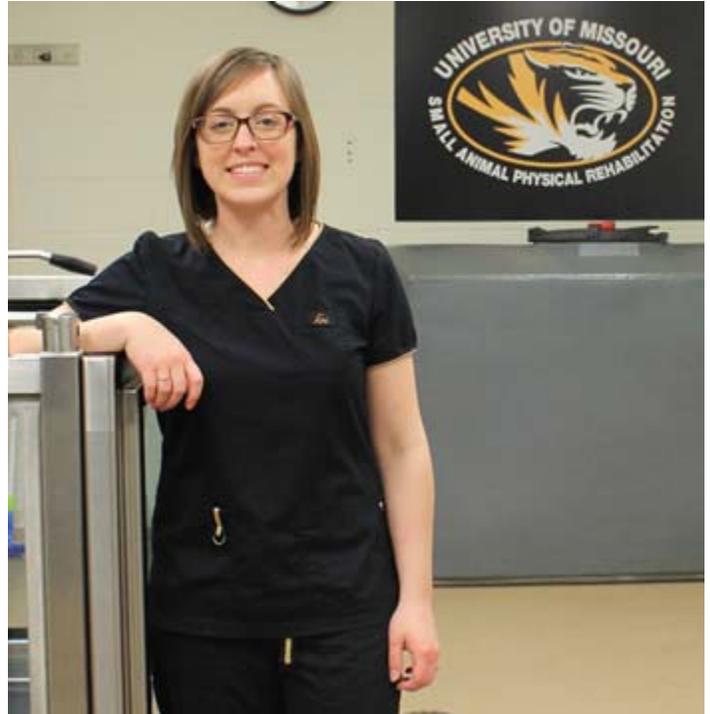
"I stay clinically relevant by working relief as an ICU technician, but I work primarily as program director for the veterinary technology program at the Platt College School of Medical Sciences," Liss said. "To advance to a dean position, or secure a better position in the private or public sector, I knew I would need a graduate degree. I also wanted to have formal academic training in research and publication."

"A very small number of schools offer a master's degree in the realm of veterinary medicine. Several of those programs admit only veterinarians," Liss continued. "The online program at the Missouri CVM bridged both of those issues for me. And, I could continue my employment while I worked toward my degree."

Stephanie Gilliam works at MU's Veterinary Health Center (VHC) as a senior veterinary technician in neurology/neurosurgery and small animal physical rehabilitation. She also serves as an adjunct clinical instructor in the Department of Veterinary Medicine and Surgery.

Gilliam, RVT, BS, CCRP, VTS (Neurology), was instrumental in developing the VHC's Physical Rehabilitation Service. She has presented at national meetings for veterinary practitioners and technicians, receiving first-place honors in case presentations at the 2009 American College of Veterinary Internal Medicine forum. She was named a Service Champion by the MU Staff Advisory Council in 2014.

Now, she is pursuing an online master's degree with an emphasis in veterinary medicine and surgery at the CVM.



For Stephanie Gilliam, who works at the MU Veterinary Health Center, geography was not the issue in advancing her education. However working full time and raising young children offered their own challenges to seeking a master's degree. The MU CVM's Veterinary Online Program allows her to pursue her studies on her own schedule.

"We use a template for our courses to ensure that our instructors are covering all the bases. We teach the instructors how to teach online. And, we put our courses through an external review to make sure they meet national standards for the quality of teaching."

C.B. Chastain

"Our method of online teaching has some other advantages for the student. They might watch the first video for 10 minutes, then go do something else, and then come back and watch the second video. That way, their attention is at peak level for both of those session components."

C.B. Chastain

CVM Food Animal Veterinarian Takes on Advisory Role with AVMA Council on Research

MU College of Veterinary Medicine Professor John R. Middleton, DVM, PhD, DACVIM, has been appointed as a veterinary medical research representative on the American Veterinary Medical Association (AVMA) [Council on Research](#). The committee advises the AVMA Board of Directors on scientific research and discovery that impacts the veterinary profession in order to sustain and advance the scientific basis of veterinary medicine. Middleton said he was interested in the position because it fits with his professional goals.

"I enjoy applying my knowledge and skills to help the profession constantly evolve to meet the needs of society. Applying my knowledge of agricultural animal research and innovation on this council allows me to give back to the profession," he said.

Middleton is a professor of food animal medicine and surgery and assistant director of the MU Agricultural Experiment Station. He earned his doctor of veterinary medicine and PhD from Washington State University. He went on to earn board certification in large animal internal medicine, and he is an associate member of the European College of Bovine Health Management.

He has more than 23 years of experience in clinical practice and more than 20 years in veterinary research with a focus on mastitis and milk quality in dairy cattle and goats. He serves as the chair of the USDA NCAC-02 Animal Health Advisory Committee for the North Central Region and is a past president of both the National Mastitis Council and National Mastitis Research Foundation. He has also represented MU at Association of American Veterinary Medical Colleges Research Committee meetings for the past five years. He has published more than 75 peer-reviewed manuscripts primarily on food animal species, more than 170 abstracts/proceedings and several book chapters.

It was his work with the USDA NCAC-02 and attendance of the AA-VMC research committee that prompted Erle Douglas "Ed" Murphey III, DVM, AVMA assistant director in the Education and Research Division, to ask Middleton to serve on the Council on Research. Richard Antweiler, executive director of the Missouri Veterinary Medical Association, nominated him to the post.

His first meeting with the Council on Research took place in October. Middleton said, "There are a number of activities relevant to the AVMA membership and veterinary research community that the council is engaged in, including developing internal policies, providing liaisons to other professional organizations with similar objectives, and working with government regulatory and funding agencies to improve policy, regulation and opportunities for veterinarians and veterinary researchers."



Professor John R. Middleton

[Bisphenol A in Canned Dog Food May Increase BPA Concentrations in Pets](#)

Researchers also found gut microbiome and metabolic changes that could have potential health consequences for dogs and humans

Dec. 19, 2016

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LINK:

<http://munews.missouri.edu/news-releases/2016/1219-bisphenol-a-in-canned-dog-food-may-increase-bpa-concentrations-in-pets/>

Missouri Farm Bureau Honors Prominent MU Veterinary College Alumnus

A University of Missouri College of Veterinary Medicine alumnus received an Outstanding Service to Agriculture Award during Missouri Farm Bureau's annual meeting, Dec. 5, 2016, at the Lake of the Ozarks. The award is presented annually to select individuals who have supported agriculture throughout their careers and have demonstrated their desire to work closely with Farm Bureau.

This year's other honorees are Tom Payne, vice chancellor for agriculture and dean of the MU College of Agriculture, Food and Natural Resources, and Dan Swearingen, who retired this year as chairman of the Division of Technical and Applied Sciences and general farm manager at College of the Ozarks, near Branson, Missouri.

Robert 'Bud' Hertzog, DVM '56, has maintained a general veterinary medicine practice for 60 years. He holds the distinction of being named a Distinguished Alumnus of both the MU CVM and the College of Agriculture. Hertzog is past president of the MU Veterinary Medical Alumni Association.

Hertzog is also a former president of the Missouri Veterinary Medical Association, which created the annual Robert E. Hertzog Leadership Award in his honor. He was chairman of the Missouri Veterinary Medical Board and was named Missouri Veterinarian of the Year in 1973.

Hertzog served the Kansas City American Royal Livestock and Horse Show as official veterinarian for 50 years. He served a similar role for the Kansas City Zoo for 22 years and continues as a consultant.

Hertzog chaired the American Veterinary Medical Association (AVMA) Executive Board and the Foundation Board, which is the AVMA's charitable section. The AVMA presented Hertzog with its 2014 President's Award. He is a charter member and executive board member of the American Association of Zoo Veterinarians, a member of the American Association of Equine Practitioners and the American Association of Bovine Practitioners.

For 16 years, he represented Jackson County during four terms in the Missouri House of Representatives. He owns and operates livestock and grain farms in Jackson and Johnson counties with his sons and grandson.



Robert 'Bud' Hertzog