The American Veterinary Medical Association Council on Education (AVMA COE) has renewed University of Missouri College of Veterinary Medicine’s full accreditation status. The AVMA COE is recognized as the accrediting body for schools and programs that offer the professional DVM degree or its equivalent in the United States and Canada. The COE renews accreditation on a yearly basis and conducts a full evaluation every seven years.

“We were gratified that the site visit team recognized that we do not just meet all standards required for accreditation, but that we are an outstanding organization,” said College of Veterinary Medicine Dean Neil C. Olson.

The AVMA COE sent a nine-member assessment team to the MU CVM in May. The objective of the site visit was to verify and supplement information that was presented to the COE in the College’s self-study. The College was required to conduct a thorough self-study to assess how well it meets 11 standards, which are: Organization, Finances, Physical Facilities and Equipment, Clinical Resources, Library and Information Resources, Students, Admission, Faculty, Curriculum, Research Programs and Outcomes Assessment.

For the self-evaluation report, the College was asked to:
• State the major goals and objectives of the college, and comment on how they are being met.
• Describe methods and/or tools used to measure outcomes of the total program of instruction, research, and service.
• List the major strengths and weaknesses of the college.
• Offer recommendations.

As part of the site visits, the AVMA COE team offered recommendations that fall into one of three classifications — must, should and encouraged. The team proposed several improvements for the CVM to implement. Of the COE recommendations, two fell into the must category:
• The College must provide annual updates on the progress toward securing funding for a proposed academic building.
• The College must conduct a holistic review of the curriculum to ensure continued instructional quality and effectiveness in light of the multiple changes made in the preclinical and clinical curriculum.

The site visit team also encouraged the CVM to devise and implement a plan to address space limitations in the anatomy lab, promote the use of professional development opportunities for faculty, and develop more sources of funding to support additional professional students interested in exploring research as a career option. Olson said that all of the concerns raised by the site team are already being addressed.

Retaining accreditation is important, Olson noted, not only to recruit top students and faculty, but also because low-interest federal loans are only available for students enrolled in accredited academic institutions.
Dr. Michael Dale Lairmore, DVM ’81, is the University of Missouri College of Veterinary Medicine 2013 Alumnus of the Year. Lairmore was honored during the College’s Alumni Reunion Weekend on Sept. 27-28.

Lairmore earned his doctor of veterinary medicine in 1981 at the University of Missouri. He then completed a PhD in experimental pathology at Colorado State University and a postdoctoral fellowship in molecular retrovirology at the Centers for Disease Control in Atlanta.

Lairmore is dean and professor of the University of California-Davis School of Veterinary Medicine. Previously, he was professor and associate dean for research and graduate studies at the College of Veterinary Medicine at The Ohio State University. He is recognized internationally as an authority in comparative oncology and retrovirology. In 2010, in recognition of his outstanding professional achievement and commitment to service, he was elected to the National Academies of Science Institute of Medicine, one of the highest honors in the field of health and medicine.

Lairmore thanked his mentors, including Dr. Charles “Mac” Scanlan, a member of the MU College of Veterinary Medicine Class of 1968, who allowed him to gain experience in his clinic. Scanlan returned to Mizzou to pursue additional training of his own and during that time served as Lairmore’s advisor for a Phi Zeta research project. The Phi Zeta experience “opened up another world,” Lairmore said, and it was through that experience he was considered for the research position he later pursued at Colorado State.

“I want to thank the University of Missouri for giving me a chance,” Lairmore said, accepting his award.

The National Institutes of Health has funded Lairmore continuously since 1992. He has authored or co-authored more than 175 scientific publications.
NEW DIRECTOR FOR VMDL ANNOUNCED

College of Veterinary Medicine Dean Neil C. Olson recently announced that Dr. Shuping Zhang has accepted the positions of professor and director of the Veterinary Medical Diagnostic Laboratory. She begins Nov. 1.

Zhang received her veterinary degree in 1985 from Shanxi Agricultural University and a master’s degree in 1988 from Northwest Agricultural University, China. In 1999, she earned her doctorate in veterinary microbiology from Kansas State University. She received additional training in immunology and pathogenesis of infectious diseases at the Beltsville Agricultural Research Center Animal Parasitic Diseases Laboratory from 1992 to 1995 and Texas A&M University College of Veterinary Medicine from 2000 to 2002. Zhang has been a diplomate of the American College of Veterinary Microbiologists since 2009.

In 2002, Zhang joined Mississippi State University as a clinical assistant professor and head of microbiology and serology at the Mississippi Veterinary Research and Diagnostic Laboratory. She was promoted to clinical associate professor in 2007. In 2010, Zhang joined the faculty of College of Veterinary Medicine and Biomedical Science of Texas A&M University, where she served as an associate professor and director of Clinical Microbiology Laboratory. At both institutions, she built strong disease surveillance programs and taught professional and graduate courses. Zhang’s research focuses on pathogenesis, diagnosis and treatment of infectious diseases with emphases on avian infectious diseases and salmonella in birds and companion animals.

Ophthalmology Researcher is New Kraeuchi Endowed Professor

Rajiv Mohan, PhD, has been named the next Ruth M. Kraeuchi Missouri Endowed Professor in Veterinary Ophthalmology at the College of Veterinary Medicine. Mohan, a professor of ophthalmology, will still maintain appointments at the MU School of Medicine and Truman Veterans Hospital; however, his primary appointment with MU will move to the CVM’s Department of Veterinary Medicine and Surgery.

The Ruth M. Kraeuchi Endowed Professorship funds the investigation of structural and functional aspects of retinal cell biology, comparative aspects of clinical retinal disease and intraocular microsurgery. Mohan’s research has focused on corneal gene therapy, corneal wound healing, refractive laser surgery, corneal scarring and angiogenesis, nanomedicine and nanoparticles, growth factors and apoptosis. His laboratory is attempting to define viral and nonviral gene therapy approaches for corneal diseases and dystrophies using AAV- and nanotechnology-based vectors. In addition, he is investigating the safety and efficacy of various therapeutic genes for treating corneal diseases, such as corneal scarring and angiogenesis, using newly defined controlled gene therapy modalities and rabbit and rodent models. Other research focuses on molecular mechanisms and signaling pathways associated with corneal wound healing, and strategies to improve laser eye surgery outcomes.
James Nave, DVM, a member of the CVM Class of 1968, added another honor to his resume recently when he accepted the Kansas City Health Corridor Iron Paw Award Aug. 26, at the Kansas City Convention Center. The award was presented during the Kansas City Health Corridor’s Eighth Annual Homecoming event, Prime Time Paws.

Nave is a small animal practitioner in Las Vegas, Nevada. After earning his DVM, the Missouri native served in the United States Army from 1968 to 1971, attaining the rank of captain. His military service included a tour of duty in Vietnam.

In 1971, Dr. Nave entered private practice in Las Vegas. In 1974, he established the Tropicana Animal Hospital, an accredited member hospital of the American Animal Hospital Association. He continues to own and manage Tropicana Animal Hospital as well as 15 other veterinary hospitals in the Las Vegas area. He served as president of the American Veterinary Medical Association (AVMA) from 2000-2001. While president, he helped to create a mentoring program, worked to restructure the AVMA political process and established new Executive Board districts.

In 2002, Dr. Nave was selected by the AVMA Executive Board to serve as one of two North American Councilors to the World Veterinary Association, and the solo councilor representing the United States. He served in that position until 2009. Later in 2009, Dr. Nave received the AVMA award, which recognizes members of the association who have contributed to the advancement of veterinary medicine and improved the Association.

Nave has held a long list of leadership positions at the state and national level. He has influenced the profession’s economic future by co-founding the National Commission on Veterinary Economic Issues in 2000 and served as its first chair until 2007.

Grants Administrator
Donna Stearns Passes Away


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

Mrs. Stearns had been a vital part of the College of Veterinary Medicine Dean’s Office staff since June of 2003 working for the Office of Research and Postgraduate Studies. She joined us as a Grants and Contract Specialist and three years later was elevated to the position of Grants and Contracts Administrator. Continued on page 5
She excelled in her role assisting investigators with fiscal management of their grants and as the College's grants and contracts liaison with other University departments and funding sponsors. She also contributed her time and talents to raise the Phi Zeta Program and Phi Zeta Annual Research Day to the level of excellence they have achieved at the CVM. Her organizational abilities, thorough knowledge of grant policies and procedures and helpful nature were among the traits that earned her the College's 2009 Dean's Impact Award for outstanding and sustained impact on the College of Veterinary Medicine.

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

**Cells in Dogs May Advance Human Disease Research**

Some people possess a small number of cells in their bodies that are not genetically their own; this condition is known as microchimerism. It is difficult to determine potential health effects from this condition because of humans’ relatively long life-spans. Now, researchers at the University of Missouri have found that microchimerism can be found in dogs as well. Jeffrey Bryan, an associate professor of oncology at the MU College of Veterinary Medicine and director of Comparative Oncology and Epigenetics Laboratory, says this discovery will help doctors determine what diseases humans with microchimerism may be more likely to develop during their lifetimes.

“Dogs have a much shorter lifespan than humans, which allows us, as researchers, to better monitor what diseases they may develop throughout their entire lives,” Bryan said. “We already have some evidence that microchimerism may increase risk of thyroid disease while lowering the risk of breast cancer in women. Finding microchimerism in dogs allows us to track this condition over a lifespan of about 10 years, as opposed to the 70 or 80 years of a human life. This will make it much easier to determine any increased risk of or protection from other diseases brought on by microchimerism.”

“Our study demonstrates that male microchimerism of probable fetal origin occurs in the pet dog population,” said Sandra Axiak-Bechtel, an assistant professor of oncology at the MU College of Veterinary Medicine. “Evidence exists in women that fetal microchimerism may have conflicting roles in disease formation. The pet dog represents an excellent model of many ailments in people, and the presence of fetal microchimerism in dogs will allow studies which further clarify its role in health and disease.”

Microchimerism most often occurs when a mother gives birth to a child. Sometimes, cells from that child are left in the mothers’ body and continue to live, despite being of a different genetic makeup than surrounding cells. Those cells can then be passed on to other children the mother may have later. Cells also can be passed on through blood transfusions as well as bone marrow and organ transplants.
Two University of Missouri professors weren’t exactly on the same page, but they were close enough to bring them together in the creation of a multidisciplinary University of Missouri center.

Two years ago, while flipping through the pages of an MU Archives edition that held an article featuring his work, Matthew Page, an assistant professor of otolaryngology in the School of Medicine, spotted an article featuring the research of Teresa Lever, assistant professor of communication science and disorders in the School of Health Professions.

Struck by the common threads in their research, Page was compelled to contact Lever to see how they might work together. Their meeting launched the University of Missouri Voice, Swallow and Airway Center (VSAC). In the weeks following, Joan Coates, College of Veterinary Medicine professor of veterinary neurology and neurosurgery, joined them — bringing a veterinary perspective to the project.

Since that time, the center has grown to envelop MU experts from various medical, scientific, engineering and artistic fields. The result is a cross-trained team of clinicians and researchers with complementary interests and a desire to make progress in correcting voice, swallowing, and airway problems that have resisted conventional clinical and research strategies.

This broad, multidisciplinary approach is optimal for a number of reasons. The complex functions of voice and swallowing intersect in the upper airway, yet require the coordinated action of multiple body systems. Voice is central to being human, and it serves communication purposes in many other species. Swallowing is vital for nutrition in humans and animals alike. All functions are affected by aging and by common diseases.

The VSAC holds monthly think-tank meetings. In addition to Lever, Page, and Coates, there are several members who can be counted on to be at the table. Among them are Tony Mann, College of Veterinary Medicine professor of veterinary medicine and director of the small animal emergency and critical care service at the MU Veterinary Medical Teaching Hospital; Carol Reinero, associate professor of small animal internal medicine at the College of Veterinary Medicine; Vamsi Guntur, assistant professor of pulmonary and environmental medicine at the School of Medicine; Vellore Gopalaratnam, professor of civil engineering; and Ann Harrell and Christine Seitz, associate professors of voice in the School of Music.

At this time, Arts and Science, Engineering, Health Professions, Medicine, and Veterinary Medicine are represented. Others, such as the College of Education and School of Journalism, are primed to jump on board. Much of the center’s research occurs in virtual core facilities spanning human and veterinary medicine — with some instruments in both places.

With multiple disciplines come challenges. In many cases, data collection must bridge humans and animals, or small animals and large. To address such challenges, VSAC routinely relies on members from the College of Engineering to remove technology barriers and create new designs.

The VSAC has been quite prolific over a short period of time. Members have presented numerous posters locally and at national and international scientific meetings, and they have several publications in the works. They even have a patent pending on an innovative diagnostic tool that permits unrestrained testing of swallowing function in animals.
Mark Dickherber and his wife, Stephanie Hoff, of Chesterfield, left their 7-year-old Italian greyhound, Cisco, with a family member when they went on vacation in 2009. Concerned that the dog seemed abnormally tired and somewhat despondent, Cisco’s dog sitter took him to his veterinarian. The vet treated Cisco for what was believed to be a muscle injury and sent him home. However, his condition failed to improve. On the morning Dickherber and Hoff were scheduled to return to St. Louis, the Italian greyhound began urinating blood.

Upon hearing the news, the couple went directly from the airport to the veterinary clinic where their ailing pet was again being treated, this time with blood transfusions.

“He would respond just a little to the transfusions,” Dickherber said. “We were told we needed to get him to a specialist. We didn’t understand the seriousness of the disease.”

The disease responsible for the Italian greyhound’s illness was immune-mediated hemolytic anemia (IMHA), a condition in which a body’s own immune system begins to hunt down and kill its red blood cells. The mortality rate for dogs stricken with IMHA is 50 to 70 percent, a grim statistic that has not changed in decades, said Carol Reinero, DVM, PhD, associate professor of small animal internal medicine at the University of Missouri College of Veterinary Medicine. In an effort to change that dire prognosis, Reinero is leading research at MU’s Comparative Internal Medicine Laboratory into IMHA and a related condition, immune-mediated thrombocytopenia (ITP), a disease that involves the immune system destroying platelets. “We treat these disorders with strong drugs to suppress the immune system, but little is known about the specific immune defects driving these diseases,” Reinero said. “We need more information on which parts of the immune system are going haywire so we can more selectively target the underlying immune pathology.”

On the advice of their veterinarian, Dickherber and Hoff brought Cisco to the College’s Veterinary Medical Teaching Hospital. Laura Nafe, DVM, MS, was a fourth-year veterinary student on her emergency medicine and critical care rotation when Cisco was brought in.

“He was my patient for three days,” Nafe said. “He was diagnosed with presumptive IMHA before being referred here. He was really sick. He had a very severe form of the disease.”

 Shortly after arriving at the veterinary hospital in Columbia, Cisco slipped into a coma and subsequently had a seizure. Despite the efforts of a team of clinicians, technicians and students, he succumbed to multiple organ failure.

IMHA can be frustrating for veterinarians and challenging for pet owners, Reinero explained. Sometimes the disease is considered primary and its cause is unknown. In

**Cisco’s Legacy**

Research into Deadly Disease Advances Thanks to Fund Memorializing Beloved Pet
other cases, it is deemed secondary, a complication of another underlying illness. Nor is treatment universal. It is not uncommon for dogs to fail to respond to the prescribed drugs. In other cases, dogs’ initial treatment is a success, but they then suffer a relapse. “Steroids are our first line of defense,” Reinero explained. “The goal is to shut off the abnormal immune response and then slowly taper the dogs off the drugs. The side effects of these drugs can be unpleasant. The dogs drink a lot. They urinate a lot. They are ravenous. They pant. They can take on a potbellied appearance. There are skin and coat changes.”

Life-saving blood transfusions and extensive diagnostic testing to determine if the IMHA is primary or secondary can also make it an expensive disease to treat for the animals’ owners.

After losing Cisco, Dickherber and Hoff decided to channel their grief into helping other pets. Dickherber and Hoff established the Cisco Fund for Immunologic Research at the CVM. Funds have been used to spearhead research projects, train graduate students and purchase equipment that will help dogs with IMHA.

Nafe meanwhile earned her Doctor of Veterinary Medicine degree at MU and relocated to North Carolina State University where she undertook a small animal medicine and surgery rotating internship. The experience further cultivated the interest in immunology that had been seeded while she was caring for Cisco. Attracted by a strong residency program and the opportunity to simultaneously pursue her master’s degree and engage in an intensive research project under the guidance of Reinero and her fellow internal medicine researchers, Leah Cohn, DVM, PhD, professor of small animal internal medicine, and Amy DeClue, DVM, MS, assistant professor of small animal internal medicine, Nafe returned to MU in 2010.

For her master’s project, Nafe’s goal was to develop an assay to determine the best treatment for each patient’s immune-mediated disease and to better understand why the disease occurs. She was able to pursue her project because of financial support available through the Cisco Fund.

Nafe’s study involved evaluating blood from healthy dogs subsequently tested in the laboratory with a panel of immunosuppressant drugs to assess their potency. This assay ultimately evaluates the ability of an immune cell, the lymphocyte, to proliferate (divide) in respond to stimuli. With immune-mediated diseases, lymphocytes are expected to proliferate excessively; with effective immunosuppressants, proliferation will be inhibited effectively.

Nafe completed her residency and master’s degree and has decided to pursue a career in academic veterinary medicine. She recently accepted a position as a clinical instructor at the University of Wisconsin-Madison School of Veterinary Medicine. However, the research she initiated at Mizzou will continue. Her mentor, Reinero, will now test lymphocytes in stricken dogs to confirm and determine which type of lymphocyte is abnormal. The work is possible through continued support from the Cisco Fund and the College’s Clinical Scientist Award. Reinero is currently recruiting dogs with IMHA and ITP to determine the underlying immune defect that drives the devastating auto-reactive antibody production. To participate, dogs should not have been treated with immunosuppressants. Reinero needs to draw a small volume of blood from the dogs just one time for the study. Treatment of their dogs won’t be delayed by participation.

“This is not a typical trial,” she explained. “There is no financial incentive for the owners; however, the goal of the trial is to help us figure out what is causing the disease. This in turn, we hope, will help us better manage dogs with these devastating diseases in the future.”
THE VET SPECIALIST

Dr. Leah Cohn is a specialist with a focus on “infectious, immune-mediated, and respiratory diseases.” Dr. Cohn tells SyndicateMizzou that she “can’t remember ever wanting to be anything but a veterinarian,” and that she has been working with animals since her first position at a veterinarian’s office at the age of 12. After earning a BA in animal science, she went on to obtain a Doctor of Veterinary Medicine degree in her home state of Tennessee, and then elected to pursue specialization training involving a one-year internship and a three-year residency in internal medicine. After specialization training, Dr. Cohn’s interest in research and teaching led her to pursue a PhD in veterinary microbiology and immunology, as well as a postdoctoral fellowship in immunology. Dr. Cohn’s early interest in veterinary medicine has lead to a distinguished career at the University of Missouri over the past 18 years.

Specialists like Dr. Cohn are extremely important in Missouri, where the large tick population and prevalence of tick-transmitted diseases are significant dangers to animal health. One particularly deadly tick-borne disease, Cytauxzoonosis, is currently the main focus of Dr. Cohn’s research. Known colloquially as “bobcat fever,” Cytauxzoonosis was discovered at the University of Missouri in the mid 1970s and described by Dr. Joseph Wagner. The disease is caused by a complicated protozoal organism named Cytauxzoon felis (C. felis). The “reservoir species” for C. felis is the bobcat, which roams nearly the entire continental U.S. Bobcats infected with C. felis—for reasons not yet completely understood—are able to live through the infection and become persistent carriers of Cytauxzoon. Ticks that feed on bobcats can contract C. felis and spread the infection to any other felines, including domestic cats.

Dr. Cohn’s interest in Cytauxzoonosis arose from seeing infected cats at the veterinary hospital. Once a cat is inoculated with C. felis, the course of infection is quick, painful, and difficult to combat. In the hospital Dr. Cohn saw healthy cats in the prime of life deteriorate and die within a matter of days, experiencing symptoms so horrible that Dr. Cohn likens the condition to “Ebola virus for cats.” Worse, Dr. Cohn was unable to help, as the recommended treatment for Cytauxzoonosis was an anti/protozoal drug that only saved a quarter of infected cats.

Dr. Cohn says these experiences drove her to seek a better treatment for Cytauxzoonosis. Her investigation into new treatment options led her to consider a combination of drugs that had been found useful in combating other protozoal infections.

To read the complete article, go to: http://syndicate.missouri.edu/articles/show/150.
Two large, energetic Labradors greet visitors to the rural Chesterfield home of Gary Savill and Barbara Stampfli-Savill. The couple, who met in Tampa, Fla., and married in 2010, acquired the two dogs from a rescue organization. Self-described animal-lovers, they have also actively supported a big cat rescue organization in Florida.

Stampfli-Savill’s position as a human resources executive brought the couple to Missouri shortly after they wed. At about the same time, Savill, who was Dell Computer’s regional manager providing support to large commercial clients, began looking for a hobby that was less cerebral than the demands of his job. He wanted, he said, “something to do with his hands.”

He decided to build a motorcycle. His first experience building a chopper involved a lot of trial and error, and Savill said he was fortunate to find Darren Williams, the owner of Liquid Illusions art, a custom motorcycle painter, who is also knowledgeable about bike building. Savill said Williams helped him through some of the learning bumps in the road.

Although his first motorcycle presented challenges he had not anticipated, what Savill had intended as a pastime quickly became a passion and took the career of the former British Navy diver, SCUBA instructor and computer company executive down another path. He created Silver Wraith Choppers LLC and began building custom motorcycles for a living.

Savill and Stampfli-Savill have also found a way for Silver Wraith Choppers to be a vehicle for their philanthropy toward animal welfare. The couple is donating a custom chopper that Savill built and Williams painted to the MU College of Veterinary Medicine. The College is selling tickets for a drawing that will be held during the 2014 Gentle Doctor Benefit on April 5. All proceeds from the sale of the tickets will benefit the College’s student scholarship fund.

“The bike has a Harley-Davidson feel to its ride and look, but with the Springer front end,” Savill said. “It harkens back to the classics of the ‘70s era, with the real ‘Chopper’ look. Also, it has the seating and rear pegs for a passenger, but looks great as a solo bike.”

The technical specifics of the chopper are as follows:

- 80-cubic-inch Evo Engine, sitting on a rigid frame
- Mikuni carburetor
- 5-speed Rev-Tech transmission
- 2-inch open primary
- Custom-built tank and rear fender
- Copper on black Springer front end
- Chrome 60-spoke wheels
- 240 rear tire
- Chain final drive
- Chrome-finish upper and lower controls
- King/queen seat, with tuck-away passenger pegs.

The artwork for the chopper is inspired by the College mascots: the mule team of Tim and Terry.

To purchase a ticket for a chance to win the motorcycle, please go to: http://cvmweb.missouri.edu/gdb-drawing/.

To meet the Savills and learn more about their gift to the College, please enjoy our video: https://www.youtube.com/watch?v=9CTkyBZe0Bc.