


College of Veterinary Medicine  University of Missouri-Columbia

# VETERINARY MEDICAL REVIEW

Vol 20 No. 2

Spring/Summer 2005

## The Genetic Cat's Meow

*An Unassuming Missouri Cat  
Has Something Special*

Also Inside...



• Veterinary Dentistry



• Missouri's Oldest Veterinary Clinic

• Finding An Alternative For A Hated Procedure



• ICU Technician Lectures in Ireland

• Alumnus Receives Bronze Star

VMR

Veterinary Medical Review is published twice a year by the College of Veterinary Medicine, University of Missouri-Columbia

Editorial Office  
W-203 Veterinary Medicine Building  
University of Missouri-Columbia  
Columbia, MO 65211

College of Veterinary Medicine Dean  
Dr. Joe Kornegay

Associate Dean for Academic Affairs  
Dr. C.B. Chastain

Associate Dean for Student and Alumni Affairs  
Dr. Ron Cott

Director of Development  
Greg Jones

Editor and Writer  
Randy Mertens

Photography  
Don Connor, Randy Mertens,  
Art Smith, Howard Wilson

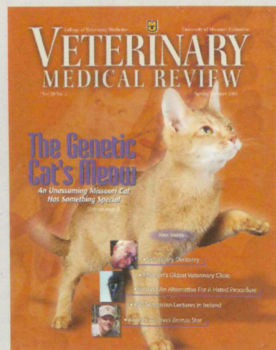
Design  
Sandy Hockenbury  
MU Printing Services

Graphics Support  
Don Connor, Howard Wilson

Telephone  
(573) 884-2215

Web Page Address  
www.cvm.missouri.edu  
www.vtmh.missouri.edu

on the cover...



Man's best genetic friend, the cat.



MU does not discriminate on the basis of race, color, religion, national origin, ancestry, sex, age, disability, or status as a disabled veteran of the Vietnam era. For more information, call Human Resource Services at (573) 882-4256 or the U.S. Department of Education, Office of Civil Rights.

# College of Veterinary Medicine University of Missouri-Columbia VETERINARY MEDICAL REVIEW

Vol 20 No. 2

Spring/Summer 2005



Veterinary

People

Alumni Earns Bronze Star	25
Losing History	28



Departments

Serving  
the  
Community

Taking a Bite Out of Disease	14
Mining a Cancer Database	15
Helping Victims Through VMAT	18
Changing Irish Veterinary Culture	22

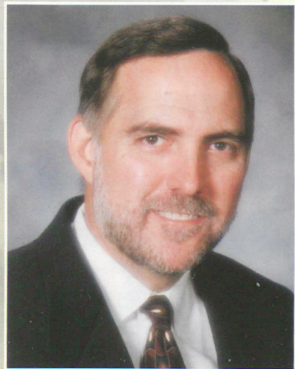
Teaching

Healing

Discovery

The Genetic Cat's Meow	8
A New Face for the College	12
Saving Eyes Through PDT	20
Teaching About a New Threat	24

Message From the Dean	3
Around the College	4
Veterinary Heritage	16
Alumni at Large	26
Flashback!	30



## Message from Dean Kornegay

### *A Celebration of Life* Cale Michael Estabrook 1978–2005

*Cale Michael Estabrook*, a member of the College of Veterinary Medicine Class of 2006, was killed in a car accident on April 8, 2005 (see obituary on page 29). These remarks were made by Dr. Joe Kornegay at a memorial service for Cale at the College on April 17.

“Words come hard at a time like this. A well-intended expression of comfort seems hollow, insignificant. But, allow me to share with you how these past ten days have touched me — and touched the College of Veterinary Medicine family.

Each August, we welcome a new class of students to the College. August, 2002 brought to us the Class of 2006, Cale’s class. In my comments to the class, I emphasized that they were now part of the College family and the profession of veterinary medicine. That weekend, the Class of 2005 hosted a picnic for Cale and his classmates. Parents and other family members joined us. We stressed that they, too, were now part of the College family.

We have had a death in the family. Cale’s life touched all of us. With his passing, part of each one of us has also been lost. Prior to this week, I didn’t know Cale’s brother, Garrett. But, I did. Yes, he was Cale’s brother, but he is also my brother. Your brother. Until the visitation in Cameron (Mo.) Tuesday night, I didn’t know Cale’s parents, Ed and Beverly. But I did. They were Cale’s parents, yes, but they are also my parents. Your parents. Truthfully, I didn’t know Cale that well. But, I did. Yes, he was

Garrett’s brother, but he was also my brother. Your brother. He was Ed and Beverly’s son, but he was also my son. Your son. Their loss is our loss.

As a family, we celebrate each other’s successes and grief our losses. Tonight, we are here to celebrate the life of Cale Michael Estabrook, our friend, class-

mate, brother, and son. And, in Kara’s case, a soul mate with whom she shared so much. His was such a special life — a life filled with love for each of you. A life filled with passion. Cale would want his family — all of us — to remember him as he lived. To remember the passion he had for life and the way that he touched our lives. Just as (classmates) Jennifer, Beth, and Jarrett have done tonight.

As this week comes to a close, I’ll take with me memories of Cale and memories of each of you. Memories of the special bond shown by the Class of 2006. You have been truly magnificent. Memories of Dr. Ron Cott and Linda Van Den Berghe who have nurtured and healed us over this past week. And, especially, memories of the dignity shown by Cale’s brother, Garrett, his parents, Ed and Beverly, and the love of his life, Kara. Each of you has made me very proud to be a part of your family — Cale’s family.”

*As a way for Cale’s memory and spirit to tangibly remain with the College, we’ve established an endowment to support the Cale Estabrook Memorial Scholarship. The scholarship will live on forever, helping future students — and reminding us of the impact Cale had at the College for generations.*

# Around the **CO**

## Pathobiology Faculty Win Laboratory Animal Awards

Three MU College of Veterinary Medicine Pathobiology Department faculty received prestigious national awards at the 2004 National Meeting of the American Association for Laboratory Animal Science (AALAS).

Dr. Lela Riley, professor of pathobiology, was presented the R. Brewer Scientific Achievement Award. Dr. Matt Myles, research fellow, received the Pravin N. Bhatt Young Investigator Award. Dr. Ronald McLaughlin, formerly the director of the MU Office of Animal Resources and professor in the Pathobiology department, was honored with the Cohen Award from the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC).

The Brewer scientific achievement award was established in

1994 in honor of Nathan R. Brewer, DVM, PhD, and first president and a founding father of AALAS. Open to all members of professional scientific societies, this award is given to "recognize an individual who has made major and repeated scientific contributions to the fields of laboratory animal science or comparative medicine" over the span of an entire career.

The Pravin N. Bhatt award was first presented in 1995 to encourage and recognize an outstanding young scientist who has made significant contributions to the fields of laboratory animal science or comparative medicine. The nominee must have demonstrated a commitment to a career in science and have demonstrated originality of thought and experimental design.

Alumni from the MU Comparative Medicine Program have

won five of the last seven Bhatt awards.

"Dr. McLaughlin's contributions to the AAALAC are too numerous to list and too significant to sum up in just a few sentences," said Dr. John Miller, executive director of AAALAC. "His knowledge, leadership, and spirit have left an indelible mark on our organization."

## Gentle Doctor Benefit Surpasses \$100,000 Scholarship Goal

The Gentle Doctor Benefit, an annual dinner and auction designed to fund scholarships for students at the University of Missouri College of Veterinary Medicine, this year surpassed its goal of a \$100,000 endowment.

The 18th annual event, held in April, was a tremendous success, raising more than \$40,000 for student scholarships, said Lisa

Jones, special events coordinator for the college. This year's event was highlighted by two live auctions and two silent auctions with items divided into themes such as sports-related and veterinary medical-related. It was held in the Hearn Center Field House.

Money is raised through auction item sales, individual sponsorships, and corporate sponsorships. The 2005 Gentle Doctor Benefit had six Gold Sponsors who each donated a minimum of \$1,500 and 15 Silver Sponsors who each donated a minimum of \$1,000. This year was the first year that Gold Sponsorships were offered.

Auction items are donated by either individuals or corporations. Past auctions have featured a variety of items, including Frederick Remington sculptures, vacations, medical



**▲ Dr. James (Jimi) Cook** is a veterinary surgeon who has been recognized by his human medicine peers. He was awarded the Orthopedic Research Society's New Investigator Award, the first time that a veterinarian had been so honored.

## Orthopaedic Lab Director is First MU William Allen Faculty Scholar

It's not often that a veterinarian is honored by his human medicine colleagues.

**Dr. James Cook**, associate professor of veterinary medicine and surgery at the University of Missouri and director of the Comparative Orthopaedic Laboratory, was named the MU School of Medicine's first William C. Allen Distinguished Faculty Scholar.

The Comparative Orthopaedic Laboratory is vital to research and residency training in the school's Department of Orthopaedic Surgery. The lab was co-founded by Dr. Cook and Keith Kenter, MD, in 1999 and includes MU's College of Veterinary Medicine, College of Engineering, and medical school. More than 25 scientists are involved in the lab's research

on osteoarthritis, tissue engineering, and articular cartilage physiology.

"Research conducted in the Comparative Orthopaedic Laboratory goes hand-in-hand with the dynamic and progressive clinical services provided by the medical faculty in advancing MU to the pinnacle of orthopaedics," Dr. Cook said.

"The residents are the future of orthopaedics, and we need to give them the best and most comprehensive training possible. This includes giving them a solid basic-science foundation from which to make decisions regarding the clinical application of techniques and devices as well as other aspects of patient care."

Mentored in part by Dr. Allen, Dr. Cook received doctorates in veterinary medicine and

pathobiology from MU. His research focuses on disorders of articular and meniscal cartilage, as well as the study of cartilage's role in health and disease.

Dr. Allen joined MU in 1976 as professor and chief of orthopaedic surgery. A skilled total joint replacement and sports medicine specialist, he did much to advance faculty recruitment and residency training before leaving his post as chief in 1994. Now a professor emeritus, Allen was named Mr. Sports Medicine last year by the American Orthopaedic Society for Sports Medicine.

In 2003, Dr. Cook received the Orthopaedic Research Society's 2003 New Investigator Recognition Award.

# College

supplies, toys, stuffed animals, a four-poster bed, furniture, veterinary services, household goods, airplane rides, cars, and breeding services.

Future auctions will help bolster the scholarship trust fund, providing more assistance to financially needy students.

Event organizers are already accepting auction items and seeking corporate sponsorships for the 2006 Gentle Doctor Benefit. For details, contact: Lisa Jones, special events coordinator, W-211 Veterinary Medicine Building, College of Veterinary Medicine, University of Missouri, Columbia, Mo. 65211. Phone: 1-888-850-2357

For more information about next year's event, see the web page at: [www.gentledoctorbenefit.org](http://www.gentledoctorbenefit.org).

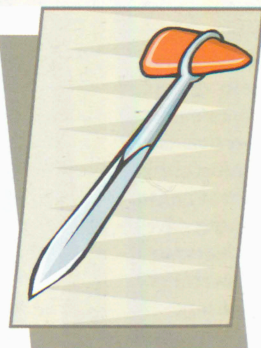
## Knee Process Receives Approval For Human Clinical Trials

Each year, millions of people undergo surgery to repair damaged cartilage in their knees. Unfortunately, in most of those cases, doctors simply remove the damaged cartilage and leave nothing in its place, nearly ensuring that patients will experience painful arthritis as they age. However, a process developed by a MU College of Veterinary Medicine researcher that has received FDA approval recently helps the knee to generate cartilage without the use of drugs.

One common cause of arthritis occurs when an area of knee cartilage is damaged and must be removed during surgery. The cartilage, known as the meniscus, is a shock absorber in the knee. When torn or damaged, the meniscus typically does not heal on its own, and the damaged portion is removed and not replaced. While current surgical techniques

solve the short-term problem, arthritis inevitably develops several years later. Dr. James (Jimi)

Cook, an MU professor of veterinary medicine and surgery, has performed groundbreaking research for DePuy Orthopedics Inc. to help develop a process that successfully encourages the meniscus to repair itself, while minimizing progression of arthritis for the patient.



“Other studies have shown the amount of arthritis a person experiences is related to the

amount of meniscus you have left in your knee,” Dr. Cook said. “In our animal studies, we have been able to grow back 90 percent of the meniscus on average. Using tissue engineering and biological stimulation

through the implantation of a scaffold derived from pig intestines, we show the tissue where it needs to grow. With approval from the federal government, we will now be able to begin using this in humans in the first phase of clinical trials.”

While the new process has been used in more than 300 dogs, about 20 human patients will receive the procedure in the trials, which will be completed by surgeons in Memphis and Indianapolis. Following a successful first phase, the trials will

## VETERINARY PEOPLE



### Alex J. Bermudez Appointed Director of MU Veterinary Medical Diagnostic Lab

**Dr. Alex J. Bermudez** this March was named director of the University of Missouri Vet-

erinary Medical Diagnostic Laboratory (VMDL).

The VMDL is a laboratory in the College of Veterinary Medicine with multiple missions of public service, teaching, research, and continuing education. It provides in-depth laboratory diagnostic support to veterinary practitioners, livestock and poultry industry farmers, pet owners, wildlife conservationists, state and regulatory officials, and clinicians of the MU Veterinary Medical Teaching Hospital.

The laboratory handles more than 200,000 specimens a year and serves Missouri's 114 counties and surrounding states by performing over 300,000 diagnostic tests annually.

Dr. Bermudez earned his master's and DVM from the University of Illinois in 1984 and 1986, respectively. He then enrolled in

a Poultry Medicine internship at North Carolina State University.

Following this training Dr. Bermudez took a faculty position at the University of Connecticut where he served as poultry extension veterinarian. In this position he also taught an avian pathology course to undergraduate students and conducted studies on the efficacy of killed *Mycoplasma gallisepticum* vaccines in laying hens.

In 1988, Dr. Bermudez joined the Ohio State University where he taught graduate and professional student courses.

Dr. Bermudez, in 1991, accepted a position as assistant professor in Veterinary Pathobiology at MU. His work in the VMDL involved significant interaction with and service to the Missouri poultry industry.

Dr. Bermudez is a diplomate in the American College of Poultry Veterinarians. His research focuses on the effects of mycotoxins in poultry and parasites in turkeys. He has published 42 peer-reviewed manuscripts, eight book chapters, and was

promoted to the rank of associate professor in 1997.

Dr. Bermudez has been an associate editor for the journal *Poultry Science* for ten years and on the editorial board of *Avian Diseases* for eight years. He also serves on the editorial board of the *Avian Disease Manual* published by the American Association of Avian Pathologists and is a contributing author to the text *Diseases of Poultry*.

In 1996, Dr. Bermudez was elected to the American College of Poultry Veterinarians (ACPV) board of governors. He served as the ACPV president in 1998. He currently represents the ACPV on the American Veterinary Medical Association's American Board of Veterinary Specialties.

The VMDL contributes to the protection and continued growth of the more than \$2 billion per year livestock industry in Missouri, a livestock production leader in the Midwest and nationally.

# Around the **CO**

be opened nationwide for a second, larger trial before finally being available to the public. Dr. Cook expects that process to take about 3–6 years. Ideal patients for the trials are those individuals who are in good health, but are suffering from a meniscal tear that will extend to the vascular zone of the meniscus when surgically treated.

## College Supporter Receives University Recognition

The University of Missouri-Columbia recently conferred the Degree of Doctor of Humane Letters to Kansas Citian Tom Scott, a long time supporter of the College of Veterinary Medicine and MU's business college.

Mr. Scott has contributed much to the veterinary medical college. He chaired the college's medical 50th Anniversary Endowment Campaign while endowing the Tom and Betty Scott Program in Veterinary Oncology. He also led the establishment of a program that provides scholarships to veterinary students from MU and Kansas State University to attend the Kansas City American Royal.

Mr. Scott received the College of Veterinary Medicine's Dean's Impact Award in 2000.

A 1958 MU graduate in business administration, Mr. Scott went on to grow his insurance company, Insurance Management Corporation (IMC), into one of the nation's top 150 insurance and risk management firms. IMC focused on specialty products for a number of industries, including long haul trucking and childcare. As president and chief executive officer in 1995, Mr. Scott led his company and its subsidiaries through its merger with Arthur J. Gallagher & Co., one of the

ten largest insurance brokerage firms in the world.

Since his retirement in 1997, Mr. Scott has continued to give support and service to his community and alma mater. In Kansas City, he has been active in the American Royal, one of the Midwest's largest livestock exhibitions and rodeos. Currently, Mr. Scott serves on its board of directors and executive committee and is vice chairman of both the Board of Governors and Governors and Sponsors Relations Committee. Mr. Scott also has served in leadership positions for the Junior Chamber of Commerce, United Way, Saint Luke's Hospital Foundation, Kansas City Symphony and Ozanam Home for Boys.

He and his wife, Betty, are benefactors of the new Scott Pavilion at the American Royal fairgrounds and an outpatient dialysis center at St. Luke's Hospital.

## Human Medical Technique Effective In Canine Tracheal Collapse

A few years ago, Teddy, a small Pomeranian, developed a cough that wouldn't go away. He was diagnosed with tracheal collapse, a potentially deadly disease. Although various medications helped over the short term, his cough worsened. In late August, Teddy had difficulty breathing and was rushed to the MU College of Veterinary Medicine. Doctors found his windpipe almost completely obstructed due to the tracheal collapse. Using a treatment approved for humans, MU veterinarians gave Teddy a new lease on life.

"The cartilage of the wind pipe (trachea) should normally be rigid and support a tightly stretched membrane across the top of it, allowing air to easily



▲ Dr. Carol Reinero

flow into the lungs," said Dr. Carol Reinero, assistant professor of veterinary medicine and surgery. "When dogs have tracheal collapse, which is fairly common in toy and small breeds, the cartilage degenerates and the membrane blocks the airways. Depending on the severity of the obstruction, dogs may cough, show a reluctance to exercise, or even die if not treated."

Most dogs are placed on cough suppressants or anti-inflammatory medications to control symptoms. However, the disease is progressive, and medical management may fail. Current surgeries to correct the problem depend on which area of the trachea is affected. If the problem is in the portion of the trachea in the chest, performing open-chest surgery can be risky and there are many post-operative complications, Dr. Reinero said. However, Dr. Reinero found a solution in human medicine.

Humans, while not affected with degeneration of their tracheal cartilage, can have obstruction of their airways due to certain cancers. These problems are corrected with the placement of

an intraluminal stent. The stent resembles a small tubular chain link fence. When placed in a dog, the stent forces the trachea to remain open and keeps the membrane in the correct place, while allowing the dog to breathe. Because the procedure is not without risk, Dr. Reinero warns that the treatment is only for extreme cases and when medicine has been proven to be ineffective.

## Two Days Inactivity Initiates Signs of Pre-Diabetes, Study Shows

In as little as two days of physical inactivity, a body may start showing signs of decreased efficiency of insulin, according to two University of Missouri-Columbia researchers in a study published recently in the *Journal of the Physiological Society*.

In a study of rats, Dr. Frank Booth, professor of veterinary biomedical science and director of the Health Activity Center housed at the MU College of Veterinary Medicine, and Dr. David Kump, a doctoral student in the MU Department of Medical Pharmacology and Physiology, found that insulin sensitivity decreases the longer the rats stay inactive. This decrease lessens insulin's efficiency in the body and may be a precursor to diabetes.

"The less efficient your insulin is, the greater risk you have of diabetes, heart disease, obesity, and hypertension," Dr. Kump said. "Insulin works by taking glucose, or blood sugar, out of the blood stream and into



# College

the muscle to be used for energy. Our research found that when the rats stopped running for two days, the amount of sugar taken into the muscle in response to insulin was reduced by about one-third."

Typically, when insulin binds with a muscle cell, it starts a chain of events that help glucose transfer from the blood into the muscle. The process starts when insulin binds to receptors on the muscle wall to open a path for

the glucose to transfer into the muscle. At the same time, proteins inside the muscle are activated to accept the glucose and begin the process of turning the glucose into energy. In a person who has been active, this process typically is very efficient, but for someone who has been physically inactive, not only are there less receptors on the muscle wall to bind to the insulin, but there is less activity inside the muscle, making the transferring of the

glucose to the muscle difficult."

"Everyone is looking at exercise, but we are looking at the consequences of stopping that exercise," Dr. Kump said. "People already know that exercise is good for them. This shows that within a very short time frame of inactivity, the insulin does not work as well and might have negative effects."

To simulate the sudden drop in activity, researchers allowed the rats to run on exercise wheels

for three weeks and then locked the wheels for a period of up to two days. Past studies have indicated increases in human blood sugar and insulin as early as five days, but these findings show that changes could be occurring even earlier in the muscle, Dr. Booth said. The American Heart Association and the National Institutes of Health funded the study. ■

## MU Veterinary Medicine Student Snares First Place in College Challenge

Do you think that school rivalries only extend to athletics? Then consider the annual Nestlé Purina College Challenge where veterinary students from across North America go head-to-head to match wits on topics ranging from anatomy to internal medicine.

At stake is \$13,000 in prize money and a lot of bragging rights.

Taking first place in January's 2005 competition was **Joanna Buckley**, MU College of Veterinary Medicine Class of 2005. She competed against 25 students representing veterinary colleges from across the nation as well as two schools from Canada. The College Challenge is a competition set up as a quiz bowl with questions similar to those on the national board.

Ms. Buckley brought back winnings of \$3,000 for herself and \$3,000 for the MU Student Chapter of the American Veterinary Medical Association, which had paid her way to the event.

"The competition is extremely tough," said Dan Christian, DVM, Nestlé Purina director of professional communications. "Each year we hope for even higher standards of intellect, veterinary knowledge,

and, most of all, fun competition between representatives from all of the schools."

The competition is held during the North American Veterinary Conference (NAVC). Veterinary medical students serving as their school's delegates are invited to participate in the competition, which is loosely based on popular TV game shows. Students amassing the greatest number of points during five rounds of competition advance to the next level of the challenge until the field is narrowed to two finalists. NAVC attendees will be part of the "studio" audience and sessions will be telecast on the NAVC closed-circuit network broadcast to all hotels associated with the conference this year.

"The college is extremely proud of Joanna as she represented our school in an award winning style," said Dr. Ron Cott, associate dean for student and alumni affairs. "When you are competing against the best and the brightest and you take home the winnings, it speaks highly of our program, our instructors, and our students. Joanna has made us very proud. She has set a new standard for the college."

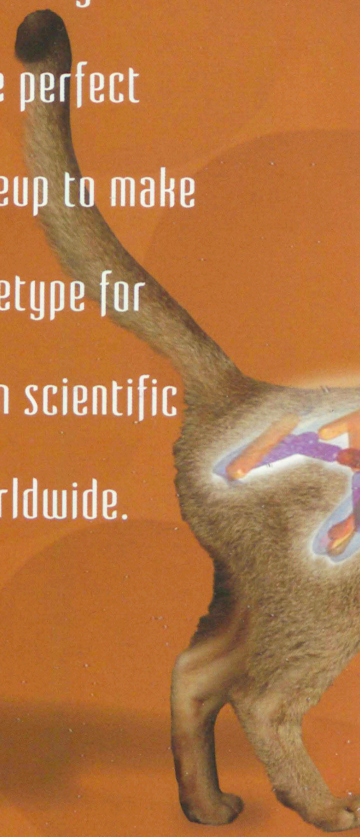


▲ Winner and champion, Joanna Buckley. She graduated *summa cum laude* this year.

# The Genetic Cat's Meow



An unassuming Missouri cat has something special—the perfect genetic makeup to make her the archetype for feline-human scientific research worldwide.





**C**innamon is a shy cat. While the other cats in Dr. Kristina Narfstrom's ophthalmology research center at the University of Missouri College of Veterinary Medicine vie for the attention of veterinary medical students and technicians, Cinnamon is more reticent, preferring to sit quietly and watch the other cats play and carouse.



▲ Dr. Kristina Narfstrom

The reddish-haired feline's introversion notwithstanding, Cinnamon is an important cat. In fact, scientifically, she may be one of the most important cats who has ever lived.

Of all of the cats in the world, Cinnamon has been chosen to be the definitive genetic model for all cats in a project called the feline genome project. By donating a small vial of blood, Cinnamon will provide scientists worldwide to map the feline genetic structure, eventually allowing for each gene's function to be noted and studied.

While previous cats have helped chart sections of the feline genetic structure, Cinnamon's will be the first complete and consummate map, the

single standard that scientists worldwide will use as the basis of their research.

Such data will be hugely important. Armed with this genetic navigation chart, scientists across disciplines will be better able to determine the location and function of each gene on the feline chromosomes, allowing scientists to determine genetic causes of diseases such as blindness and cancer. Knowing the location of malformed genes, scientists may soon be able to create therapies to cure previously unsolvable problems.

Not a bad day's work for a somewhat timid cat living in middle Missouri.

The effort to map the feline genome is directed by the National Human Genome Research Institute, part of the National Institutes of Health. The feline genome-sequencing project is being conducted at the laboratory level by Agencourt Bioscience Corporation as part of a larger effort to sequence numerous mammals. The Massachusetts Institute of Technology and the National Cancer Institute are also in on the project.

Previously, scientists have mapped the genomes for dogs, rats, mice, chickens, and humans. Each of these studies has given researchers tremendous research grist, providing important clues in a score of diseases. Though late to the game, the cat genome is a long anticipated tool for the researchers.

Why is the cat so important to this type of research? The common housecat and humans share much, genetically. Not that it's human nature to chase mice or purr when scratched behind the ears, but scientists have found that when it comes to the arrangement of genes on

our chromosomes, people are closer to cats than to any other animal group studied so far except primates.

In fact, many researchers think humans and cats shared a common ancestor 90 million years ago.

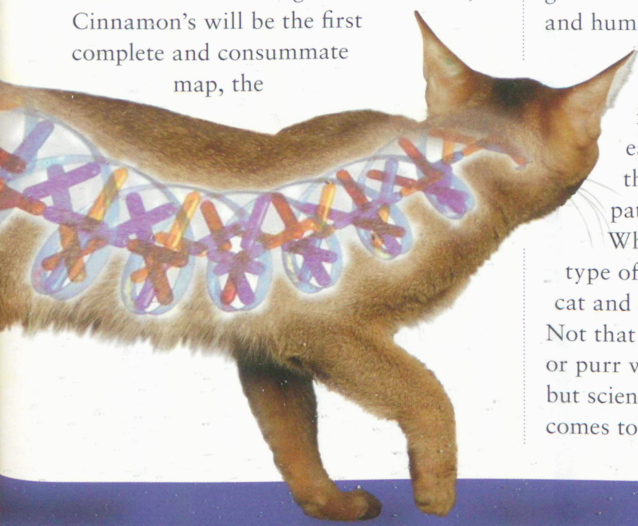
This underappreciated genetic similarity between people and cats means that studying the cat's genome will provide scientists valuable information in common genetic diseases of both species. Cats and humans share more than 200 hereditary and infectious diseases. Comparing the genetic defects causing cat diseases may point to the genetic trigger for an analogous human condition.

This similarity means that the feline genome project will very quickly become an essential tool to researchers hoping to find cures for a host of human ailments. In fact, the domestic cat genome may prove to be the single most useful biomedical research model, even better than dogs. Sorry, Rover.

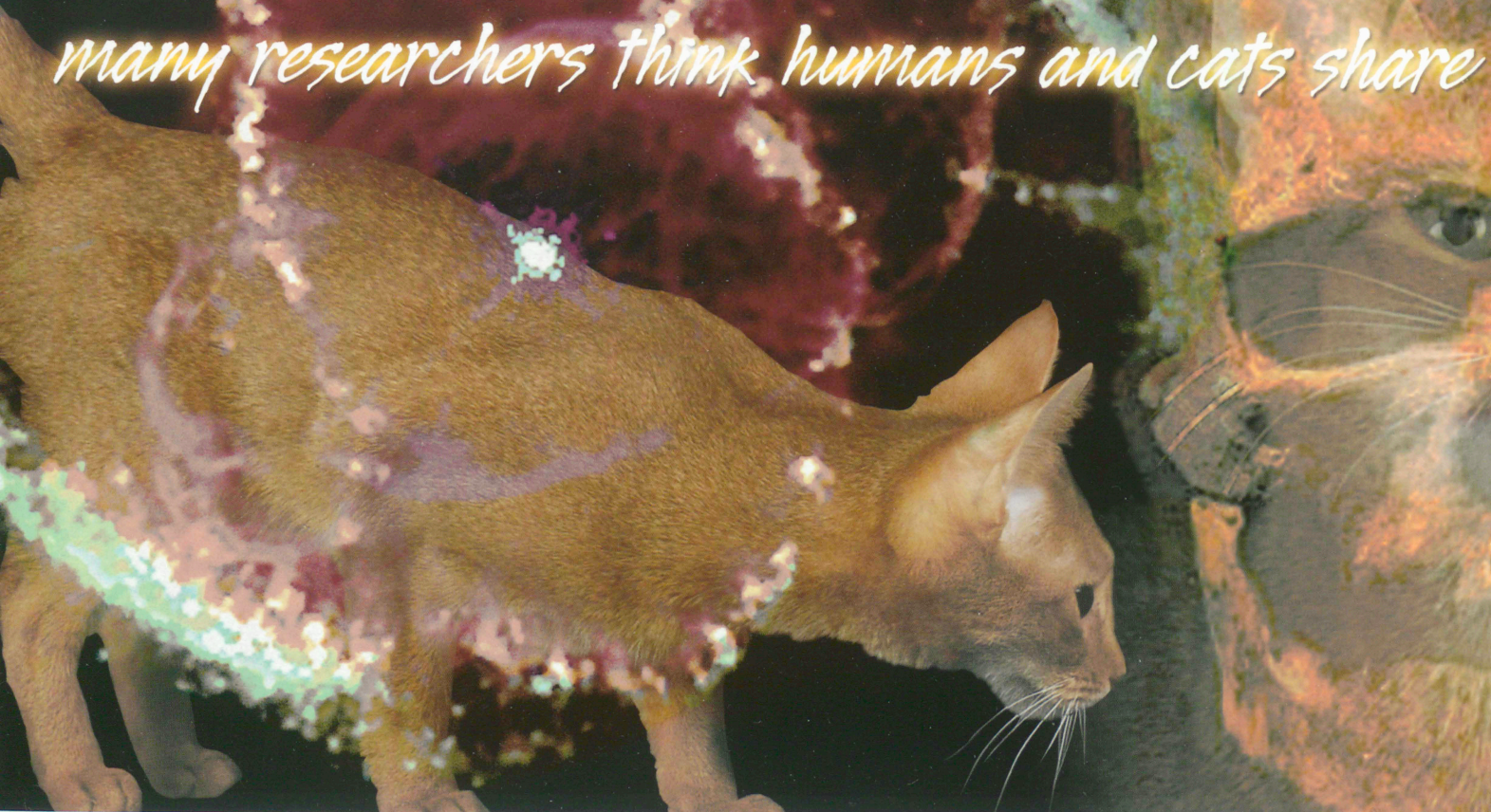
Dr. Narfstrom predicts that the feline genome will rapidly shed new research light on a number of cat and human medical problems including virus-mediated diseases, respiratory problems, cancers, AIDS, immunity problems, muscular dystrophy, polycystic kidney disorder, and Dr. Narfstrom's research specialty, retinal eye diseases.

#### The Cat—Man's Best Genetic Friend?

Another reason why the cat is an excellent animal model for human genetic diseases is that the species hasn't had the crossbreeding that dogs have experienced at human hands over the centuries. Scientists believe that the canine genome



*many researchers think humans and cats share*



has been shuffled fourfold by humans since dogs first wandered into prehistoric caves.

Humans didn't see the need to modify the cat's behavior or size for uses such as herding or hunting. This left the cat pretty much as Version 1.0 over evolutionary time. This "extremely conserved genome organization," as the scientists call it, means that the genetic structure has not been significantly changed. In fact, researchers believe that the cat has the most highly conserved gene order of all mammals.

This consistent makeup over the eons is important to researchers as changes in the genetic structure, such as caused by inbreeding, can skew the true intent of a particular gene. Studying the function of such a gene could send researchers down a scientific dead end.

Fewer scientific dry holes will result in more consistent and faster research results as to what each gene really does, and sometimes doesn't do.

Because of all of this, researchers have been looking for one really genetically pure cat to be the model for

the feline genome.

Which is why, of the billions of cats prowling planet Earth, the researchers selected Cinnamon.

Cinnamon was born in Columbia, Mo. in February 2003, the offspring of two Swedish purebred Abyssinian cats. She has a long and well documented pedigree. Her physical characteristics, such as oversized ears and a sleek body, identify her as being the product of a very pure lineage, a true representative of the sub-species.

Abyssinian cats go back a long way, to ancient Egyptians who worshipped them. In fact, they are regarded as the first breed of cat, most representative of the original species. Breeders have been careful to keep this line genetically pure. Over the centuries, Cinnamon's forebears seem to have enjoyed particularly efficient breeding.

Cinnamon's documented parentage, her pure characteristics, and her known relationship to cats afflicted with a



hereditary retinal disease comparable to a human condition, Retinitis Pigmentosa (RP), made her a perfect candidate for Dr. Narfstrom's search for the gene or genes that cause this vision disorder. These qualities also made Cinnamon perfect for the larger genome project.

#### **Worldwide Research Data Comes Back to MU**

Dr. Narfstrom is one of the many scientists worldwide who will benefit from the mapping of the feline genome. She has spent her professional career, spanning continents, studying vision-threatening diseases caused by genetic defects. RP, a hereditary and blinding retinal disease of humans, affects approximately 1 person in 3,500. It is thus one of the most prevalent blinding diseases. About 100,000 people in the United States have been diagnosed with RP. Worldwide, approximately 1.5 million people have the problem. Most patients are legally blind by around age 40. There is no current cure.

Dr. Narfstrom notes that RP may be



# A New Face for the College

*Proposed Construction Program Would Add Vital Renovations*

**W**ith growth in its teaching, clinical, and research missions, certain areas of the MU College of Veterinary Medicine have been straining at the seams. This spring, a proposal to address the space needs was announced.

The proposed renovation includes the areas of the veterinary medical campus most familiar to the public and alumni—the library, administrative area, and main entrance.

No part of the college is more in need of renovation than these facilities, said Dr. Joe Kornegay, dean of the college. The college's library retains its vintage 1970's look, and has run out of space to accommodate the educational technologies of the 21st Century. The administrative area, likewise, is a relic from the Johnson Administration and does not lend itself to effective workflow. The college's entrance was once the college's back door when the pre-Clydesdale Hall clinic entrance was on the north side of the building.

Over the past two years, the college has been studying potential renovations to the Veterinary Medicine Building to make its facilities more functional and also to expand classrooms. At the same time, ways have been explored to create more of a campus effect, tying the Veterinary Medicine Building together with Clydesdale Hall.

The proposed renovation has been made a priority by the college's *For All We Call Mizzou* Comprehensive Campaign Steering Committee. General plans and renderings of the renovation were presented last year to college faculty, staff, and students for review and comment.

A key aspect of this \$5 million-plus renovation involves shifting the main entrance of the Veterinary Medicine Building from its current south side location to the west side facing Campus Drive. The new entryway would open to a foyer separating the renovated library and administrative complex.

The current parking lot between the Veterinary Medicine Building and Clydesdale Hall would be replaced with a central courtyard and small building complex that would include the college's cafeteria and bookstore. This complex would be positioned at the midpoint of a covered walkway connecting the two buildings. The displaced parking lot would be relocated to the west side of the Veterinary Medicine Building.

This renovation would also involve the near doubling of the floor space in lecture rooms used by the second and third year classes and modest expansion of the histology teaching laboratory, allowing up to 90 students to be accommodated.

"Needless to say, substantial funding would be required for this project," said Dr. Kornegay. "And, at this point, it appears that most, if not all, of these funds would have to come from private giving. To this end, we are moving forward with discussions within our campaign steering committee."

It is hoped that alumni and friends of the college will fund all or part of Alumni Hall, as the project is called. Overseeing the funding effort is James E. Nave, DVM and chair of the college's *For All We Call Mizzou* campaign steering committee; Philip R. Brown, DVM; Thelbert E. Childers, DVM; Robert E. Hertzog, DVM; Roger C. Kuhn, DVM; Reuben E. Merideth, DVM; Kevin M. Schinze; Thomas M. Scott; and Jack L. Stephens, DVM.

Greg Jones, director of development

at the college, has already begun seeking gifts for the project. Major gifts, he said, can be pledged over a five-year span in tailored payment amounts to suit individual circumstances. The college can accept gifts of cash, stock, real property, life insurance proceeds, retirement plan assets, etc. Gifts can be made in an estate-planning instrument, such as a donor's will or trust.

College classes are being encouraged to pool their gifts. The three top classes from each of the following groups will be recognized on a plaque in the renovated area: The Digging Deep Award (recognizes total dollar amount raised), Stretched to the Limit Award (largest ratio of dollars given per class member), and The Gang's All Here Award (for recent graduating classes with the highest percentage of participation).

Gifts of at least \$500 will permit the individual donor to buy an engraved brick in the new walkway.

There are several levels of individual gift amounts with premiums accompanying each, Mr. Jones said. For example, gifts of \$1,000 or more qualify the donor for membership in the College's John W. Connaway Society and MU's Jefferson Club.

There are also possible naming opportunities at each level. For example, the donor can name the Courtyard between Clydesdale and the Veterinary Medicine Building or Library for \$1 million. Naming the Auditorium would require a donation of \$250,000. Individual classrooms or a new computer lab is set at \$100,000, and study carrels in the Library for \$10,000 each.

For more information about this project, please contact Mr. Jones at 573/884-2896 (or 888/850-2357 or e-mail, [jonesgre@missouri.edu](mailto:jonesgre@missouri.edu)). ■

# the Plans



## Fresh 21st Century Design

▲ Design components would be added to the 1960's-vintage Veterinary Medicine Building to create an architectural effect similar to Clydesdale Hall.



## New Colonnade

▲ Since Clydesdale Hall opened in 1993, clinical students have endured rain and snow to walk to the library and college deli. If built, a colonnade would link the two buildings, with the college bookstore and deli located midway between the buildings.



## New Entrance

▲ The proposed new entrance to the Veterinary Medicine Building would face west. The college library would be to the right of the new entrance, and the administrative offices on the left.



## New Technology

▲ Currently, the college's library features colors and carpeting that were popular when Neal Armstrong walked on the Moon. The new library will be dramatically updated, with new technologies better suited for the 21st Century.



▲ Dr. Richard Meadows is a 2005 Kemper Fellowship for Teaching Excellence award winner. He was one of 10 MU educators so honored this spring.

## Taking A Bite Out of Disease

*Gift to College Expands Service and Education for the Next Generation of Veterinary Dentists*

**It's more than just a toothache.**

Recent research has found that dogs and cats three years and older have an almost 85 percent chance of developing dental disease. Left untreated, such conditions can trigger other medical disorders leading to heart, kidney, and liver damage.

Until recently, veterinary dentistry has been only an informal subject at colleges of veterinary medicine. A greater appreciation of how dental difficulties can cause other ailments, a public that often wants the same level of care for their pets as they expect for themselves,

and the fact that companion animals are living longer and experiencing the difficulties of old age, has caused veterinary dentistry to be a growth industry of late.

To prepare the next generation of University of Missouri veterinarians for this expanding role, Dr. Richard Meadows, clinical associate professor of veterinary medicine and surgery, has been steadily bolstering the teaching hospital's clinical and educational dentistry efforts. Earlier this year, he secured a \$76,000 gift from Pfizer Animal Health to update the clinical dentistry examination room and research laboratory.

The new facility comes amid a growing demand for veterinary dentists and their services, Dr. Meadows says. Despite today's rapidly increasing patient load, there fewer than 80 US board-certified veterinarians who specialize in dentistry. There are probably fewer than 100 such specialists in the world.

### Preparing for an Emerging Specialty

Dr. Meadow's MU veterinary dentistry training facility will be the only one in Missouri and one of only approximately three permanent sites in the US. He plans to offer course work for both DVM and graduate students.

Dr. Michael Cavanaugh, director of the Pfizer Veterinary Specialty Team, says his company is currently funding similar efforts at two other colleges of veterinary medicine. The Pfizer grant purchases multiple sets of hand instruments used to clean and extract teeth, dental x-ray machines, and air-driven instruments used to grind, shape, and polish teeth.

While most of the equipment is the same as used in human dentistry, some pieces have been modified for animal use. However, Dr. Meadows points out, there are huge clinical differences between animal and human dentistry.

"Most human dentists would be hard pressed to handle veterinary patients without additional training," he notes. "There are significant anatomical and physiological differences between the species. For example, some veterinary patients, such as the shark, have multiple sets of teeth. Herbivorous animals often have constantly growing teeth. And, of course, consider the fanged teeth of the tiger."

The need for anesthesia is another difference. Most animals consider dental work a threat and react accordingly.

## Cancer Data Mining

### MU Scientists Use National Database to Uncover Cancer Links in Dogs

#### Cats: Brush After Every Mouse

However, the admonitions of good preventative care are the same with human and veterinary dentists. "As with your family dentist, your veterinary dentist stresses good oral hygiene as a preventive measure," Dr. Meadows relates. "This means seeking regular veterinary care to have the teeth cleaned and regular brushing. Special toothbrushes and flavored toothpastes are available for pets." A tartar control diet is available through your vet's clinic. It can be used as a maintenance diet or as a treat.

"Oral hygiene is one of the most overlooked areas of medical care for animals," says Dr. Meadows. "As we increase our knowledge of animal health, we realize that proper dental care does not just make your pet's breath smell better, it is mandatory for your pet's long term quality of life."

As with humans, caught in the early stages of dental disease, dental problems are often reversible. At some point, however, even cleaning cannot restore the mouth to normal. Loose or damaged teeth may need to be extracted. Antibiotics may need to be used if the patient suffers from gingivitis or pharyngitis. Promptly dealing with oral infections is important as any infection within the mouth will be picked up by the blood stream and carried to other parts of the body. Kidney infections frequently begin in the mouth.

"The educational dental suite at MU's College of Veterinary Medicine is a prime example of a program that we believe will support not only students and the University, but ultimately the profession and veterinary patients as a whole," Dr. Cavanaugh says. "I found Dr. Meadows' enthusiasm, passion, and vision to be very contagious." ■

**D**o significant clues to the treatment of cancers lie in the tens of thousands of clinical studies done on the subject? Maybe. But how do you realistically collect and analyze such mountains of information in an effective way?

In 1964 the National Cancer Institute of the National Institutes of Health started a database that would store information about clinical cases discharged from U.S. and Canadian veterinary medical teaching hospitals. Ten years later, a consortium of those hospitals was formed to continue operating the database when NCI no longer ran it.

That database now contains over 6.5 million clinical abstracts, and MU College of Veterinary Medicine researchers are using the information to answer questions about cancer that affects both dogs and humans.

"There are many cancers in dogs that behave similarly in humans," said Dr. Allen Hahn, professor emeritus of veterinary medicine and surgery and currently president of the Veterinary Medical DataBase. "The database can sort cases by diagnosis, demographics, discharge status, and many other features. This allows us to make a number of comparisons that we normally would not be able to do."

Dr. Hahn, along with Dr. Carolyn Henry, MU associate professor of veterinary oncology, and Dr. Charles Caldwell, Cancer Research Center Missouri Chair in Cancer Research and director of MU's Ellis Fischel Cancer Center, used the database to compare trends in canine lymphoma. The research-

ers found that female dogs that had not been spayed were the least likely to develop lymphoma. The researchers believe their findings can be applied to humans to determine who might be most at risk.

"Non-Hodgkin's lymphoma is approximately 50 percent more common among men than women and we found similar trends in canine lymphoma using the veterinary medical database," Dr. Henry said. "Our findings may imply that estrogen is a protective factor against lymphoma. We also want to explore other questions about factors such as lifestyle, hormone status and obesity and how each of these might relate to cancer."

While a similar database does exist for human patients, scientists can ask more specific questions using the information contained in the veterinary database. This is because animal patients represented in the veterinary database generally have much more controlled lifestyles in terms of at-risk behaviors and dietary choices than do their human counterparts.

"We can't always answer specific medical questions as they relate to humans," Dr. Caldwell said. "However, we are able to ask the veterinary database questions of the animal data that we couldn't ask of any human database system. For instance, we were interested in potential hormonal effects regarding lymphomas, so we examined the difference in dogs that had been spayed or neutered compared to intact animals. There are a lot of other questions that we want to propose following our recent study." ■

# An Enduring Design

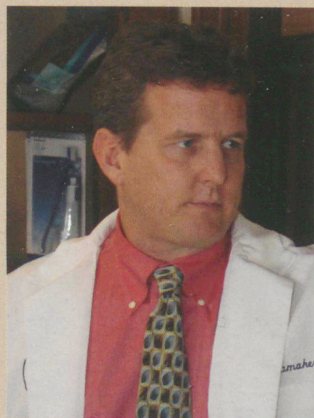
**N**ot many veterinary clinics are considered for inclusion in the National Register of Historic Places. Most clinics are pretty utilitarian and follow a time-accepted formula for purpose, efficiency, and workflow. Clinics rarely vary in their basic design formula because they perform their clinical and business missions so well.

The Springfield (Mo.) Veterinary Hospital qualifies as a possible historic site for two reasons. First, it is probably the oldest continuously-operated clinic in the state. Second, it was one of the very first, if not the first, structures in Missouri designed specifically to be a veterinary clinic, making it a prototype for all that came after it.

Whether the clinic, owned by **Tedd Hamaker, MU DVM '89**, will be the newest tourist attraction in southwestern Missouri has yet to be decided. It does, nonetheless, provide an interesting glimpse into the history of veterinary medicine, as the profession changed from its equine-oriented roots.

## From Horses to Cats and Dogs

The veterinary clinic as we know it today was a rarity in the early Twentieth Century. Most veterinarians specialized in making farm calls to horses, still the significant mode of transport and farm work. Companion animals were a sideline, at best.



► Dr. Tedd Hamaker is the third owner of the Springfield Veterinary Hospital.

That changed when automobiles and tractors began to supplant horses. As equine work decreased, veterinarians had to modify their business toward small animal care, scheduling multiple clients who would bring their dogs and cats to the veterinarian each day. Grouping the clients was an economic necessity. It took a lot of spays and neuters at \$2 each to equal the income of a once thriving equine practice.

Veterinarians used whatever space they had—rooms, garages, barns, or storefronts. Generally, these places were originally intended for large animal work and were not efficient for small animal treatment. Such rustic surroundings did little to impress an increasingly urbanized clientele.

A pioneer in the popularization of purpose-built companion animal veterinary clinics, modeled after human hospitals, was Dr. Joseph Flynn in Kansas City. He

operated a mixed animal practice in a barn after his 1910 graduation from the Kansas City Veterinary College. As his companion animal practice grew, Dr. Flynn realized that he needed a more sophisticated structure to better isolate diseases, handle multiple clients, and provide sterile care. In 1915, he modified a brick building at 3026 Main in Kansas City into the prototype of today's veterinary clinic.

Dr. Flynn became a spokesman for this new concept and became a popular speaker on the efficient design of pet hospitals and how companion animal medicine could provide a good living.

In the audience at one such presentation was Dr. Emert Carter, KC Veterinary College Class of 1904 and a World War I Army Veterinary Corps veteran. Dr. Carter had returned to Missouri as a partner in a Springfield practice. When his colleague died, he became the owner of a practice at 511 Convention St., renaming it Carter's Animal Hospital. Here he built a practice largely specializing in the treatment of dogs and cats.

## Designing a New Animal Hospital

Dr. Carter did not forget Dr. Flynn's lecture. In 1929, on a lot at 1009 St. Louis St., he designed his version of Dr. Flynn's modern animal hospital. It was among the first, if not the first, Missouri clinic built from the ground up for the purpose—and maybe one of the first in the

nation. This was no informal barn. Here, Dr. Flynn's clients were greeted by a receptionist in a separate room, a new concept in 1929. Clients were then led to a specialized examination room, another innovation. Dr. Carter's private office was nearby, for consultation. Away from the public's gaze were an instrument and drug storage room, operating room, general ward, isolation ward, laboratory, pharmacy, and exercise wards.

The layout allowed one veterinarian to see several patients in an efficient, almost assembly line way.

This new clinic was self-contained as well as efficient. In the pharmacy, Dr. Carter made his own medicines while still in hearing distance of his client. In the laboratory, he performed urine and blood analysis. He probably had one of the first x-ray machines dedicated to veterinary work in Missouri.

As a purpose-built structure, the building featured extensive tile floors and walls for better sanitation and to convey the look of a hospital. A garage had a door that opened directly to the clinic, allowing Dr. Carter to rush sick patients in from his personal car/ambulance. As the clinic fronted the famous Route 66, he could buzz quickly to an injured animal and back again.

A kitchen was located near the wards. Hospital staff members would prepare meals for clients and patients as the quality and availability of nearby restaurant food was undependable. A second floor was used as the living quarters of the veterinar-



► Dr. Flynn's KC clinic.



## One of the Longest Continuously-Operated Missouri Clinics Remains A Prototype for the Modern Animal Hospital

ian and his family.

Dr. Carter operated the small animal clinic, and a related large animal practice, for 15 years before the stress of being on call 24/7 caused him to sell the business and get a job with the US Department of Agriculture. He died in 1971 at the age of 84.

### The Next Generations

A 1941 DVM graduate from Kansas State University and a '44 grad of Michigan State purchased the clinic. They renamed the facility the Springfield Veterinary Hospital. The pair amicably dissolved their practice in 1952, leaving K-Stater Dr. Charles Moore in charge. He would continue caring for pets until his death in 1990.

Dr. Hamaker, purchased the property in 1991, and has been running it since.

He has postponed pursuing Historic Registry status for the building. A general renovation of downtown Springfield is occurring, particularly a new \$30 million Springfield AA Cardinals stadium nearby. The granting of historic status on the clinic would place restrictions on any changes. Dr. Hamaker doesn't want to limit his ability to expand or sell the property until the downtown's renovations are finalized.

Although Dr. Hamaker has remodeled the upstairs apartment where he lives, the brick clinic has changed little since its opening day. Three

original windows in the front of the structure were replaced in the 1950's by one large picture window. A window in the front dormer was added after that, and the upstairs apartment had been remodeled.

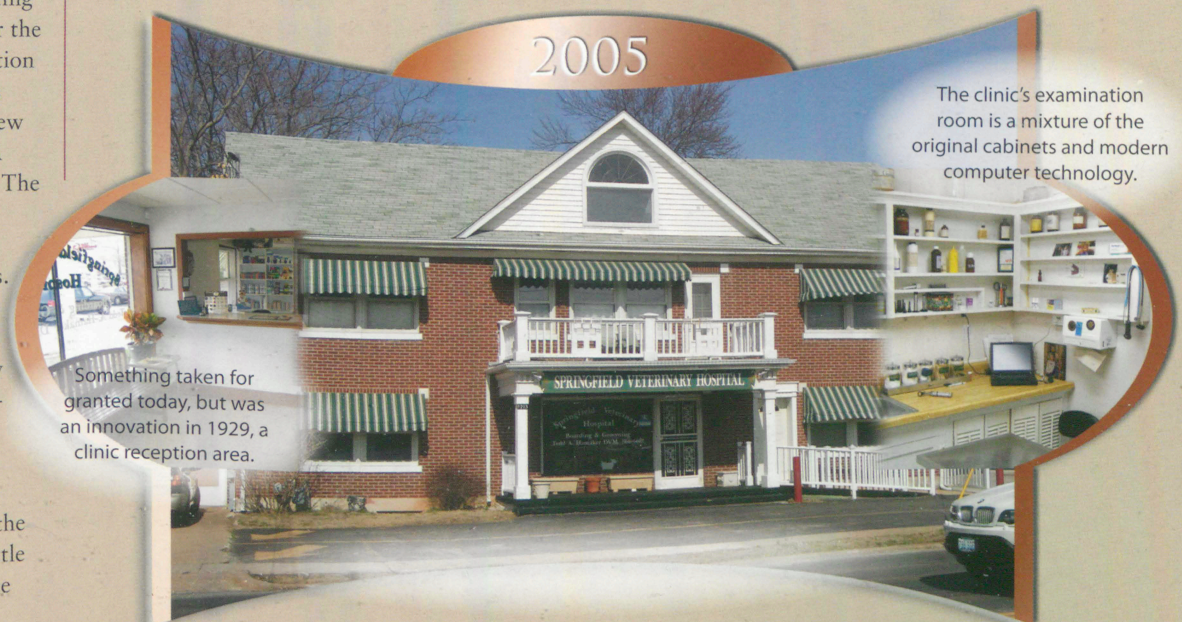
Another significant change involves the backyard incinerator that has gone to seed. In its

earliest days, when the building was on the outskirts of town, the incinerator was used to dispose of deceased animals. As Springfield grew around the clinic, that practice had to be abandoned. The widening of Route 66 took much of the building's front yard and landscaping.

Much of the original interior tiled walls and floors are still in operation, however. A few interior rooms have been repurposed, and the private office was moved to a remodeled garage. Overall, the building is much the same as in 1929—a tribute to the vision of Dr. Flynn and Dr. Carter. ■



A postcard made in 1931 showed that Springfield boasted one of the most modern veterinary clinics in the country.



The clinic's examination room is a mixture of the original cabinets and modern computer technology.

Something taken for granted today, but was an innovation in 1929, a clinic reception area.

# Helping Man's Best Friend in Times of Need

*VMAT Teams Assist Animals When Disaster Strikes*

**M**ost people are familiar with disaster relief groups that provide aid to humans who have just weathered a natural disaster, but few think about the pets, livestock, and wildlife that also need help. One University of Missouri College of Veterinary Medicine professor is part of a team designed to address the needs of animals after an emergency.

The effort is called VMAT for Veterinary Medical Assistance Team, and is organized by the American Veterinary Medical Association. VMAT's work with other federal disaster teams in areas affected by natural disasters, terrorist attacks, and other emergencies.

VMAT's are highly trained teams composed of veterinarians, veterinary technicians, scientists, epidemiologists, toxicologists, and other medical and lay support personnel. They provide nationwide coverage during times of disaster and can be deployed to any state or US territory. VMAT team members triage and stabilize patients at a disaster site and provide austere veterinary medical care. These teams are mobile units that can deploy within 24–48 hours.

The teams are activated by the federal government under the Department of Homeland Security. In addition to assisting local veterinary communities, VMAT members are trained to assist with food and water safety as well as zoonotic diseases. VMAT's also have been sent to care for Secret Service dogs and police horses at events such as the G-8 Summit and the Republican



"After the Sept. 11 attacks, I felt helpless and that led me to investigate what I could do and how I could help, so I joined a

Veterinary Medical Assistance Team," said **Dr. Marie Kerl**, MU clinical associate professor of small animal medicine. "I had learned about VMAT's and the assistance they gave to search and rescue animals working in the rubble of the World Trade Center towers. I was looking for an opportunity to volunteer in an area where I could be effective."

National Convention.

The members carry a three-day supply of food, water, personal living necessities, and medical supplies and equipment. Each team is capable of establishing a veterinary field hospital and can provide any other veterinary services needed to support a complete disaster relief effort.

During disasters, Red Cross volunteers refer all animal medical questions and needs to veterinarians affiliated with the national, state, county, or local veterinary medical associations.

VMAT's supplement the relief efforts already underway by local veterinarians and emergency responders. The goal is a cooperative animal relief effort during times of disaster among

VMAT, state and local officials, the state veterinarian, the local veterinary community, state and local veterinary medical associations, emergency management personnel, humane groups, the American Red Cross, and search and rescue groups. The desired result is for all of the entities involved in disaster response to work together cooperatively and efficiently for human and animal well-being.

Those selected to join a VMAT are preprocessed for federal employment and issued identification cards. These persons can then be called to federal service for up to 14 days as "special needs" Homeland Security employees. If activated, the personnel are paid a salary, covered by federal worker's compensation, protected under the Federal Tort Claims Act against personal liability, and are exempt from licensure, certification, or registration requirements.

Dr. Kerl is part of VMAT-3 based in North Carolina. Team members come from across the country, including Florida, New York, and Colorado. Part of Dr. Kerl's team was deployed to Florida after Hurricane Charley in August 2004. Although Dr. Kerl did not go, she was sent to her team's base in North Carolina to prepare for deployment after Hurricane Frances. Once the hurricane hit, the damage did not warrant the use of the disaster team.

"Dr. Kerl is part of the tremendous variety of talent on our team," said Dr. Jim Hamilton, VMAT-3 team commander. "Her energy and determination help elevate the team and get our difficult job done. We need more people like Dr. Kerl on our team." ■



◀ MAT-3 team members work on an injured horse hurt in a hurricane.

▼ VMAT-3 team members help a pair of dogs. Personnel work from facilities that can be erected quickly, such as a tent.



Photos by Darren Breen.



◀ **Dr. Giuliano** (left) prepares to deliver the laser component of the treatment. The cancer has absorbed the PDT drug and will react to the laser light. ▲ The eyelid (above) suffers a superficial wound from the treatment, but the problem will soon heal with the eyelid being restored to normal function.

**I**t was a procedure that Dr. Elizabeth Giuliano hated to perform. Veterinary ophthalmologists are trained to save eyesight, not remove healthy eyes.

But surgically removing the eye was the only effective treatment for tumors that extensively involve a horse's eyelid. Without this protective covering, the eye itself can not survive.

Dr. Giuliano thought that there had to be a better option. Beginning in 2003, the University of Missouri-Columbia veterinarian and ophthalmology section chief began researching methods to better treat eyelid tumors. She found something promising in human medicine. With help from her MU colleagues, she developed a new approach.

The first trial of the new method would involve a 17-year-old Tennessee Walker horse named Dixie. She had received numerous treatments for her eyelid cancer, all unsuccessful. She was a good candidate for the relatively short and painless procedure.

#### **A New Approach to a Common Problem**

Dixie had squamous cell carcinoma, the most common cancer of the equine

## Finding An Alternative To A Hated Procedure

*Can Photodynamic Therapy Be Modified to Save the Eyes of Horses?*

eye and second most common cancer in horses, overall. The tumor is classified as periocular when it affects the eye and surrounding eye tissue including the eyelid. Due to the area, it is extremely difficult to perform any type of skin graft on a horse's face. As a result, if a horse were to lose an eyelid, its eye also must be removed in most cases.

Removal of a horse's eye is a grave situation as the eyes are positioned far to the sides of the head. Eye loss causes a blind spot in that half of the body. One-eyed horses can be very dangerous to ride. Without treatment, however, the condition may be fatal.

Dr. Giuliano, an assistant professor of veterinary medicine and surgery, found that a human cancer therapy called photodynamic therapy could kill the tumors. She began research to see if the procedure could be useful in horses.

To use photodynamic therapy, PDT, surgeons first inject a drug into the body of a patient and wait 24 to 48 hours for the drug to circulate in the body and attach and accumulate in the tumor. Depending on the drug used, the surgeon matches a specific laser that will activate the drug. When the drug is activated, it creates oxygen free radicals that destroy the tumor.

Dr. Giuliano's research indicated the human technique of injecting the entire body with PDT chemicals wouldn't work on a horse as it would require an excessive amount of drug to be effective on a 1,000-lb. animal.

Injecting the entire body would also photosynthesize all of the horse's skin, confining the animal to a shady stall

for weeks to months—something that predisposes the animal to respiratory and gastrointestinal ailments.

The two problems looked like a showstopper. While brainstorming with colleague Dr. Dudley McCaw, who performs PDT therapy on small animals, Dr. Giuliano came up with a novel approach. She would inject the drug directly into the tumor bed just before treating the animal with the laser light. Dixie was the first patient.

### Waiting for Results

The MU ophthalmology team watched Dixie with interest. The eyelid tumor stopped growing, then began to shrink. Within a few weeks, the affected eyelid had returned to normal and was healthy.

"While we were the first ones to use this therapy in this way in horses, we do still have many questions to answer," Dr. Giuliano said. "The method appears to be extremely effective and very safe. It also appears to require fewer stays in the hospital than other treatments. We do know that the horse may experience some sensitivity to light for a short period of time, but local injection minimizes this risk and long-term recovery appears to be excellent."

To date, Dr. Giuliano has treated half a dozen horses and has seen similar improvements in all of them. All the horses are white or light in skin color, which is typical for this type of cancer, as lightly pigmented horses are more at risk, Dr. Giuliano said. Currently, she is looking for additional horses with this specific type of eye cancer to study the



### PROFILE

**Dr. Giuliano** grew up abroad, living four years in Belgium and seven years in Africa. She developed an interest in horses and became proficient at the sport of stadium jumping.

After an undergraduate degree at Cornell University, she earned her DVM degree from the University of Wisconsin-Madison, received her internship training at the Animal Medical Center, New York City, and practiced in Manhattan, just south of the UN.

She returned to Wisconsin for post-graduate fellowship in ocular pathology, performing her residency at the MU College of Veterinary Medicine where she received a master's degree, as well. Dr. Giuliano joined the MU faculty in 2002.

Dr. Giuliano serves on the residency committee of the American College of Veterinary Ophthalmologists, and is an editor of its journal. She lectures nationally and internationally and was recently invited as a visiting professor in Helsinki, Finland.

treatment further.

Dr. Giuliano recently presented her preliminary results to the American College of Veterinary Ophthalmologists. The Morris Animal Foundation is funding the work.

As for Dixie, she has been cancer free for almost three years and her prognosis for long-term recovery is excellent. She has also recovered the use of her eye. Dr. Giuliano won't have to perform the hated procedure again. ■

### OPHTHALMOLOGY: AN MU AREA OF EXCELLENCE

**Ophthalmology** is one of the MU College of Veterinary Medicine's Areas of Excellence. It is also considered one of the nation's finest programs, with four board-

certified ophthalmologists and two residents. The clinical team sees between 40 and 45 cases per week, performing up to six surgeries each day. Typical

problems include corneal, eyelid, and retinal diseases, as well as cataracts.



# Journey to Ireland

*A MU Veterinary Technician Gives Irish Professors Pointers on Building a Modern Veterinary ICU...And Changing a Culture*



It's not unusual for a noted professor to be invited by another college to lecture on the latest trends and discoveries. It is somewhat unusual for a college staff member to be so invited.

**Mary Molly Flanders**, supervisor of the ICU at the MU College of Veterinary Medicine, traveled last year to be a guest lecturer at University College Dublin School of Veterinary Medicine on the topic of modern emergency and critical care in small animal medicine.

The presentation was an important one for educators on the Emerald Isle where veterinary emergency care is far behind that of the US. It is a problem not caused by lack of funds or knowledge, but a philosophy of the profession itself, dating back centuries.

Emergency care in Ireland still resembles that popularized by James Harriet in the *All Creatures Great and Small*

books. While this philosophy of care is long on compassion, individual attention, and sacrifice by the veterinarian, it is short on efficiency, technology, and overall quality of care by American standards. While Harriet-styled veterinarians are dedicated and remain near their patients for days, they also suffer high rates of compassionate fatigue, divorce, and family stress.

While personally satisfying for idealistic caregivers, this ancient high-touch over high-tech culture is also at odds with realities of the 21st Century. Ireland is undergoing an economic boom. The growing population is becoming more wealthy, urbanized, and willing to spend disposable income on their pets. Irish veterinary clinics are unprepared for the rising number of cases as veterinarians cling to lavishing large amounts of time on each animal without help from

additional nursing staff, other veterinarians, and high-tech, 24-hour monitoring systems.

To evaluate the latest technical trends in emergency medicine, and improve lives of the practitioners who provide it, Irish veterinary medical educators turned to MU's Veterinary Medical Teaching Hospital in far away Missouri with its reputation for delivering high levels of compassionate care with all of the benefits of modern technology and efficient administration.

## Back to the Home Country

Ms. Flanders' trip was almost a reverse migration of sorts. She left her modern MU ICU, patterned after American human ICUs, to travel back to the land of her ancestors and emergency veterinary medicine the way it was practiced



◀ **Mary Flanders** (far left) has long experience in veterinary nursing care. She is a 1973 graduate of the then new veterinary technician program at the Central Carolina Technical Institute. Some of her private practice work was done on the Caribbean island of St. Thomas. Currently, she is licensed to practice in four states. In 1998, she was the first person in Missouri to be board certified in veterinary emergency and critical care in the technological field. In 2005, she was the winner of the University of Missouri Technical and Paraprofessional Staff Recognition Award.

◀ One of the benefits of delivering a lecture in a far-off land is the opportunity to sightsee. Ms. Flanders and her cousin pose by a traditional Irish house with a thatched roof.

decades ago.

In MU's busy ICU filled with computers, high-tech equipment, and students and faculty tending patients, Ms. Flanders spoke about the Irish counterpart.

"The building that houses the Irish veterinary school and teaching hospital is a modern structure located at the forefront of a beautiful campus," she said. "The facility is extremely clean with runs and wards comparable to those here at Clydesdale Hall. Their equine area is wonderful and the anesthesia department equal to anything in the US."

It all sits in the beautiful Irish countryside. "When they tell you that there are 57 shades of green in the landscape, believe it, it is true," she continued.

The Irish ICU, on the other hand, looks like its American counterpart in the 1960's. "They have a room set aside

for emergency and critical cases," Ms Flanders noted, "but it is not staffed 24 hours a day 7 days a week. It is designed to deliver stabilizing care and is not equipped with wireless monitoring, oxygen cages, and other critical care features. If overnight observation is needed, it is expected that the veterinarian on the case will be present and may sleep on a gurney in the room."

Ms. Flanders' presentation was designed to show the Irish faculty the benefits of organizing their ICU along American lines. Most of the presentation was about technology, but a significant part dealt with the need for teamwork and the coordination of efforts between technicians and veterinarians. She also said that it is okay for the gallant individual veterinarian to delegate authority and duties to the professional staff and other veterinarians.

Such a change not only frees the veterinarian from a professional lifetime of responsibility for heroic care, but will actually improve patient outcomes. One dedicated, but exhausted, veterinarian does not deliver better care than a veterinarian and a relief colleague.

Ms. Flanders emphasized the need for the Irish to increase such efficiency as soon as possible, if for no other reason that the world's veterinary community will question the accreditation of schools with such old style philosophies. Additionally, the expected increase in patient load will probably come faster than the college can produce graduates. The MU ICU, that has been on the forefront of this for a long time, has seen a three-fold increase in its patient load in the last decade. Such a booming caseload in Dublin could overwhelm veterinarians clinging to the traditional methods.

### **Another Change Coming, Specialty Medicine**

Another topic was the increasing role that the modern ICU plays in specialty veterinary medicine. Veterinary cardiology, oncology, ophthalmology, and other specialties are just emerging in Ireland. The country's ICU's will soon need to be ready to deal with these complicated and specialized cases.

In the last decade, Ms. Flanders has seen how the MU ICU has had to adapt to the specialized needs of patients undergoing advanced procedures. Ireland could see such a transition even more quickly.

Ms. Flanders played to a packed house. She reports that, predictably, the younger faculty and technical staff were eager to hear about how things are done among the rolling hills of Missouri. Some of the older professors watched with furrowed brows and skepticism, but listened with interest.

Despite the resistance of some to the concept, her talk was well received. In fact, they discussed a job offer where Ms. Flanders would help them build a new Irish ICU, just like the one she runs back in Missouri. ■

# Something New to Learn In Public Health Class: Threats From Terrorism

*Veterinarians May Be The First To See An Attack On US Agriculture*

It is widely thought that American agriculture is on the terrorists' hit list. An attack against US food supplies could have a devastating effect on the national economy.

Veterinarians, who monitor the food supply from feedlot to grocery, may be the first to see evidence of such a strike. To help assure that they have the best understanding of what to look for, and what to do, the public health course at the MU College of Veterinary Medicine recently has been modified and upgraded.

## Teaching Public Health, and Threats to It

The college's public health course is required for all DVM students and offered to graduate students. It will also be a major component to the college's contribution to a planned Masters of Public Health program.

The course is broken into three parts: food safety, zoonotic diseases, and environmental health. Agro-terrorism training touches each of these three areas.

"If you think about it, veterinarians are the most likely people to first see evidence of an attack," Public Health Clinical Instructor Dr. Ron Tessman said. "They need solid information to prepare them to isolate threats, protect themselves and the public, collect evidence, and alert regulatory agencies."

Based on current data, anthrax is the most likely agro-terrorism threat, followed by foot and mouth disease, botulism, West Nile Virus, plague, Q fever, and tularemia.

A foot and mouth case would raise suspicion the soonest, Dr. Tessman related, because the disease was eradicated from the US in the 1930s. Anthrax, botulism, and West Nile would be harder to initially identify as these problems can occur naturally, although rarely, in the US. Dr. Tessman said that veterinarians need to be on guard for anything suspi-

## What To Look For, and What To Do—Now Part of Curriculum



▲ Dr. Tessman teaching a class in the MU Veterinary Medical Teaching Hospital.

cious about an outbreak, such as a rapid and dramatic onset, or multiple outbreaks in several isolated areas.

In his class, Dr. Tessman stresses the importance of veterinarians keeping apprised of possible threats through information provided by the USDA, AVMA, World Health Organization, and the Food Safety Inspection Service, as well as local, state, and federal law enforcement agencies.

## On Guard Against the Most Likely Threats

Given the characteristics of farms in Missouri and much of the Midwest, Dr. Tessman said he thinks that the most likely attack would come with the introduction of dangerous organisms to an isolated and unattended small farm. Terrorists would

have ample time to perform an effective strike out of sight, and then disappear. The discovery of a sick animal will trigger a call to the local veterinarian.

"We cover a lot of organisms that can be used by a terrorist," Dr. Tessman said. "We give students an idea of what is likely to be employed, the clinical signs to look for, and what isolation and reporting protocol to use."

As the second largest cow-calf state with many small farms, Missouri would be a tempting target for a terrorist, Dr. Tessman said. Missouri animals are often sent to a big out-of-state feedlot, where they could infect a much larger number of animals.

Modern high-density, vertically integrated industries, livestock sale and transportation practices, and centralized feed supply and distribution systems only add to the potential for transmission. The foot-and-mouth disease outbreak that occurred in the swine population of Taiwan in 1997 revealed the vulnerability of such an industry to contagious disease transmission. Island-wide, more than 6,150 outbreaks caused almost total depopulation of swine and resulted in an overall economic loss that included 50,000 jobs and half of a percent of that nation's gross domestic product.

America's agriculture sector is an integral part of the economy, accounting for 17 percent of employment and 13 percent of gross domestic product. It also contributes \$50 to \$60 billion annually in exports. Major metropolitan areas have food reserves sufficient for no more than five days. The food supply is also dependent on uninterrupted transportation and energy.

Veterinarians also need to be alert to the threat of foreign diseases, Dr. Tessman said. Because American feedlots are free from many dangerous diseases, US herds and flocks are highly susceptible to new diseases. ■



# Veterinary Battlefield Decoration

*Alumni Awarded Bronze Star for Service in Iraq*



▲ One of Maj. Bormanis's duties was to provide veterinary medical care to Uday Hussain's lions. It has been widely reported that the Iraqi dictator's son fed dissidents to this lion.

**M**aj. Scott Bormanis, MU DVM '94, was awarded the Bronze Star award for his Army service in Baghdad.

"Maj. Bormanis' contributions to Operation Iraqi Freedom 2 have been substantial," the citation reads. "As the Unit Maintenance and Movement Officer, he was the leading force in reconstituting and preparing all of the detachment's rolling stock, equipment, and supplies from its previous deployment to ensure a high state of readiness for the detachment's year-long deployment. His extensive efforts ensured all rolling stock and equipment passed inspections on the first try and were shipped on time with only 96 hours notice."

Just prior to deployment, Maj. Bormanis assumed command of the 248th Veterinary Medical Detachment when the commander was unable to deploy. He successfully led the deployment of 37 personnel and 87 tons of equipment from Ft. Bragg, North Carolina to ten different locations within Iraq without injury, loss, or damage. Maj. Bormanis also led a three-day convoy from a Kuwait staging area to forward areas in Iraq through hostile territory and without armed escort. Upon arrival, he strategically placed veterinary teams in key locations to include support to the 1st Marine Expeditionary Force.

The citation also noted how Maj. Bormanis orchestrated the establishment of high-quality veterinary care to

more than 230 military working dogs throughout the theater, of which 180 were previously without support. "Maj. Bormanis superbly accomplished these feats with limited resources and assets that doctrinally would support only 60 working dogs. Additionally, Maj. Bormanis played an integral role in the planning and execution of renovations and furnishing of the Central Veterinary Treatment Facility, which established the first Level-I, -II, and -III care fixed facility in theater, thereby dramatically increasing theater veterinary capabilities and greatly reducing the need to evacuate working dogs out of theater."

As the assistant theater veterinarian, Maj. Bormanis developed and implemented plans that streamlined veterinary operations and greatly reduced veterinary public health threats to over 140,000 US and Coalition personnel.

The citation also detailed how Maj. Bormanis renovated the theater's medevac transport procedures, and designed and constructed in-theater veterinary treatment facilities. He also developed a customized Rabies Submission plan. That plan, the citation noted, reduced the number of soldiers required to undergo rabies prophylactic immunization.

In addition, Maj. Bormanis also played an integral role in reconstruction projects for the Baghdad University College of Veterinary Medicine, the Baghdad Zoo, and the Baghdad Police Academy Working Dog Kennels by coordinating with US veterinary schools, and other agencies in the United States to secure funding for construction projects and acquisition of thousands of dollars of critical equipment, supplies, and educational material. Furthermore, he worked with Baghdad CVM faculty to completely redesign the college's 25-year-old veterinary curriculum which greatly enhanced and modernized the college's future education of new veterinarians. ■



## Alumni at Large

### George Wadley Receives NBVME 2004 Award

The National Board of Veterinary Medical Examiners (NBVME) has presented its sixth annual NBVME Award to George Wadley, MU DVM '72. Dr. Wadley lives in Searcy, Ark.

Dr. Wadley was cited for his leadership to the National Board Examination Committee (NBEC) during a time of that organization's transition. He drafted revised operating guidelines that formed the basis of NBEC Bylaws when the board incorporated as an independent organization in 1994. He was also influential in the adoption in 1992 of a common pass point for the National Board Examination and Clinical Competency Test in all licensing jurisdictions.

Upon graduation from the MU College of Veterinary Medicine, Dr. Wadley entered private practice in Searcy, where he worked until 1998. After a brief retirement, he accepted a position as State Veterinarian for the Arkansas Racing Commission in 2002, a position that he still holds.

Dr. Wadley also served as a member of the Arkansas Veterinary Medical Examining Board from 1979–1994. He served as president of the American Association of Veterinary State Boards from 1987 until 1988, and was recognized as the Arkansas Veterinarian of the Year in 1986.

### Veterinary Triathletes Fare Well in Ultramax

Dwayne Miller, MU DVM '86, and Jennifer Reisdorf, MU DVM '00,

both of Columbia, Mo., placed in the Ultramax Triathlon held in September at Smithville Lake just north of Kansas City.

The Ultramax is an Ironman distance race—a 2.4-mile swim, 112-mile bike ride, and 26.2-mile run.

Dr. Reisdorf placed third among women with a time of 12 hours, 17 minutes, and 16 seconds. Dr. Miller placed second overall with a time of 10:06:26. He finished two minutes behind first place.

The Ultramax Triathlon is part of a fundraising series hosted by the Missouri Lions Eye Research Foundation, a nonprofit organization dedicated to sight preservation and restoration.

### Dennis Schmitt Recognized by MU Alumni Association

Dennis Schmitt, MU DVM '78, was one of 19 University of Missouri alumni honored by the MU Alumni Association during its 37th annual Faculty-Alumni Awards Ceremony this autumn.

Dr. Schmitt is a veterinary reproductive specialist in domestic and exotic animals and professor of animal science at Southwest Missouri State University, Springfield, Mo. His research includes artificial insemination in elephants, and ultrasound evaluation of elephants, cheetah, and maned wolf. He has also researched artificial insemination and ultrasound in the rhinoceros, an endangered species.

Dr. Schmitt is considered the leading North American expert in elephant reproductive physiology

and veterinary management. His work was critical to producing the first elephant by artificial insemination in 1999.

### Shane Brookshire Appointed Missouri State Veterinarian

The Missouri Department of Agriculture (MDA) has appointed Dr. Shane Brookshire, MU DVM '97, as the state veterinarian, effective Feb. 28, 2005.

"We have a great opportunity to blend the talents of two uniquely, gifted veterinarians, Dr. Taylor Woods and Dr. Shane Brookshire," said MDA Director Fred Ferrell. "Both individuals working together will make a powerful team for Missouri agriculture."

Dr. Brookshire will serve as the director of MDA's Animal Health Division and chief animal health official for the state. His new role will focus on the administrative functions and statutory responsibilities while Dr. Woods will maintain the department's vision on national issues of animal identification and agroterrorism.

"We feel that this is the best of both worlds," said Dr. Woods, MU DVM '59. "Being able to combine historical knowledge with a youthful counterpart will provide an advantage to our state."

### Veteran T.J. Vogelweid is Honored by Daughters of the American Revolution

The Armstrong Chapter of the National Society of the Daughters of

the American Revolution recognized Dr. T.J. Vogelweid, a Moberly, Mo. veterinarian, as their first Patriot of the Month for the month of October 2004.

Dr. Vogelweid is a World War II veteran and served in the Company D Regiment, 19th Tank Arm Division of the US Army. He was on active duty from Jan. 24, 1941 until Sept. 1, 1945 while serving in England, France, Belgium, Germany, and Luxemburg, including the famous Battle of the Bulge. Dr. Vogelweid was a member of a horse cavalry and rode 900 miles on one maneuver.

He earned a Purple Heart and a Presidential Unit Citation.

Dr. Vogelweid earned his degree in veterinary medicine from the University of Missouri at Columbia in 1951.

### "Doc" Wayne Smith Selected 2004 Northeast Missouri Livestock Person

Dr. Wayne "Doc" Smith, long-time cattle enthusiast and popular Missouri Angus Fieldman, was inducted into the Northeast Missouri Livestock Hall of Fame December 2004.

Dr. Smith earned his DVM degree at the University of Missouri in 1956. He also holds a Masters Degree in Education and graduated as an auctioneer after completing the 1980 Missouri Auction School.

Dr. Smith has received numerous awards and recognitions. The Missouri State Fair Beef Show was dedicated to him in 1997. Also,



▲ Dr. White receives his award from Dr. Ron Cott, MU CVM associate dean.

### Kenneth White Recipient of Veterinarian of the Year Award

Dr. Kenneth White, MU DVM '70 and owner of the Perry County (Mo.) Veterinary Hospital, was honored as the 2005 Veterinarian of the Year at the Missouri Veterinary Medical Association's 113th Annual Convention.

Dr. White has practiced in Perry County since 1970. He is a past-president and board chair of the Missouri Veterinary Medical Association. His professional memberships include the Southeast Missouri District Veterinary Association, the American Association of Bovine Practitioners, the American Association of Swine Practitioners, the Society of Theriogenology, the Missouri Academy of Veterinary

Practice, the University of Missouri Alumni Association, and the Missouri Cattlemen's Association.

Dr. White and his wife, Ann, have two sons and four grandchildren. Their son Brad, MU DVM '97, is on the faculty at Mississippi State University College of Veterinary Medicine. Another son Brian, and his wife Jennifer live in Biloxi, Mississippi where he is a physician in the Air Force.

The MVMA also presented two President's Awards. This annual award is given to individuals who were instrumental to the MVMA's efforts to advance the veterinary profession for the betterment of animal health in the

state. Dr. M.A. Kammerlohr, MU DVM '73 and MVMA Executive Board Chair, presented this year's awards to his wife Dana, Cassville, Mo. and Dr. Clark Fobian, MU DVM '77, and his wife Rita, Sedalia, Mo.

Dr. William Wolff, Columbia, Mo., received the Honorary Membership Award of the Missouri Academy of Veterinary Practice. Born and raised in Colorado, Dr. Wolff received his DVM and masters degrees from Colorado State University. Honorary members are individuals who have rendered distinguished or meritorious service to the veterinary profession.

## CLASS NOTES

## '50's

**Ireatess Keeney, MU DVM '54**, recently celebrated his 50th anniversary in practice with a party attended by about 450 family and friends. Dr. Keeney's practice is in Houston, Mo.

**John Holman, Jr., MU DVM '56**, recently celebrated his 50th wedding anniversary with his wife Marilyn. The family lives in Potomac, Maryland.

**Paul Nicoletti, MU DVM '56**, received the Lifetime Achievement Award from the Florida Veterinary Medical Association. The award is presented to those members who have given a "lifetime of dedicated service to veterinary medicine."

## '60's

**Leon Scrutchfield, MU DVM '65**, received the Distinguished Educator Award from the American Association of Equine Practitioners. A professor at Texas A&M for more than 28 years, he is credited with redefining the practice of equine dentistry.

**Larry Moore, MU DVM '66**, was named the Missouri Cattle Association's Cattleman of the Year. The award recognizes a person who has most contributed to the cattle industry. He lives in St. Clair County, Mo.

**Jerry Rainey, MU DVM '67**, is a partner in the Jimmy Buffet restaurant in Cameron, Mo. The establishment opened in September. Dr. Rainey also operates the Cameron Veterinary Clinic.

## '70's

**William Jones, MU DVM '70**, has moved his Pacific Animal Hospital into new quarters in Washington, Mo. The 10,000-sq. ft. facility also offers grooming and boarding. **Dawn Gau, MU DVM '01**, and **Brian Hezel, MU DVM '80**, are associates.

**Dennis Weaver, MU DVM '70**, has been admitted to the Missouri Academy of Veterinary Practice. He practices in Lee's Summit, Mo.

**Sam Adams, MU DVM '74**, was honored by the Fort Worth Business Press as one of its HealthCare Heroes. The publication annually recognizes the above-and-beyond contributions to the local healing arts. Dr. Adams is the first veterinarian to be so honored, and owns University Animal Hospital in Fort Worth, where he has practiced for 29 years.

**Carole Maltby, MU DVM '74**, was awarded the Excellence in Teaching

Award at the Missouri Governor's Conference on Higher Education. Dr. Maltby teaches veterinary technology at the Maple Woods Community College, Kansas City.

**Don McCormick, MU DVM '76**, has published a book entitled "Companions, Christ-Centered Prayer." Dr. McCormick was a veterinarian at the Monnett (Mo.) Veterinary Hospital for 25 years.

**Roger Borgmeyer, MU DVM '79**, celebrated 25 years of business at the California (Mo.) Veterinary Clinic.

**Al Boswell, MU DVM '79**, has joined the staff at the Herrin Animal Hospital in Cassville, Mo. The facility is owned by **Brent Herrin, MU DVM '92**.

**Karen Campbell, MU DVM '79**, recently saw the publishing of her new textbook, *Companion Animals: Their Biology, Care, Health, and Management*. The book was published by Prentice Hall. Her co-authors were James Corbin and her father, John Campbell, former retired MU professor of dairy science.

## 80's

**Mike Pfander, MU DVM '82**, was named Runner Up Best Veterinarian in The Best of the Ozarks contest held by the Springfield, Mo. News-Leader newspaper. He was also installed as vice president of the Missouri Veterinary Medical Association. He will chair the membership committee.

**Michael Joyner, MU DVM '84**, was elected as the Texas representative to the Southwestern Veterinary Conference's Board of Managers. He lives in Killeen, Texas.

**Cynthia Sprigg, MU DVM '86**, was chosen as director of the board for the Western Veterinary Conference. She operates the Cross Point Animal Hospital in Cape Girardeau, Mo.

**Tom Welsh, MU DVM '87**, has opened a new clinic, the Parkville Wellness Clinic, in Parkville, Mo.

**Daniel Smith, MU DVM '88**, celebrated his tenth anniversary of his Animal Hospital of Washington (Mo.)

**Nancy Roth, MU DVM '89**, is practicing at the Banfield Pet Hospital in Manchester, Mo.

## '90's

**Brett Bacon, MU DVM '91**, was named Best Veterinarian in The Best of the Ozarks contest held by the Springfield, Mo. News-Leader newspaper.

**Steve Finch, MU DVM '94**, and his wife Maureen, announced the birth of their second daughter, Samantha Kristine. The baby was born May 22, 2004 and joins big sister Ally, age 2. The family lives in St. Louis.

**Christy Wilkerson, MU DVM '94**, and several colleagues in September broke ground for a new Shoal Creek Animal Hospital in Liberty, Mo. The facility is scheduled to open in Spring 2005.

**Patricia Homeyer, MU DVM '95**, has joined the Companion Animal Hospital in New Haven, Mo. The clinic is owned by **Sheri Moellinger, MU DVM '81**.

**Shahrooz Khamenehli, MU DVM '95**, is practicing at the Banfield Pet Hospital in Fountain Valley, Calif.

**Cara (Clarkson) Longshore, MU DVM '95**, and her husband Randall, announced the birth of a son, Zachary Reed Longshore, born May 5, 2003. The family addition joins daughter Sydney, age 4. The family lives in Richmond, Texas.

**Rosalinda Doty, MU DVM '96**, gave birth to Alexandria Doty, born September 26, 2004. The daughter joins brother Will Doty. The family lives in Fort Riley, Kan.

**Jaime Gonzalez, MU DVM '96**, is practicing at the Banfield Pet Hospital in Bradenton, Fla.

**Stephan Miller, MU DVM '97**, recently opened the Glasgow Veterinary Clinic in Glasgow, Mo. He formerly operated a clinic in Marshall, Mo.

**Robert and Michelle Nack, both MU DVM '97**, announced the birth of their son, Benjamin Michael. Born July 14, 2004, Benjamin joins brothers Will, Sam, and Max. The family makes their home in St. Louis, Mo.

**Bradley White and Christine Matthews White, both MU DVM '97**, announced the birth of a son, Nicholas, born on September 26, 2004. The family lives in Mathiston, Miss.

**Melanie Grundy, MU DVM '98**, and her husband, Ed, received the 2004 Small Business of the Year Award from the Carthage, Mo. Chamber of Commerce. They operate the Central Pet Care Clinic. **Michelle Cahill, MU DVM '99**, also works at the clinic.

**Bryan Chitwood, MU DVM '99**, and his wife Wendy, opened the Veterinary Medical Center in St. James, Mo.

## '00's

**David Leighr, MU DVM '00**, purchased the Long Veterinary Clinic in Kearney, Mo. from **James Long, MU DVM '72**.

**Justin Bouse, MU DVM '02**, and **Hunt Tainer, MU DVM '99**, have opened the Franklin County Animal Medical Center in Washington, Mo.

**Thomas Goss, MU DVM '02**, is practicing at the Banfield Pet Hospital in O'Fallon, Ill.

**Rebecca Galmiche, MU DVM '03**, joined the Troy and Wentzville (Mo.) Veterinary Clinic.

**Ray Alcantara, MU DVM '04**, is practicing at the Banfield Pet Hospital in O'Fallon, Ill.

**Vicki Marie Mattlage Black, MU DVM '04**, is an associate veterinarian at the Nevada (Mo.) Veterinary Clinic.

**Kelly Bowman, MU DVM '04**, is practicing at the Banfield Pet Hospital in Vista, Calif.

**Philip Briscoe, MU DVM '04**, has joined the General Veterinary Clinic in Hannibal, Mo.

**Mayuri Chhotu, MU DVM '04**, is practicing at the Banfield Pet Hospital in O'Fallon, Mo.

**Geoff Green, MU DVM '04**, has joined the staff of the West Plains (Mo.) Veterinary Clinic.

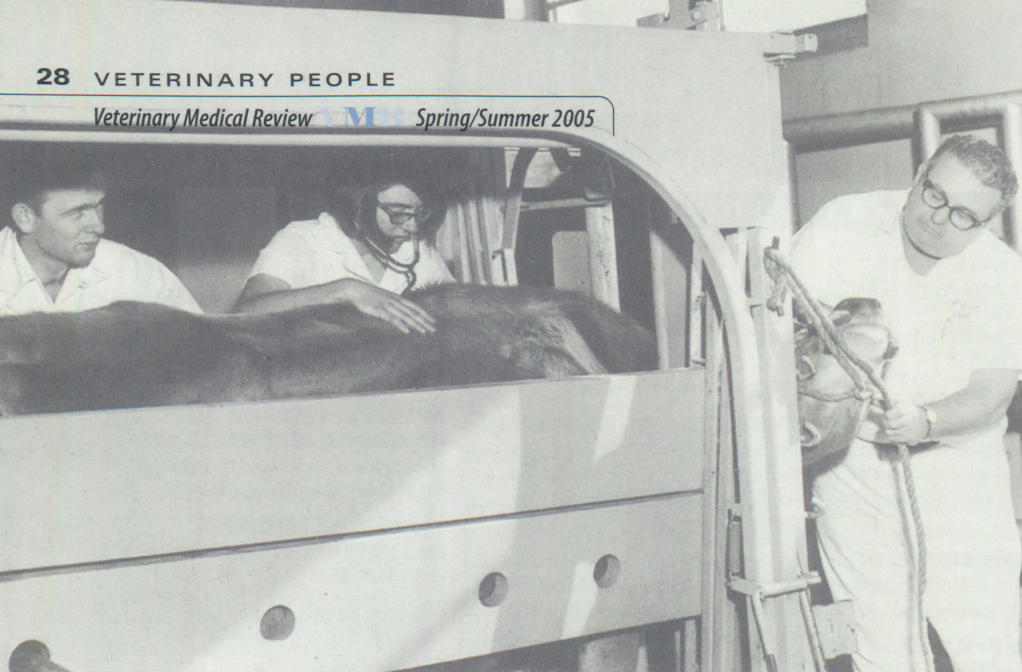
**Brian Heuring, MU DVM '04**, married Lauren Sydenstricker in September in New Hamburg, Mo.

**Jill Jacobsmeyer, MU DVM '04**, joined the Animal Medical Center of Troy, Mo. The facility is operated by **J. Ryan McCann, MU DVM '96**.

**Nick Lindsay, MU DVM '03**, and **Mike Williams, MU DVM '04**, recently joined the Bowling Green (Mo.) Veterinary Clinic.

**Sean McCaul, MU DVM '04**, is practicing at the Banfield Pet Hospital in St. Charles, Mo.

**Candice Sebourn, MU DVM '04**, is practicing at the Banfield Pet Hospital in Clackamas, Oregon.



▲ Clinical conditions steadily improved under Dr. McGinity's watch. In the early 1960's, he demonstrated the use of a new squeeze chute.

## Losing a Piece of Its History

*A Pioneer MU College of Veterinary Medicine Professor Passes On*

One of the earliest faculty members of the University of Missouri College of Veterinary Medicine, Dr. Joe McGinity, died April 10, 2005. He was 86.

Dr. McGinity helped the college grow from an under-funded institution living on its wits and hard work to an institution with a growing reputation for graduating high quality veterinarians.

Dr. McGinity was born April 19, 1918 in Humboldt, Kan., a small railroad town in the southeast part of the state. He graduated from high school there in 1934 at the age of 16, later attending Iola Junior College and Kansas State University, playing football at both institutions.

In 1940, Dr. McGinity joined the Kansas National Guard and completed Officers' Candidate School. He was assigned to the 209th Artillery Battalion, ultimately attaining the rank of captain. He saw action in France and Germany, receiving the Bronze Star.

During the war years, he married his childhood friend Margaret Louise Hixon. They were married in Wichita where she worked for Lockheed Aircraft. Like many people of this generation, Dr.

McGinity learned of the birth of his first children, twin sons, while on his way to France.

He returned to his KSU studies in late 1945, graduating from the College of Veterinary Medicine there in 1949. He practiced in Hutchinson and Independence, Kan. for three years.

The University of Missouri College of Veterinary Medicine was young and struggling when it recruited Dr. McGinity to join the food animal program. The school didn't have much to offer, even to someone who grew up during the dustbowl and depression years. Often, MU faculty demonstrated surgical techniques on cows tied up to a tree behind Connaway Hall. Intrigued with the prospect of helping to build a program, Dr. McGinity signed on in 1952.

Dr. Ken Niemeyer, an early faculty member who would later retire as associate dean, remembers how he and Dr. McGinity were the *de facto* directors of the teaching hospital before the official titles, and budgets for such salaries, existed. Dr. Niemeyer headed the small animal efforts, while Dr. McGinity handled the food animal section.

In a time of poor wages and little

opportunity for advancement, Dr. McGinity added intangible incentives to keeping the faculty intact.

"Dr. Joe McGinity brought a tremendous amount of stability to the college," Dr. Niemeyer relates. "He was kind and unselfish and gave a lot of credit to others when he probably deserved most of it. You liked working for or with him."

Students also found a friend in him. "Students knew that they could go to him with personal problems and that he would help or give advice," Dr. Niemeyer recounts. "He was a great mentor of students. I don't think there is a student in the generation that he taught who would disagree with that. And he helped turned some students around whose future was looking bleak."

MU colleague Dr. Clarence Bierschwal agrees. "Dr. McGinity had a way with students," he relates. "Nobody had more patience, understanding, or insight. He took all the time needed to help them. He had a heart as big as the school. Students knew that they could count on him if things got rough."

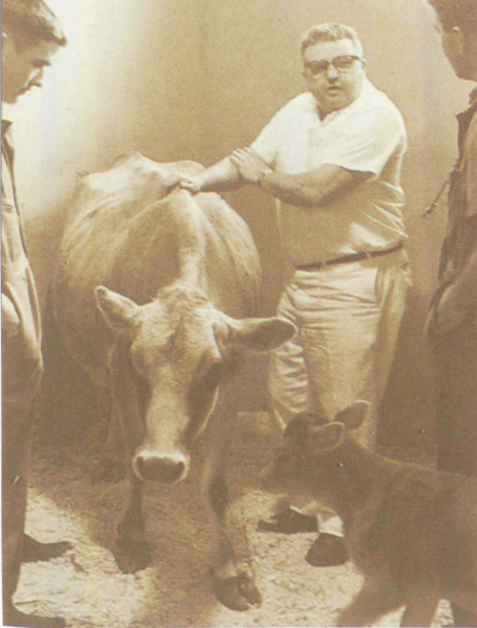
Dr. C.B. Chastain, now MU CVM associate dean for academic affairs, was one of Dr. McGinity's students. "He was always cheerful and positive and gave students a lot of confidence," Dr. Chastain says. "When alumni asked about the school, almost always their first question was 'how is Dr. McGinity?'"

While Dr. McGinity unofficially ran the food animal clinic and kept things together the best way that he could, the college began to grow. Old or non-existent equipment was replaced with better materials. From 30 students in each class, class size increased to 76. To accommodate the additional students with limited equipment, the faculty began experimenting with a concept called the Block System, the prototype of the current training program at MU.

During Dr. McGinity's MU years, he and Margaret would have four more children. While at MU he earned a Master's, and collected distinguished teaching awards in 1970, 1974, 1978, and 1981. He retired in 1983 as *professor emeritus*.

After his retirement, Dr. and Mrs.

## In Memoriam



▲ Dr. Joe McGinity describes aspects of bovine medicine with students in a stall in the early 1960's. When Dr. McGinity arrived at the college a decade before, much instruction in food animal medicine occurred under a tree.

McGinity toured the country, visiting hundreds of former students and colleagues. His daughter, Margaret Ann, says that on these trips he exercised his gift as a storyteller with an extraordinary memory, reliving experiences and challenges of the early days of the MU CVM. Dr. McGinity had a deep appreciation of family and friends and never regretted joining the fledgling MU College of Veterinary Medicine.

Margaret, his wife of 48 years, died in 1991. Dr. McGinity never remarried, and lived in a townhouse adjacent to a MU farm field in southeast Columbia.

A scholarship fund at the MU College of Veterinary Medicine has been established to honor Dr. McGinity's memory. For more information, contact Greg Jones, director of development, W-205 Veterinary Medicine Building, Columbia, MO 65211. Phone: 888-850-2357. ■



▲ Students and fellow faculty alike demonstrated their affection for Dr. McGinity with a series of teaching awards.

*Note: If you would like to share your stories about Dr. McGinity, or other thoughts about the college's history for inclusion in the archives, please mail them to: Editor, MU College of Veterinary Medicine, W-209 Veterinary Medicine Building, University of Missouri, Columbia, MO 65211. (E-mail: MertensR@Missouri.edu)*

**Richard Wilson Hughes, MU DVM '51**, passed away Dec. 29, 2004 at Greene County General Hospital. He was 78 and lived in Bloomfield, Indiana.

Born Nov. 27, 1926 in Quincy, Ill., he was the son of Wilson Brown Hughes and Emma Sarah Houser.

He practiced in Tell City, Ind. before moving to Beltsville, Md., to serve the US government as a research associate. Returning to Indiana, he earned his master's and PhD at Purdue University. He taught at the Purdue School of Veterinary Medicine for 15 years. After leaving Purdue, he farmed in Montgomery County where he raised border collies and competed in national trials.

Surviving along with his wife, Shirley (Crace) Hughes, are two sons, Andrew Richard Hughes and Chris Hughes; two daughters, Susan Canganelli and Merry Wright; six grandchildren, Kerby Hughes, Elsie Wright, Emily Wright, Grant Richard Wright, Nicole Hughes and Nathan Hughes; first wife, Jean Hughes and one niece, Judy Harris.

**Alfred Wesley Doughty, MU DVM '52**, died March 23, 2005 in Pinckneyville, Illinois. He was born on a farm in 1949 in Council Bluffs, Iowa. Dr. Doughty married Margaret "Peg" Doughty. He was a World War II veteran who served in the US Navy.

Dr. Doughty earned a degree in agriculture and his DVM from the University of Missouri. He practiced veterinary medicine for 25 years and was past president of the Southern Illinois Veterinary Medical Association. He was track veterinarian for the DuQuoin State Fair for 17 years. He most recently owned and operated the Oxbow Bed and Breakfast in Pinckneyville.

Dr. Doughty is survived by his wife and daughter Susan Engelhardt of Nashville.

**Leo Freese, MU DVM '54**, died Dec. 12, 2004 in Des Moines, Iowa. Dr. Freese was born April 4, 1926 at Portage Des Sioux, Mo. He married Dorothy Mary Wiechens in 1949 in St. Charles, Mo. The couple had five children: Randy, Karen, Danita, Karla, and Mike.

Dr. Freese received his BA degree in agriculture in 1949, and then served as a medical technician in the US Army. He earned his DVM degree from MU in 1954. He began his veterinary practice in Corydon, Iowa in 1954 and retired in 1994.

Dr. Freese was president of the Association for Retarded Citizens, and was active in the Rotary, Lions Club, and Chamber of Commerce. He was instrumental in founding the New Venture Home and St. Francis Church in Corydon. Dr. Freese is survived by his wife and children.

**Dr. Urban L. Kramer Jr., MU DVM '60**, of Cape Girardeau, Mo. died Sept. 21, 2004, at his home.

He was born July 16, 1929, in Clinton, N.J., son of Urban Lewis and Helen Apgar Kramer. He and Marian Schlemeyer were married June 20, 1959, at Labadie, Mo.

Dr. Kramer served in the US Air Force from July 28, 1948, to July 3, 1952.

Survivors include his wife; a son, Urban Kramer III of Phoenix, Ariz.; a sister, Arlene Benn of Lincoln, Mo.; and a grandchild.

Dr. Kramer was a member of Evangelical United Church of Christ, American Veterinary Medical Association, Missouri Veterinary Medical Association, and VFW Post 3838.

**Robert Tharp, MU DVM '63**, died Nov. 10, 2004 at the Cameron (Mo.) Regional Medical Center. He lived in Maysville, Mo. Dr. Tharp was born on Sept. 28, 1931, in Grundy County, Mo., to R.B. and Lillian Bittle Tharp. He married Gracie A. Gibley on Sept. 7, 1958, at Trenton, Mo. He was a veteran of the U.S. Navy and was discharged in 1956.

After graduation from the MU College of Veterinary Medicine, Dr. Tharp moved to Maysville to start a veterinary practice. In 1979, he went to work for the State of Missouri as director of the Northwest Missouri Diagnostic Laboratory in Cameron until his retirement in 1999.

Those surviving include his wife, Gracie of Maysville; a son, Kendal Tharp, and his wife, Pam of Maysville; a daughter, Terri Lawrence, and her husband, Dave of Excelsior Springs, Mo.; and a son, Bobby Tharp, and his wife, Wendy of Springfield, Mo.

**Cale Estabrook**, MU College of Veterinary Medicine Class of 2006, died April 8, 2005 from complications following a car accident. Cale was born on Sept. 2, 1978 to Edward and Beverly (Campbell) Estabrook. He was a graduate of Cameron (Mo.) High School.

Cale is survived by his parents, Edward and Beverly Estabrook; a brother, Garrett; and maternal grandmother, Marthalene Campbell.

Two memorial funds have been established: the Cale Estabrook Cameron High School Scholarship Fund, and the Cale Estabrook Scholarship, College of Veterinary Medicine, University of Missouri.



# There and Gone

Like Other Communities in the Last 50 Years, Columbia's Once Familiar Retail

## ABOVE LEFT TO RIGHT

- ▲ Montgomery Ward in its heyday on Broadway. After the store moved west to the Biscayne Mall in the mid-1960's, the old facility was remodeled as the Strollway Centre. Today, the building has been remodeled to resemble its original appearance in the 1920's. It features a variety of local retail shops.
- ▲ Hartzfeld's was an upscale Columbia retail store until its parent company was closed in a corporate acquisition.
- ▲ Woolworth's storefront on Broadway at Eighth street in Columbia, circa 1965. The buildings still exist, but in an effort to compete with the new malls, a cement canopy was later built over the sidewalk to shield shoppers from rain.
- ▲ Western Auto grew from a locally owned "associate store" to this storefront on Walnut. As the area grew seedy in the late 1970's, the store moved to a larger facility in the Parkade Shopping Center.



- ▲ A&P Grocery Store on Ninth Street was close to campus and downtown Columbia, but suffered from no parking when the automobile replaced walking.

**R**etail merchandizing is a tough game. Competition, changes in consumer taste, and a slipping economy can wreck a business plan and send a company into receivership.

Even if the parent company survives, local stores can be shuttered for greener economic fields.

Since 1946 when the MU College of Veterinary Medicine accepted its first students, a number of national retail chains have come and gone in Columbia, Mo. Among the missing are Kroger's, Safeway, Hartzfeld's, Western Auto, Katz, Montgomery Ward, and K-Mart. The stores that have endured in the Columbia market, Sears and JCPenny, have migrated from their original downtown locations to the ever-present mall. Their fate may yet be in question as they battle the retail behemoth, Wal-Mart.

### Shopping Before the Automobile

When GI's returned to Columbia, they found a thriving downtown, crowded with shoppers and students. Downtown was the center of

business activity as car ownership was not yet universal, especially among MU undergrads. Without a car, a person was limited to shopping within walking or bus range. Thus, downtown Columbia, next to the MU campus, thrived.

The busiest postwar national retail operation in downtown Columbia was Montgomery Ward in the Virginia Building at 111 S. Ninth Street. It was the closest to MU of all of the downtown national chains and was the store of choice for students during their four years on campus.

It thrived not because it had more floor space than Sears and Penny's, it didn't, but because it had a substantial catalog area that offered thousands of goods for pickup or mail delivery. Delivery was the only option for many without a car to tote a bulky item home.

Montgomery Ward's catalog offered general merchandise from bicycles to socks to washing machines to auto parts, allowing customers to stock their apartments or homes with a single visit or phone call.

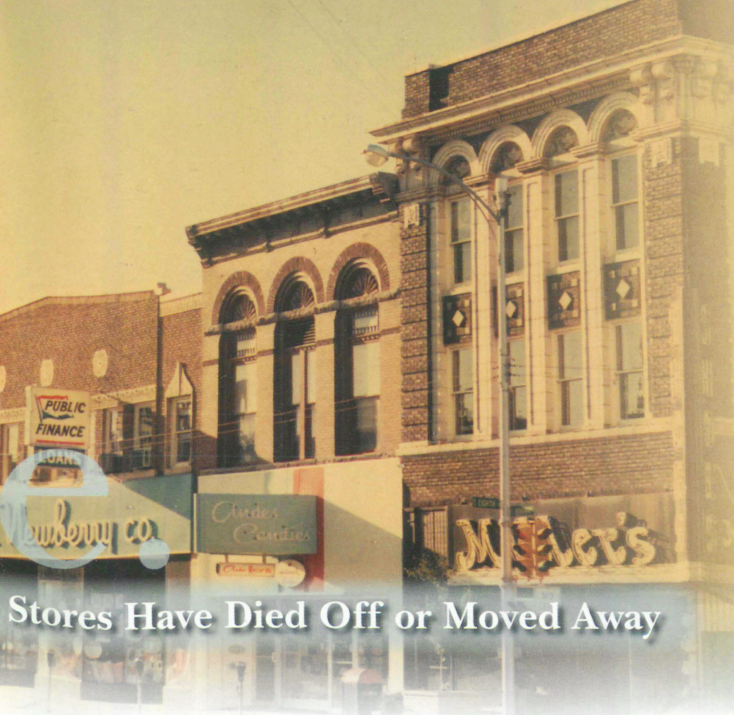
The catalog was the Internet of its day, allowing people liv-

ing in rural areas to order a variety of products otherwise not available or that local stores wouldn't stock. As with the country, Columbia prospered in the postwar boom. As more people purchased cars, more customers wanted their goods immediately. The Chicago-based Wards, credited for creating the Rudolph the Red-Nosed Reindeer character and coining the "satisfaction guaranteed or your money back" marketing slogan, began to struggle against larger stores like Penny's and Sears.

In the late 1950's, the Columbia Wards abandoned its downtown location and moved west to an expansive facility at the new Biscayne Mall surrounded by acres of parking.

Wards, the corporation, still struggled. Various mergers and buyouts followed. In 1997,





## Stores Have Died Off or Moved Away

it filed reorganization bankruptcy and was purchased by General Electric. It was during this period when the Biscayne store closed. Three years later, Montgomery Ward Corp. declared Chapter 7 liquidation and closed its last 250 facilities, including its store in Jefferson City.

Save for a Wal-Mart just north of the Ward's location, the old Biscayne Mall has been torn down with new upscale shops sprouting in its place.

The popularity of the automobile also did in the near-campus grocery stores. The A&P and Kroger's grocery stores on Ninth Street, and Safeway on Broadway, were closed because they had no parking lot for an increasingly mobile population.

### Kansas City Firms in Columbia

One operation that catered to



cars from the beginning was Kansas City-based Western Auto. It was founded in 1909 to sell tires and Model T supplies through its catalogs. In 1913, it expanded into retail.

Though oriented to car parts, the company also stocked its shelves with an eclectic variety of toys, bicycles, hardware, lawnmowers, motorcycles, and furniture—mostly under its Wizard brand. In 1931, the company offered its Truetone radios—a brand that became popular, particularly in small towns.

Western Auto's Columbia store was at 809 E. Walnut, next to the somewhat sleazy Ben Bolt Hotel. Today, the building houses a fashionable restaurant.

Many students got to know Western Auto well, either for inexpensive home items or to help keep an old jalopy running until graduation.

When the Parkade Plaza mall opened on Highway 40, Western Auto moved to a large freestanding facility and happily sold flashlights, tools, and other goodies until 1998 when the parent company merged with Advanced Auto Parts—with the latter's name surviving the transition. Advance closed its Parkade facility. It was recently

torn down.

Columbia's Katz Drug Store, on top of the hill near Providence Road and Broadway, was one of a number of Missouri stores of this KC-based chain that had its origin with the Katz Brothers, Mike and Ike. It, too, sold a range of products from cold remedies to luggage to cheap furniture. The company was later renamed Skaggs, then Osco. Osco recently pulled out of Columbia when a Walgreen's store was built nearby.

Another KC-based company with a Columbia presence was Harzfeld's, an upscale women's ready-to-wear department store. The mid-Missouri facility had three floors and was located at 16 N. 10th St., now the site of Gold's Gym. The family-owned Harzfeld's closed its operations in the early 1980's after a corporate acquisition.

### And the Others...

Like many Midwestern cities, Columbia had two "five-and-dimes" downtown—Woolworth's, on Broadway, and the S.S. Kresge Co. Both featured lunch counters where a student could get a cheap off-campus lunch or dinner. The two stores also operated a soda

fountain, a popular gathering place until the cultural turmoil of the 1970's made such pastimes seem passé. Many students supplemented their income with a part-time job at these stores.

Kresge would later reorganize as K-Mart, which, at its zenith, was the nation's number two retailer. In Columbia, it located its store at Providence Road and Range Line—an odd choice for a retail store as Providence dead-ended near the location.

The company soon rectified its location problem by building a large store near Stadium and Worley streets, its old facility eventually becoming McKnight Tire. About two years ago with its economic problems in full crisis, K-Mart announced its last Blue Light Special in Columbia. Today, the facility is a Hobby Lobby and Best Buy.

Columbia's Woolworth's store was one of 1,000 that the firm boasted at the peak of its popularity. The store suffered as the migration away from downtown continued. The Broadway store sold its last trinket years before 1997 when the company shuttered its last 400 stores and disappeared from the retail scene. ■



# Alumni & Friends

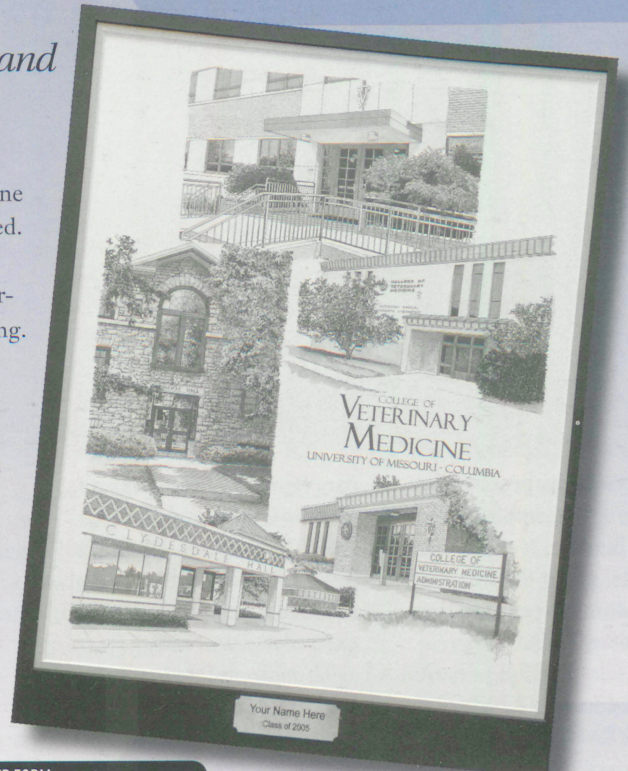
## OF THE MU COLLEGE OF VETERINARY MEDICINE

*This limited-edition black and white, pen and ink print can now be yours!*

Available exclusively to University of Missouri College of Veterinary Medicine alumni and friends, this limited edition fine art print, drawn by John Stoeckley, is hand signed and numbered. Only 500 copies of this print will be lithographed.

Created by special commission in pen and ink, this rendering depicts the major buildings of the College since its founding. Each print comes with the artist's certificate of authenticity as well as his biography.

These prints are made from museum-quality paper and suitable for framing. You can order your print triple matted in black and gold and framed in black satin cherry wood. Your numbered print can also be customized with a 1 x 3-inch brass plate inscribed with your name and other information such as your year of graduation. The engraved brass plate will be mounted inside the glass and centered at the bottom of the mat.



... ORDER FORM ...

**Please send me:**

- \_\_\_ Print(s) @ \$35 each \$ \_\_\_\_\_
- \_\_\_ Brass Plate(s) @ \$15 each \$ \_\_\_\_\_
- \_\_\_ Mat & Frame(s) @ \$180 each \$ \_\_\_\_\_
- \_\_\_ Shipping @ \$15 each \$ \_\_\_\_\_
- \_\_\_ Donation to Scholarship Fund \$ \_\_\_\_\_

**TOTAL \$** \_\_\_\_\_

*Profit from the sale of this print supports a veterinary medical student scholarship fund  
Please make checks payable to: Missouri Veterinary Educational Services*

**Ship to:**

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City/State/Zip \_\_\_\_\_

Send payment and order to: Missouri Veterinary Educational Services, College of Veterinary Medicine-  
 University of Missouri, PO Box 7331, Columbia, MO 65205

I wish to have a brass plate on my print. Please engrave the following information:

Name \_\_\_\_\_  
 Message \_\_\_\_\_

*Please type or print clearly. Attach separate sheet, if needed.*



College of Veterinary Medicine  
 W203 Veterinary Medicine Building  
 College of Veterinary Medicine  
 University of Missouri-Columbia  
 Columbia, MO 65211



# What's new with you?

COLLEGE OF VETERINARY MEDICINE - UNIVERSITY OF MISSOURI - COLUMBIA

Please help the magazine staff keep your friends informed. Send us a Class Note. Fill in this coupon and drop it in the mail. Alumni want news about other alumni.

Name \_\_\_\_\_

Address \_\_\_\_\_

Date of Birth \_\_\_\_\_ Degrees and Dates \_\_\_\_\_

Day Phone \_\_\_\_\_ Evening Phone \_\_\_\_\_

Check those that apply:

- |                                  |                                   |                                      |                                    |
|----------------------------------|-----------------------------------|--------------------------------------|------------------------------------|
| <input type="checkbox"/> New job | <input type="checkbox"/> Award    | <input type="checkbox"/> Achievement | <input type="checkbox"/> Promotion |
| <input type="checkbox"/> Wedding | <input type="checkbox"/> Birth    | <input type="checkbox"/> Transfer    | <input type="checkbox"/> Book      |
| <input type="checkbox"/> Prizes  | <input type="checkbox"/> Honorary | <input type="checkbox"/> Retirement  | <input type="checkbox"/> Other     |

Details \_\_\_\_\_

My email address \_\_\_\_\_

TEAR OUT AND MAIL

**Veterinary Medical Review**  
**Editor**  
**W203 Veterinary Medicine Building**



C3856723000



NO  
POSTAGE  
NECESSARY  
IF MAILED IN THE  
UNITED STATES

**BUSINESS REPLY MAIL**

FIRST-CLASS MAIL PERMIT NO. 6 COLUMBIA, MO

Postage will be paid by addressee:

UNIVERSITY OF MISSOURI-COLUMBIA  
W203 VETERINARY MEDICINE BUILDING  
COLUMBIA, MISSOURI 65201-9944



Office of Development  
College of Veterinary Medicine  
W-205 Veterinary Medicine Building  
Columbia, MO 65211-5120



C3882723000

**BUSINESS**

FIRST-CLASS MAIL

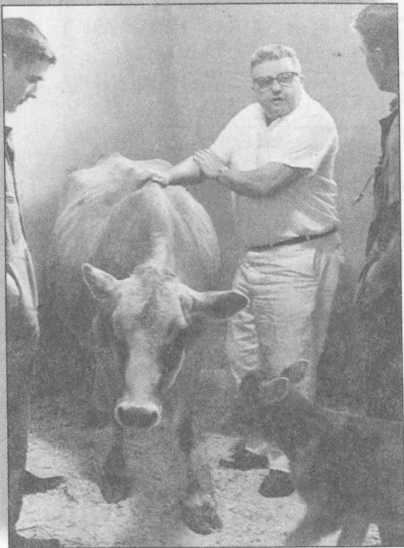
POSTAGE WILL BE PAID

MR. GREG JONES  
UNIVERSITY OF M  
W-205 VETERINAR  
COLUMBIA, MISSO

# Use Keep the Memory and of Dr. Joe McGinity Alive

to the Dr. Joe McGinity Scholarship Endowment  
University of Missouri College of Veterinary Medicine

one of the first faculty members at the MU College of Veterinary Medi-  
pe its reputation for graduating highly proficient and compassionate  
keep his memory and commitment to the next generation of students  
helping fund the Dr. Joe McGinity Scholarship Endowment.



# Plea Value

Contribute  
at the Unive

Dr. Joe McGinity was  
cine and helped sha  
veterinarians. Help  
alive by h



NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES



# REPLY MAIL

HERMIT NO. 6 COLUMBIA, MO

BY ADDRESSEE:

DEVELOPMENT OFFICER  
MISSOURI-COLUMBIA  
MEDICINE BUILDING  
PHONE 65201-9984



N O M I N A T I O N F O R M

# Alumnus *of the* Year

COLLEGE OF VETERINARY MEDICINE - UNIVERSITY OF MISSOURI-COLUMBIA

The Alumnus of the Year is selected and presented by the College of Veterinary Medicine Alumni Association in recognition of outstanding professional and personal achievements and contributions to the enhancement of the veterinary profession. Please use this coupon to nominate a graduate who has made outstanding contributions both within the profession of veterinary medicine and beyond, through community, state or national activities. Keep this outstanding tradition alive. Send your nomination today.

My nominee is Dr. \_\_\_\_\_

*(Person who can supply information on this nomination)*

Name \_\_\_\_\_ Address \_\_\_\_\_

*(Person submitting nomination)*

Name \_\_\_\_\_

Address \_\_\_\_\_ Phone# \_\_\_\_\_

TEAR OUT AND MAIL

**Veterinary Medical Review**  
**Editor**  
**W203 Veterinary Medicine Building**



C3856723000



NO  
POSTAGE  
NECESSARY  
IF MAILED IN THE  
UNITED STATES

**BUSINESS REPLY MAIL**

FIRST-CLASS MAIL PERMIT NO. 6 COLUMBIA, MO

Postage will be paid by addressee:

UNIVERSITY OF MISSOURI-COLUMBIA  
W203 VETERINARY MEDICINE BUILDING  
COLUMBIA, MISSOURI 65201-9944

