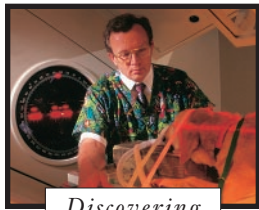


Teaching



Healing



Discovering

# Achieving International Prominence in Veterinary Medicine

After 50 years of quiet distinction, the University of Missouri's College of Veterinary Medicine is now earning international recognition. Here's how animals, people, and businesses in the Midwest benefit by having a world-class veterinary medical college in their midst.

On the threshold of the twenty-first century, veterinary medicine is playing a far more important role than ever before in Missouri and world-wide. And on that world stage, a number of indicators suggest that the University of Missouri's College of Veterinary Medicine will be playing a prominent role.

The 100 year period now drawing to a close has seen the United States make a massive move from a largely agrarian economy (with a high percentage of its population living and working on farms) to a mostly urban and suburban culture. But, surprisingly, the dependence of Americans on both farm animals and companion animals has actually increased during this time. And our need for sophisticated animal healthcare systems and technologies has grown as well.

Missouri is located at the demographic center of the nation. It is also one of the leading farm states in the planet's most productive agricultural breadbasket, the American Midwest. Because of its location, the MU College of Veterinary Medicine has the unique distinction of serving not one but two major metropolitan areas as well as the agricultural heartland.

continued on next page

## VALUES

This debut issue of *Arkeology* provides a strong new voice for the MU College of Veterinary Medicine as we embark on our second half-century. Its focus will be both broad and deep, exploring the human-animal bond in all of its implications, and looking closely at the critical work of teaching, of healing, of discovery.



### PREVIEWS

#### Postmark: Los Gatos, California

How patients with nine lives out west bring veterinary medical scholarships to Missouri.

#### On the Frontiers of Cancer

Pioneering efforts in companion animal cancer at MU are putting breakthroughs on a fast track.

#### A Silence of Hoofbeats

For a seriously-lame horse, MU's state-of-the-art Equine Clinic can turn around the grimmest prognosis.

#### Leading a Nutrition Revolution

Ralston Purina and MU collaborate to help dogs and cats live longer, healthier lives.

## Achieving International Prominence *continued from front cover*

St. Louis and Kansas City are located symmetrically at opposite sides of the state and together make up more than four-fifths of Missouri's population of five million people. The College of Veterinary Medicine is situated conveniently halfway between them.

Missouri and its eight surrounding states have a total population of more than 39 million. Approximately 50% of the households in these states own pets, and Americans today typically demand the same level of medical care for their pets as for themselves. The MU College of Veterinary Medicine (one of only 27 veterinary medical colleges in the U.S.) is providing increasingly sophisticated medical services to meet this need.

One of the most dramatic benefits provided by the college is its invaluable role as a state-of-the-art veterinary medical referral center for this large population, with high-technology diagnostic equipment, therapeutic tools, and a range of professional specialties that no private veterinary practice can offer.

Missouri is also a leader in animal agriculture. It is second only to Texas as a cattle producing state, for instance, with 4.6 million head. Sales of cattle and hogs contribute \$1.6 billion to the state's economy every year, and total revenues for livestock and livestock products approach \$2.5 billion. The veterinary college plays a critical role in bringing ambulatory care to Missouri farm animals, managing the health of the state's herds, preventing diseases, increasing livestock productivity, and making the food supply safe for consumers.

Modern science has demonstrated that virtually all basic biomedical scientific discoveries have long term applications for both human and animal health. The MU College of Veterinary Medicine is increasingly being recognized as a pioneer in comparative medicine or the "one medicine" approach.

Veterinary medicine has another critical role with which most Americans are unfamiliar: contributing to major advances in human healthcare.

Modern science has demonstrated that virtually all basic biomedical scientific discoveries have long term applications for both human and animal health. This "one medicine" concept combines and integrates clinical and research advances from both fields to open new doors and accelerate progress for humans and animals. It is a recognition of the rapidly increasing value to society of the unique contributions of veterinary medicine. But more importantly, it is a new partnership that promises to significantly hasten the attainment of many of modern medicine's most critical objectives.

*continued on next page*

### COMMENTARY

# On Stories, Friends, and Gratitude

**It helps to have friends.**

**F**rom an early age, we've all recognized the importance of friends—people with similar interests to share a good laugh, a meal, or a movie. And then there are *true friends*. Here, the word takes on a whole different meaning. We share our brightest dreams and worst fears with them. At times, they become almost a lifeline and make a difference in our very survival.

Fortunately, colleges have friends, too. Over the years, the friends of the College of Veterinary Medicine have been there for us time and time again. It's not an exaggeration to say that these friends have meant the difference between life and death for this college.

Who are these friends? Like personal friends, they come in different shapes and sizes, and the basis for the friendship may vary. They include alumni who remember what the College did for them at a formative time. Clients whose animals received essential treatment at our teaching

hospital. Companies with goals that are complementary to our own. And, in some instances, just good people who recognize the role we play in serving the people and animals of Missouri.

The stories of some of these friends are told in the pages of this inaugural issue of *Arkeology*. People like Tom and Betty Scott, Phil and Cindy Shanker, Bill and Nancy Laurie, and one of Missouri's foremost companies, Ralston Purina. Each has made a special commitment to the College—a commitment that will make a real difference in our ability to achieve our missions in teaching, service, and research.

Make no mistake—the support they have provided brings attention to the important role this College plays in the lives of Missouri citizens. The gift from the Shankers reminds everyone that MU is the only institution in the state that awards the Doctor of Veterinary Medicine degree, and helps ensure that we will continue to attract

the best and brightest students. Gifts from the Scotts, Lauries, and Ralston Purina remind us of the essential role that the College plays in providing clinical service and advancing our knowledge of health issues and diseases affecting both animals and humans. With the commitment of friends like these, the reputation of, and support for, the College will continue to grow.

The College of Veterinary Medicine is dedicated to serving Missourians, and to preserving and strengthening the age-old bond between animals and humans. But, increasingly, we simply can't do it alone. We need the support, the advice, the involvement—and, yes, the friendship—of friends like these. And friends like you.

—Joe Kornegay

*Dr. Kornegay is interim dean of the MU College of Veterinary Medicine.*





Missouri is second only to Texas as a cattle producing state.

Achieving International Prominence *continued from page 7*

**A Miss America, an Astronaut, and More**

There are other, perhaps less academic, claims to distinction that the college can make. It is the only veterinary college which has both a Miss America (Debye Turner, 1991) among its alumni, and an astronaut on its campus. (Dr. Marty Fettman recently visited MU, courtesy of Ralston Purina's small animal nutrition endowment, and is also a former Space Shuttle crew member.)

In the face of increasing international attention, the college is maintaining a modest, unassuming posture, and continuing to focus on the hard but rewarding work of advancing veterinary medicine to meet the new demands of the 21st century.

"Having a veterinary medical college coupled with strong colleges of medicine and agriculture on the same campus does distinguish Missouri from the vast majority of other institutions," agrees Dr. Joe Kornegay, interim dean of the College.

"The College of Veterinary Medicine literally and figuratively bridges medicine and the agricultural sciences," he points out. "I expect the College to play a major role in the life sciences at MU as we go into the twenty-first century." **Ark**



*With 4.6 million head, Missouri is the leading cattle state in the world's greatest food-producing area, the American Midwest. The MU College of Veterinary Medicine plays a critical role in managing the health of the state's herds, preventing diseases, and increasing livestock productivity. Here, Dr. Ben Rothlisberger, class of 1998, discusses a case with Dr. Dawn Shore, clinical assistant professor. Dr. Rothlisberger is a Pilot Knob, Missouri, native.*

# Veterinary Medicine: Benefits for Missouri

The emergence of the MU College of Veterinary Medicine as a recognized international leader is providing multiple benefits which Missourians have cause to celebrate. Among them:

- ▶ Clydesdale Hall, the college's new \$21 million, 149,000 square foot Veterinary Medical Teaching Hospital is now ranked as one of the best in the country. Its state-of-the-art medical technologies include endoscopy and cardiac ultrasound equipment suites, a computerized tomography unit, a \$600,000 linear accelerator for radiation treatments for cancer, and a diagnostic equine treadmill that provides video gait function analysis.
- ▶ The College has attracted increasing numbers of internationally recognized veterinary scientists to its faculty, in part through an endowment program supported by the state legislature.
- ▶ The College's sophisticated Veterinary Medical Diagnostic Laboratory performs more than 300,000 specialized pathology tests every year to answer questions about animal diseases.
- ▶ Ground-breaking medical and scientific research programs conducted by the College are helping to draw the nation's best students and faculty.
- ▶ The College has established nationally respected centers of excellence in half a dozen mainstream specialties of veterinary medicine, including cardiology, oncology, musculoskeletal diseases, ophthalmology, nutrition, and reproduction.
- ▶ The College provides savings estimated at millions of dollars a year for the state's economy, associated with the prevention of livestock diseases, effective herd healthcare for farmers and agribusiness firms, and making the food supply safe for consumers.
- ▶ The University of Missouri is one of only a few institutions with strong schools in medicine, veterinary medicine, and agriculture on the same campus. The veterinary college has been a pioneer in structuring productive cross-disciplinary programs in the life sciences (medicine, the biological sciences, veterinary medicine, and agriculture).
- ▶ The College's strategic focus on comparative medicine is starting to pay major dividends in both animal and human health areas, such as cancer and cardiovascular research.
- ▶ More than 2,500 alumni of the College are collectively renowned as outstanding practitioners of veterinary medicine, turned out by a faculty and a curriculum with what may be the most rigorous clinical focus of any veterinary medical school in the country.
- ▶ The College's Research Animal Diagnostic and Investigative Laboratory (RADIL), in concert with the laboratory animal training program, supports the research efforts of investigators at both the University of Missouri and across the country.
- ▶ The Missouri University Research Reactor is the largest nuclear reactor on any university campus in the U.S., and it is making possible advanced developments in radiopharmaceuticals for both animals and humans—some of which are already on the market.



4

# Postmark: Los Gatos, California

**For Dr. Philip Shanker, gratitude has nine lives and lasts a lot longer than 20 years.**

**I**t's not easy—or cheap—to train a veterinarian.

Close work with a demanding faculty, a rigorous curriculum, tough assignments, and long hours in laboratories, classrooms, and clinical environments make the four-year veterinary medical degree pro-

## PROFILE

gram a gauntlet of intellectual, professional, and financial chal-

lenges. A veterinary medical student can graduate with \$100,000 in student debt.

Dr. Philip Shanker ran that gauntlet. Now he runs six miles every day on his lunch break. And if you add all the hustling required on the job, he probably clocks off twice that distance. He does rounds. He studies charts. He provides consultations. He performs 15 to 20 surgeries a day. “My life is probably a lot like ER or one of those other fast-paced hospital dramas that you see on TV,” he says.

There's just one difference. His patients all have four legs and are popularly thought to have multiple lives.

Dr. Shanker, DVM '77, owns and runs The Cat Hospital, a Campbell, California, veterinary practice. He treats cats of all stripes. He and his staff routinely face down everything from fleas to leukemia. Every day a number of his more-or-less grateful patients are able to avoid drawing on their bank of nine lives.

## Yesterday and Today

While Dr. Shanker is dedicated to his work and today would consider no other vocation, his life and career could have turned out differently, he says, had it not been for an encouraging letter from MU decades ago.

At the time, he was tempted to put off college until he determined what he really wanted to do. In the late 1960s, many young men who weren't in school were getting a crash course in the real world called Vietnam. He came to MU, studied business, then left without having found his calling.

It wasn't until two years later that he began to reflect on his love for animals. Suddenly, his career indecision vanished. His new goal: become a small animal veterinarian. Problem: his educational background was in business, not in science or medicine. He was more than a few whiskers shy of meeting veterinary medical school requirements.

Undaunted, Dr. Shanker wrote to Dr. George C. Shelton, then the associate dean of academic affairs at MU's College of Veterinary Medicine, to see if he stood a chance of being among the select few who could gain acceptance. “Dr. Shelton sent a long, handwritten letter filled with compassionate advice,” Dr. Shanker says. “It was kind of like a Dad talk:



*A letter written to Dr. Shanker more than two decades ago has led to a distinguished career in feline medicine, the flourishing of The Cat Hospital in Campbell, California, and a scholarship fund for fourth-year veterinary medical students in Missouri.*

‘There are no guarantees in life, but if you don't try now, you'll spend the rest of your life wondering what might have been.’ ”

Dr. Shanker returned to MU. He aced his science courses. He exceeded every requirement for entry into the college. Finally, he won his way to a spot among the veterinary medical college's first-year students.

## A Distinguished Career

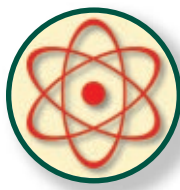
After graduation, Dr. Shanker went on to become president of the American Association of Feline Practitioners, a founding fellow of the Feline Academy, and a diplomate of the American Board of Veterinary Practitioners (Feline Specialty). Although The Cat Hospital is located in Campbell, he lives in nearby Los Gatos (Spanish for “the cats”) with his wife Cindy, two children, six cats, and one dog.

Dr. Shanker says he owes a lot to Dr. Shelton and the MU College of Veterinary Medicine. Dreams do come true sometimes.

Last year, on the 20th anniversary of his graduation from MU's College of Veterinary Medicine, Dr. Shanker and his wife showed their gratitude by establishing the Philip J. Shanker DVM Scholarship in Feline Medicine for fourth-year veterinary students with an aptitude or special interest in the area.

Julie Epprecht Dobslaw, DVM '98, was the first Shanker Scholarship recipient. Dr. Dobslaw has a lot in common with her benefactor. She earned a business degree before coming to MU to study veterinary medicine. At the College, she graduated summa cum laude and earned a spot in Who's Who Among College Students. She is now employed at the Animal Emergency Clinic in St. Louis. **Ark**





# On the Frontiers of Cancer

**Our companion animals age seven times faster than we do and recover from diseases and injuries more quickly. Because of this, the College of Veterinary Medicine's pioneering efforts in comparative oncology are starting to pay big dividends in both veterinary and human medicine.**

**B**uster is Barbara Turnbull's nine-year-old golden retriever, and an assiduous chaser of squirrels at every opportunity. For his Edmundson, Missouri, family Buster is a vigilant watchdog and a constant companion.

But in early 1997, Buster faced a crisis. He was diagnosed with cancer, and referred by his local veterinarian to the MU College of Veterinary Medicine.

In most American households today our pets breathe the same air, drink the same water, share very similar **ADVANCES** diet and exercise programs, and in general live much the same lives we do. As a result they also tend to suffer from the same illnesses. Cancer, for example, kills about 50 percent of all dogs that live beyond 10 years. And usually companion animals with cancer have few options.

For Buster, however, the story was different. The frisky golden underwent 15 radiation treatments to destroy the cancer discovered in his hind leg. His carefully planned regimen of radiation and chemotherapy paralleled that of a human patient.

Today Buster is back home, his prognosis is good, and, says Barbara Turnbull, "He's happy."

In collaboration with oncologists and researchers in human medicine, nuclear medicine, and other sciences, the MU College of Veterinary Medicine is a pioneer in the research and treatment of companion animal cancers using techniques developed for treating cancer in humans.

It's very much a two-way street. Research and treatment of cancer in animals can provide important data for treating cancer in people.

## Aging Faster—and Applying Results Faster

Since animals age more quickly than people, data from studies of new therapy techniques or drugs can often be collected more expeditiously in working with animals. And the understanding that results can be applied much sooner to human treatment environments. The favor is returned when large-scale research efforts for humans create spin-offs for animals. This extremely valuable back-and-forth interface of research and treatment between humans and animals is called comparative medicine.

For cancer in particular this "fast track" comparative oncology approach is moving more and more to the forefront, as scientists, physicians, and veterinary medical professionals explore the similarities in the way the disease affects humans and their companion animals.

## A University-Wide Oncology Program

The MU College of Veterinary Medicine's oncology efforts are in fact part of a university-wide oncology program that includes faculty in



*The MU College of Veterinary Medicine's linear accelerator, in use here, is one of only a few in the country which are dedicated to veterinary oncology. The College is a leader in radiation therapy and is the nation's only veterinary hospital using photodynamic therapy, a less-invasive form of cancer surgery that employs lasers to destroy tumor cells. Pictured here is Dr. Jimmy Lattimer, associate professor of veterinary medicine and surgery, and director of the College's radiology department.*

Medicine, Biochemistry, and Molecular Biology, as well as other departments and the Missouri University Research Reactor.

MU is uniquely positioned for this effort. It is one of only five universities in the nation to have its colleges of medicine and veterinary medicine located on the same campus. This proximity aids greatly in collaborative programs, and the presence of the research reactor makes MU truly unique. The alliances forged by this unprecedented triumvirate have already helped create the new drugs Quadramet and Seretec at MU to treat bone cancer in dogs and humans.

*continued on next page*



## On the Frontiers of Cancer *continued from page 5*

MU's Veterinary Medical Teaching Hospital has thus become a leader in veterinary oncology. The hospital installed a linear accelerator in 1997 to administer radiation therapy. This facility remains one of a handful of its kind in the country dedicated strictly to animal care. The College is also a national leader in employing photodynamic therapy, a less invasive form of cancer surgery that uses lasers to kill tumor cells.

### A Major Pledge and a Forward Leap

MU's program in comparative oncology took a leap forward when a Kansas City couple pledged \$550,000 to create the Tom and Betty Scott Missouri Professorship in Veterinary Oncology. One of five endowed at the College in the last five years, this professorship will allow MU to capitalize further on its strengths in oncology, and to serve people and their pets more effectively.

The Scotts both attended MU and have long been supporters of the College. They became admirers more than 30 years ago when they brought their family pet, a basset named Smiley, to the Veterinary Medical Teaching Hospital for treatment of a fractured vertebra. "We were impressed with the staff of the college—everyone was extremely kind, professional, and

dedicated," Tom Scott says. "At the time, we barely had enough money to pay the bill, but we told the veterinarians who cared for Smiley that we would try to repay the college some day for their kindness."

"We are delighted that the Scotts have chosen to endow this professorship," said Dr. Joe Kornegay, interim dean of the College. "The recruitment process for this position will begin soon. The new professor will join our already strong faculty in oncology at the College and campuswide."

This faculty includes Dr. Carolyn Henry in medical oncology and Dr. Jim Lattimer in radiation oncology. Dr. Henry directs one of only eight oncology residency training programs in the country approved by the American College of Veterinary Internal Medicine, and conducts research on bone marrow-stimulating drugs for dogs and cats undergoing cancer treatment. Dr. Lattimer heads the College's program in radiology and was a key player in the studies on Quadramet.

Drs. Dudley McCaw and Eric Pope are involved in studies using photodynamic therapy to remove cancerous growths.

With new drugs and new techniques like these, the recovery and remission rate for companion animals with tumors such as lymphoma and osteosarcoma has improved significantly. **Ark**

# A Silence of Hoofbeats

**Already offering new hope for horses and their owners from around the country, the MU College of Veterinary Medicine is on its way to recognition as a national leader in the diagnosis, research, and treatment of equine lameness.**

**H**er owners knew something was wrong when DeeDee, an American Saddlebred filly, skipped her customary early morning romp in the pasture.

The problem, it turned out, was a badly broken right front leg. Cause unknown, the break was at the

**TREATMENT** fetlock, the first main joint above the hoof. The break

was so severe that the lower quarter of the limb remained connected only by tendons, blood vessels, nerves, and skin.

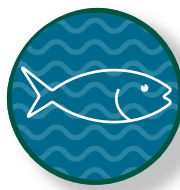
Not so long ago, the conventional response for a horse with a seriously broken leg was to destroy the animal. DeeDee, however, was a beloved family pet—and times have changed. Her St. Louis-area veterinarian cleaned the accompanying eight-inch gash, splinted the break, and immediately placed a call to the University of Missouri's Veterinary Medical Teaching Hospital. In no time at all DeeDee was traveling west to Columbia, Missouri, and the hospital's state-of-the-art Equine Clinic.

Dr. David Wilson, associate professor, surgeon, and director of the equine unit, examined DeeDee carefully. The prognosis was grim. In most cases, horses with an injury this severe will die. "Fortunately," Dr. Wilson said. "The blood vessels, nerves, and tendons were still intact." His team quickly developed a treatment plan and began to implement it.

*continued on next page*



*MU's state-of-the-art Equine Clinic at Clydesdale Hall provides an impressive array of advanced diagnostic and therapeutic tools for lameness in horses. Just one of these tools is a computerized gait analysis technology with videographic systems that monitor a horse and analyze its movements as it runs on a sophisticated equine treadmill. Pictured here is Dr. Dana Gillig, class of 1998. Dr. Gillig is an Odessa, Missouri, native.*



A Silence of Hoofbeats *continued from page 6*

### Turning Around a Grim Prognosis

After cleaning contamination within the exposed joint and administering antibiotics directly into the broken bone above and below the joint, a series of ten orthopedic surgeries—initially one every other day—was begun. Slowly, the joint and its surrounding structures were rebuilt by Dr. Wilson, using the clinic’s specialized orthopedic equipment and the surgical c-arm x-ray machine. The last surgeries fused the fetlock joint.

Three months after the injury, DeeDee went home. She would walk with a limp, but she would be healthy and pain free.

The Equine Clinic is Missouri’s primary referral center for the diagnosis and treatment of illness and injury in horses.

Each year, the clinic sees 1,800 horses and performs about 400 surgeries. Fifty percent of the clinic’s cases involve musculoskeletal problems. Patients include show horses, racehorses, breeding mares and studs, and family riding horses.

The Equine Clinic, actually a separate hospital within the new Veterinary Medical Teaching Hospital complex, occupies half of the first floor of Clydesdale Hall and includes about 35 stalls, a neonatal unit, an isolation facility, two large surgery suites, a special diagnostics room, an exercise arena, and an instrumented treadmill for special evaluations of lame horses. The clinic boasts the state’s only board-certified equine surgeons: Dr. Wilson and Dr. Kevin Keegan, associate professor.

The causes of lameness range from simple bruises and abscesses of the hoof, to complicated fractures, arthritis, and neurological disorders.

The treatment of equine lameness presents unique challenges, says Dr. Philip Johnson, associate professor of equine medicine. “You can do a brilliant job of repairing a fractured limb in the operating room, but horses are so heavy that just standing up can sometimes cause the repair work to buckle and break.”

The clinic attracts clients from around the country because of its specialized equipment and capabilities. One unique piece of equipment is a computerized quantitative gait analysis system. Here, the horse runs on a treadmill while being videotaped. A computer analyzes the movement of the horse and evaluates the horse’s limb movement and joint action. This analysis is important because the horse cannot tell the doctor “where it hurts.”

The clinic also has a CT scanner and the surgical c-arm x-ray machine, with which surgeons can view a continuous, real-time x-ray and actually check for alignment of bone fragments during surgery.

### Help from Crown Center Farm

The reputation of the clinic will be enhanced soon by the addition of a new endowed professor with a specialty in equine lameness. A national search is currently being conducted to fill the position.

The E. Paige Laurie Missouri Professor of Equine Lameness will be a critical addition to the College. The expanded professional staff is designed to establish the MU clinic as a recognized national leader in the diagnosis, research, and treatment of lameness.

Bill and Nancy Laurie, owners of Crown Center Farm in Columbia, Missouri, endowed the professorship in the name of their daughter.

“This gift is a continuation of years of philanthropic support the Laurie family has provided to MU to help advance academic missions as well as the clinical care capabilities of the College’s equine program,” said David Horner, director of development at the MU College of Veterinary Medicine. **Ark**

# Leading a Nutrition Revolution

**What do Checkerboard Square, outer space, animal nutrition, and critical advances in human healthcare have in common?**

7

**A** roly-poly puppy or kitten is still considered irresistible by most of us.

But to Dr. Marty Fettman and to the folks at Ralston Purina, weight problems in pets are more often a cause for alarm. Because animal physiology is governed by most of the same processes as human physiology, a fatty diet can—and does—lead to heart disease in a dog or a cat as readily as in a human.

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**LEADERSHIP** Surprisingly, in spite of its profound implications for animal as well as human healthcare, using diet to prevent and treat disease is a relatively new area of study in veterinary medicine.

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“Nutrition has been the poor cousin to the other sciences,” says Dr. Fettman. (Dr. Fettman holds the Mark L. Morris Chair in Clinical Nutrition at the Colorado State University College of Veterinary Medicine, and was a recent visitor to MU through its Ralston Purina visiting professor program.) But small animal nutrition, he suggests, is on the threshold of a very exciting future.

One example: a new prescription diet now entering the marketplace can significantly increase the life span of dogs with lymphoma who are undergoing chemotherapy. Lymphoma is one of the most common canine cancers. The new diet, containing fatty acids based on fish oils, was developed by Dr. Fettman and other researchers at Colorado State University. Results of the studies will soon be published. Because dogs and humans today share so many environmental conditions and stresses, the breakthrough may also impact the treatment of human forms of this cancer.

Small animal nutrition issues can often make a dramatic difference in critical therapy regimens, and nutrition is always important for the day-to-day health of pets.

### Ralston Purina’s Support for Top-Notch Nutritional Education

Recognizing the importance of animal nutrition, MU’s College of Veterinary Medicine is working with Ralston Purina to provide top-notch nutritional education to future veterinarians. The St. Louis based company with the internationally-famous checkerboard logo is the world’s largest producer of dry dog food and dry and soft-moist cat foods.

Ralston has recently endowed the Ralston Purina Missouri Professorship in Small Animal Nutrition at the MU College of

*continued on next page*



## Leading a Nutrition Revolution *continued from page 7*

Veterinary Medicine. One focus of the new professorship will be working with other MU veterinarians in the clinical management of nutritional aspects of animal healthcare. In addition, the new professor will collaborate on research programs with MU nutrition experts from other disciplines.

This endowed professorship is one of five established at the College in the last five years. Interest from the \$550,000 donation will be matched by the state as part of the Missouri Endowed Chair and Professor Program, approved by the Missouri Legislature in 1994.

“We are gratified by the confidence Ralston Purina has shown in the College of Veterinary Medicine through the endowment of this professorship,” says Dr. Joe Kornegay, interim dean. “It’s a very natural collaboration between two Missouri institutions dedicated to animal health. And it ensures that MU will offer the best in animal nutrition and research.”

The Ralston Purina visiting professorship is further evidence of the growing relationship between MU and the company. Under the program, nutritionists from other universities will first visit Ralston Purina in St. Louis and then come to MU. At MU they will work with faculty and student groups at the College of Veterinary Medicine to emphasize the role that nutrition plays in animal healthcare, in wellness, in intensive care, and in disease management. Dr. Fettman is the first professor to visit MU through this program.

“The Ralston Purina Missouri Professorship in Small Animal Nutrition will benefit both the company and the University,” says Dr. Sarah Abood, a Ralston Purina nutritional scientist who helped set up the endowment.

“It will enable the College to come to the forefront of teaching and research in this area. Because veterinarians are key to communicating knowledge about nutrition to their clients, the professorship and its benefits to MU also fulfill Ralston Purina’s goal in helping dogs and cats live longer, healthier lives.”

Dr. Abood and her colleague, Dr. Dottie LaFlamme, travel nearly every month from St. Louis to MU to lecture on small animal nutrition and to take part in student rounds.

## The First Veterinary Astronaut

Where does outer space come in?

Among his other professional distinctions, Dr. Fettman is also the first veterinarian to serve as an astronaut. In 1993 he spent 14 days in orbit on the Space Shuttle as a payload specialist, where he studied the long-term effects of microgravity on the human body.



*Dr. Marty Fettman’s fascination with animal nutrition has taken him into outer space (as payload specialist on a 1993 Space Shuttle flight) and toward a new prescription diet that increases the lifespan of dogs with lymphoma who are undergoing chemotherapy. In both areas, his work has focused on issues that bridge animal and human healthcare.*

One important aspect of the spaceflight study involved how nutrition can slow mineral and bone loss during long periods of weightlessness. Slowing or stopping this bone loss by retaining calcium is essential if people are to travel for months to Mars. “This also provides an opportunity to model diseases like osteoporosis, which affect us back on earth,” Dr. Fettman says.

The diet studied on the space flight takes an approach which is similar to that of a popular cat food. To prevent urinary blockages in cats, diets of a certain acid balance are recommended. Coincidentally, this diet regimen also causes cats to retain calcium. Part of the Space Shuttle study involved using a modification of this diet as a way to help astronauts in microgravity retain more calcium, thereby losing less bone mass.

“It would be nice to have a dietary solution to a problem like this, rather than relying on drugs,” Dr. Fettman notes.

Dr. Fettman first became involved in nutritional issues as an undergraduate at Cornell University. There he studied dairy cow nutrition as part of an honors program before attending veterinary school. For his PhD at Colorado State, he studied the physiology and metabolism upon which nutrition is based.

From 1989-1990 he was a visiting professor of medicine at the Queen Elizabeth Hospital and the University of Adelaide, South Australia, where he worked with the gastroenterology unit studying the biochemical epidemiology of human colorectal cancer. He has authored or co-authored more than 100 research articles in refereed scientific journals. He is a diplomate of the American College of Veterinary Pathologists.

“MU’s College of Veterinary Medicine is a diamond that is just being polished,” Dr. Fettman said. “It is beginning to be recognized and appreciated nationally as well as locally.” **Ark**

**Arkeology** Because animals are more important today than ever before in our history, the MU College of Veterinary Medicine is dedicated to preserving, protecting, and strengthening the human-animal bond. *Arkeology*, as its name implies, is a medium for bridging between the role of the college as a protector of the animal kingdom (a kind of modern ark) and as a place where science, medicine, learning, and teaching can flourish (*logia* is the old Latin and Greek word for study or reason). Continuously embarking on voyages of teaching, healing, and discovery, the College invites you on board this vessel to journey with us.



*Arkeology* is published twice a year by the College of Veterinary Medicine at the University of Missouri in Columbia.

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