Equine service provides crucial learning opportunities for residents and students

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Dear Alumni and Friends,

Something I have always admired about Kansas State University is its ability to educate veterinary students, graduate students and post-DVM trainees to meet the needs of society. It seems that we are at a time of convergence of the most important aspects of veterinary medicine and our graduates are in high demand.

We strive to prepare them for successful entry into the practice of veterinary medicine. This is exemplified in this issue of Healing Hands by features on our equine section and progress toward companion animal medicine with our new dental suite. I am proud to announce that we recently recruited two new oncologists and two cardiologists for our teaching hospital.

Although clinical practice is important, if we limit veterinary medicine to only that aspect, we are shortchanging the public on what the profession can provide. We are embracing the depth of veterinary medicine as it relates to a safe and secure food supply. This was punctuated last fall by the dedication of our new Biosecurity Research Institute as Pat Roberts Hall, named for our senator who was instrumental in securing federal funding for the facility. The hiring of food scientist Doug Powell and bringing his Food Safety Network to K-State has allowed us to communicate with people around the world about current food safety issues through the Internet and national media.

We must find new ways to adapt our goals to those of society. One way we can do this is by exploring new business models that can also enhance the teaching and service mission of the college. Partnering with institutions and companies through the Kansas City Animal Health Corridor will bring us in step with an entire region anchored in Kansas City that is embracing the animal health and bioscience industry.

The leadership that the state of Kansas has shown through the creation of the Veterinary Rural Training Program for Kansas, a debt forgiveness program, along with scholarship support from our alumni and friends like Mr. Walter Byers, have made it easier for our graduates to practice in underserved areas in food animal medicine. Our legacy of serving the livestock industry is an important part of our educational mission and one that we will not turn our backs on.

Our long-term commitment to attracting the best students is evident by our current student body, comprised of individuals who have a myriad of life experiences, excel academically and are ethnically and racially diverse. Our goal is to provide graduates who reflect society, understand the citizenry they serve and are prepared to meet and exceed the expectations for our profession in the future.

As always, we extend an invitation to our alumni and friends to stop by and visit. We are proud of our students, staff, faculty and facilities, and we enjoy sharing our lives with others.

Sincerely,

Ralph C. Richardson, DVM
Dean

PHOTO BY DAVE ADAMS
The College of Veterinary Medicine at K-State has joined the largest effort ever undertaken to harness the potential of the animal health industry.

A corridor stretching from Manhattan, Kan., east to Columbia, Mo., boasts the highest concentration of animal health companies in the world. More than 100 companies in this area – near Kansas City specifically – are responsible for producing nearly one third of the world’s animal health and nutrition products, a $14.5 billion industry, annually.

Realizing this wealth of resources, civic and business leaders have formed a new initiative to capitalize on this world-class niche of opportunity. This initiative, dubbed the Kansas City Animal Health Corridor, is a three-pronged approach to recruit new businesses, enhance collaborative research and commercialization, and affect legislative policy. In short, the intent is to establish the region as the world’s epicenter for animal health, life sciences and comparative medicine.

The three organizations managing the corridor effort are the Kansas City Area Life Sciences Institute, Kansas City Area Development Council and Greater Kansas City Chamber of Commerce. The Shawnee-based Bayer Animal Health donated $100,000 in seed money to each of these organizations last year to spur initial activity.

Bill Duncan, a member of the corridor’s advisory board and president of the Kansas City Area Life Sciences Institute, an organization that promotes life sciences in the region related to economic development, said organizing a formal effort to attract attention to the area was an obvious move. “There is more going on here than anywhere else in the world when it comes to animal health,” Duncan said. “It seemed logical that we should try to leverage these strengths.”

This area is home to several state-of-the-art research institutions including the veterinary colleges at K-State and the University of Missouri, along with the Stowers Institute for Medical Research and the University of Kansas Medical Center.

Dean Ralph Richardson, also a corridor advisory board member, said the K-State College of Veterinary Medicine will be a major asset to the corridor effort.

“In regards to research, the College of Veterinary Medicine is in the business of developing ideas, bringing those ideas to maturity and having them applied to improving the health and well-being of animals,” Dean Richardson explained. “Through the Kansas City Animal Health Corridor we can work together with other institutions and industry leaders to meet the growing needs of the animal health marketplace. This initiative will generate resources and turn money back into the whole animal health, research and production enterprise.”

Leaders of the some of the institutions involved in the KC Animal Health Corridor at the dedication of K-State’s Biosecurity Research Institute in October 2006. Left to right: Dr. Dan Richardson, vice president of Pet Nutrition Center and Chief Animal Welfare Veterinarian for Hills, Joerg Ohle, president of Bayer’s Animal Health Division, and Dean Ralph Richardson.
President Wefald's vision to bring the campus to Kansas City will give another boost," Ohle noted. "If we have an incubator incorporated there which would link companies to K-State, I think that would be pushing the envelope for the animal health industry."

Dean Richardson said he and others involved in the corridor program are aware of K-State's unique capacity to produce knowledge, resources and new graduates that will expand the base of activity for an evolving industry.

"It is extraordinary to see some of the greatest minds in animal health and science sit down together and find ways to collaborate that will allow our region to attain a status unmatched anywhere in the world," Dean Richardson said. "The College of Veterinary Medicine is positioned to be one of the most influential institutions to this effort, and we are excited about the opportunities that lie ahead."
A
fter earning his DVM from K-State in 1971, Dr. Conrad Nightingale led a successful 35-year career as an equine veterinarian. But that was his second career. Prior to that he spent several years training and establishing himself as an Olympic athlete. Both endeavors emerged from his love of sports and medicine.

Growing up near the small town of Halstead, Kan., Dr. Nightingale went to a country school, where he was the only student in his class by the eighth grade. In search of entertainment, he asked his father if he could go out for sports in high school. “It kept me from milking cows,” Dr. Nightingale remembered with a laugh.

It turned out to be a decision that would shape the rest of his life. Although he competed in football, basketball and track all four years, it was in the sport of running that Dr. Nightingale found his passion. Thanks to a lot of early morning training and good coaching, he became a two-time state high school champion in the mile, even setting the state record as a senior in 1963.

A Budding Athlete
His outstanding record earned him an offer for a full-ride track scholarship to the University of Kansas, but as a small-town kid, Dr. Nightingale felt more comfortable with K-State. “I just wasn’t ready to jump into that type of college. I felt like Kansas State was more my style,” he said.

DeLoss Dodds, the K-State track coach, was new to the university and Dr. Nightingale became an integral part of the program he was building. Soon the team was a force to be reckoned with and even set a world record in the distance medley relay.

Under Dodds’ coaching, Dr. Nightingale became an exceptional miler. He could complete the mile in four minutes flat, but with his eye on the Olympics, he knew he was still a few seconds short of qualifying for the Olympic team. It was then that he decided to switch to the steeplechase, a two-mile race with 35 barriers and seven water jumps. To train for the races, he built his own pit and hurdles. His hard work paid off and he began consistently finishing in the top three in the country in the steeplechase.

In 1968 Dr. Nightingale and several Olympic-bound athletes became involved in unique scientific study. Dr. Jack Daniels, a professor and coach, was asked by the Olympic Committee to research high-altitude training on the
athletes because the Olympics were to be held in Mexico City, Mexico, 7,300 feet above sea level. This group was comprised of a half-dozen of the world’s best distance runners including Dr. Nightingale and Jim Ryun, who had achieved fame as the fastest miler in the world and later served as a congressman from Kansas to the U.S. House of Representatives from 1997 to 2007. Dr. Daniels conducted studies on the athletes in Ann Arbor, Mich., at sea level, and later at high altitudes in Alamosa, Colo. He measured gas levels using breathing samples taken from the runners at various altitudes. “He made some correlations that allowed us to train better at high altitudes and become prepared for the huge oxygen deficit we would be faced with in the race,” Dr. Nightingale said. The high-altitude training turned out to be ideal for the runners as the Olympic Trials were held in mountainous South Lake Tahoe, Calif. Dr. Daniels had taught Dr. Nightingale the ultimate ability of how to “pace himself” without expending any unnecessary energy, especially by sprinting. “I ran like Jack Daniels instructed us, and I think that helped me get on the Olympic team, Dr. Nightingale said. “We weren’t afraid of running at altitude.”

The Opportunity of a Lifetime

By that time, Dr. Nightingale was preparing to enter his second year of veterinary school and needed permission from the dean and his instructors to miss the first six weeks of school to participate in the 1968 Olympics. Permission was granted. “At that time the administration was very sports oriented and wanted to have athletes at K-State,” Dr. Nightingale said. “My classmate, Dr. Jim Fountaine, took notes long-hand and mailed them to me. When I got back I was given just one test in each class for the semester.”

In October 1968 Dr. Nightingale competed in the Olympics in Mexico City, a location with 30 percent less oxygen than sea level. He finished sixth in his qualifying heat but unfortunately didn’t make the finals. He had come a long way from Halstead to participate in the Olympics. He made life-long friends and stays in contact with many of them including his friend, Jim Ryun. “I had a great time. It was a wonderful experience,” Dr. Nightingale said. “Especially to know you were up against the best in the world. I came back and had a lot of opportunities to speak to youth groups.
and tell kids from small towns they can do great things if they just apply themselves.”

Finding His Place
After earning his DVM in 1971, Dr. Nightingale joined the Air Force and served as base veterinarian at Lackland Air Force Base in San Antonio, Texas. He and wife, Nancy, fell in love with the hill country and he bought a practice in Bandera, 30 miles northwest of San Antonio. The Hill Country Veterinary Hospital and Equine Center has been Dr. Nightingale’s practice since 1973.

He developed an interest in equine sports medicine because many of the principles of training that he learned as an athlete apply to horses as well.

For many years Bandera had a race track, Bandera Downs, which kept him and two other associates consistently busy. He especially enjoyed evaluating and treating lameness cases. “The most challenging thing in my career has been to try to identify where the medical problem is,” he explained. “Probably the biggest adrenaline rush I get is to see an animal that I’ve worked on perform to its capability.”

A Progressive Veterinarian
In his quest to provide state-of-the-art treatment, Dr. Nightingale has remained at the cutting edge. In 1982 he was one of the first veterinarians in Texas to learn and perform arthroscopic surgery. He was also among the first to offer ultrasound, CO2 laser, digital radiology and shockwave therapies. “It has helped my diagnostic ability and allows me to offer the client and patient the best care possible.”

Perhaps even more unique, Dr. Nightingale has embraced non-traditional treatments including acupuncture and chiropractic techniques. His interest in those therapies can be traced back through his family heritage. His grandfather was a homeopathic “doctor” in a rural Kansas community at a time when professional clinicians were rare. “When people had sick animals he’d put his hands on them to find out what was wrong with them. I think he probably gave some of those genes to me. I like to think he did anyway.”

His strong faith has led Dr. Nightingale to become involved with the Christian Veterinary Mission, an organization that helps provide knowledge, skills and resources for people in developing countries to care for their animals. In 2005 he traveled to Romania with a team of veterinarians and performed the first arthroscopic surgeries in that country.

“Probably the biggest adrenaline rush I get is to see an animal that I’ve worked on perform to its capability.”

“Time is Trauma”
Dr. Nightingale remembers his veterinary education at K-State fondly. “Going to K-State was the right thing for me because the instructors had good ethics, and they gave us confidence in what they expected of us.”

He still practices advice he learned from Dr. John Noordsy, a longtime professor of large animal surgery. “He taught us that time is trauma. The more time we spend with an animal under anesthesia, the less successful we’re going to be. I still remember that. I don’t hurry, but I try to operate as quickly as possible.”

A New Phase
After Bandera Downs closed in 1993, Dr. Nightingale went back to a one-man practice but his reputation as an equine practitioner meant that business would find him. He also treats small animals as well. He likes that Bandera remains a small town, even though an increasing number of people are moving to the community, seeking refuge from the metropolitan San Antonio.

At their home, located next door to their clinic, the Nightingales raised their three children, Amie, Todd and Abby. They now have a granddaughter, Catherine.

Dr. Nightingale continued running for recreation, but eventually the impact on his joints from running and working on horses over the years caught up with him. “That put a lot of trauma on my body,” he said.

In 2003 he competed in a 5K run in his hometown of Halstead, but it would be his last race. Shortly after, he had two knee replacements and a shoulder replacement.

“I didn’t know it would be my last race, but it turned out to be an appropriate place to participate in my last athletic event, to sort of close the circle.”
Responding to an Industry in Need

By Christina McCall

In rural areas throughout the Midwest, there is a significant need for veterinarians, specifically those in large animal practice. Many large animal specialists are retiring, and no one is filling their positions.

Kansas is leading the way by providing incentives for veterinary students to practice in rural areas. Last year Gov. Kathleen Sebelius signed a bill that established the Veterinary Training Program for Rural Kansas, a debt forgiveness program for graduating veterinarians to practice in rural Kansas counties. They can receive $20,000 each year for up to four years to cover tuition and training expenses. After graduation, they must practice in a Kansas county with a population of 35,000 or less.

With the help of some generous donors, K-State is also addressing the shortage of veterinarians by establishing scholarships for veterinary students who intend to practice in rural areas.

The Olson Brothers Foundation, established by Vernon and Everett Olson of Loup City, Neb., awards four $5,000 scholarships to K-State veterinary students from Nebraska each year. After a student receives the scholarship, they are eligible to re-apply in following years.

The Olson brothers operated a dairy farm south of Loup City for 27 years until they retired in 1994. They were farmers who cared about the future of the dairy cattle industry. They developed a close relationship with their veterinarian, Dr. Randall Pedersen, CVM 1965, who encouraged a gift to the college for scholarships.

Mr. Walter Byers, a former executive director of the National Collegiate Athletic Association (NCAA) and cattle rancher, has responded to the rural and ranching communities by donating $600,000 to create the Byers Ranches Scholarship Fund. The scholarships, based on grades and need, will be granted to veterinary students who come from rural Kansas communities and will cover the full cost of tuition, fees and books. They are designed to renew yearly through a student’s veterinary curriculum.

Byers first became interested in cattle ranching when he was a junior in high school. Although he grew up in Kansas City, Mo., his father owned a modest ranch in Emmett, Kan., near St. Marys, where Byers returned through the years and currently resides.

He inherited his father’s ranch and expanded the operation in the 1950’s. At the height of operations, Byers’ several companies owned over 6,000 acres and ran 800 cows.

In 1951, he was hired as the first executive director of the NCAA, which grew significantly by the time he retired in 1987.

Dean Ralph Richardson said the Byers and Olson gifts are important in meeting the challenges of agriculture.

“Through these new scholarships, we are honored to help build a greater level of support for livestock owners and rural communities,” Dean Richardson said. “They will assure that new graduates can enter practice without being hampered by overwhelming debt.”
When Dr. Doug Powell visited K-State in October 2005, he was already known as an expert in food safety and was collaborating with scientists in K-State’s Food Science Institute.

During that visit Dr. Powell pointed out to K-State President Jon Wefald that the all-in-one hand washing units in the Student Union did not sufficiently rid hands of germs because they failed to incorporate the friction of paper towels. President Wefald was so impressed with Dr. Powell’s pragmatic approach to everyday occurrences such as public hand-drying, that he said, “We should hire this guy!”

Based on the university’s decade-old commitment to food safety and security, and collaborations that had been built between the colleges of Veterinary Medicine and Agriculture through the Food Science Institute, Dr. Powell was offered a position as an associate professor of food safety in the College of Veterinary Medicine.

Dr. Powell is the creator and director of the Food Safety Network, a Web site and online repository of food-safety related information. Last summer, Dr. Powell brought the Food Safety Network to K-State from the University of Guelph in Canada, where he was a professor for 10 years.

He has helped elevate K-State to the forefront of the way people on campus and around the world think about safe food handling and the spread of pathogens.

The Food Safety Network provides commentary, policy evaluation and public information on food safety. Free Internet-based mailing lists are released each day offering current food safety and agricultural risk information “from farm-to-fork.” These listservs consist of news articles gathered and edited by Dr. Powell and his team of students. The articles come from news wire services, scientific and technology-related press releases and major metropolitan newspapers. The four listservs are FSNet,
The Food Safety Network is an online repository of food safety-related information. In addition to offering tips, fact sheets and editorials, the FSN features three blogs for discussion of food safety topics and a toll free telephone line for inquiries. The FSN Web site can be found at www.foodsafety.ksu.edu.

All in a day’s work. Dr. Powell is interviewed for the CBS Evening News in February 2007. He is frequently a source of food safety comment in the local and national media.

According to Dr. Powell, the information goes to people in 70 countries in the food industry, academia, government, agriculture and the public at large.

Dr. Powell arrived at K-State just before the E. coli O157:H7 outbreak in spinach last September that killed three people and sickened nearly 200 in the United States. He quickly became a sought-after source on food safety by the national media and has been regularly interviewed on television news shows, including programs on CNN, CBS and MSNBC. He is also routinely quoted on food safety topics in major newspapers such as USA Today.

Dr. Powell said the spinach E. coli outbreak was an event that increased media attention on food contamination cases, the kind that have been underreported in the past. “The September spinach outbreak was a tipping point because people from all walks of life heard about it and responded to the news. It broke through to the popular culture,” Dr. Powell said.

Since that outbreak there has been one outbreak after another reported nationally, with salmonella found in tomatoes, botulism in carrot juice, E. coli in Taco Bell lettuce and salmonella in peanut butter.

The only way to prevent produce-related outbreaks, Dr. Powell said, is to practice preventive measures when the produce is grown, such as monitoring irrigation water quality and effective employee sanitation. “The farm is the first line of defense. The farmer has to prevent the bacteria from coming in contact with the crops in the first place.”

He believes pressure on the food industry to clean up its act should come from the people who are affected most, consumers. “It starts from consumers demanding safety from their grocery stores, retailers, suppliers and farms,” he said. “It isn’t up to the government to solve these problems; it’s up to the food industry because it has the responsibility to provide a safe product.”

AgNet, AnimalNet and Functional FoodNet.

The Listservs

Four free Internet mailings summarizing issues of food safety are circulated from the FSN each working day. The articles are condensed from from journalistic and scientific sources from around the world.

FSNet
Food safety, food-related outbreaks and recalls, and regulatory issues.

AgNet
Plant agriculture, biotechnology, organic food production, pests and pesticides, climate issues and phytopathology.

AnimalNet
Animal behavior and welfare, animal disease, antibiotic use and resistance, regulatory and trade issues.

Functional FoodNet
Nutraceuticals and functional foods, nutrition, allergens and antioxidants.
The College of Veterinary Medicine’s primary mission is to “train the veterinarians of tomorrow.” Students complete a four-year program that consists of three years of classroom learning, followed by a fourth year of clinical rotations in the Veterinary Medical Teaching Hospital. The teaching hospital treats 3,000 horses each year on a referral and non-referral basis.

Of the eleven core rotations required during the senior year, two are equine-specific. In total, each student spends a six week block working on actual equine medical cases, rotating between surgery, field service and theriogenology (reproductive services for mares and stallions). This education provides veterinary students with the opportunity to work in a full-service equine facility equipped to manage any medical condition in horses, ranging from routine care, to specialty service to emergency/critical care.

While some less complex conditions are treated on an outpatient basis, many cases require hospitalization. The equine facility is equipped with 50 stalls for cases that require 24-hour critical care hospitalization. Three stalls are specifically designed for neonatal critical care, and two other stalls are equipped with padded walls and a sling to manage horses that are unable to stand. There are two operating suites, one for soft tissue surgery and one for orthopedic surgery. Each suite has an adjacent induction room and recovery room specially designed with inflatable floors that were designed at K-State.

State-of-the-art equine services are available with technology such as video endoscopy, ultrasound, digital radiography, computed tomography (CT),...
nuclear scintigraphy, high-speed treadmill evaluation, shockwave therapy and stem cell therapy.

The facilities at K-State provide an optimal learning environment for students while concurrently providing patients with cutting-edge technology for diagnosis and management of their clinical disorders.

The College of Veterinary Medicine has assembled a world-class faculty of board-certified specialists with a wide range of experience and skills in internal medicine, surgery, theriogenology and field service. These specialists have four to six years of advanced training beyond veterinary school. Faculty members maintain primary responsibility for all clinical cases. These cases give veterinary students the chance to learn optimal management techniques and work closely with individuals who have clinical expertise and many years of experience.

In addition to the equine faculty, the section has graduate veterinarians pursuing specialty certification through advanced training programs. This program includes three equine surgery residents, two internal medicine residents and one intern. These house officers are involved in a three-year training (residents) or one-year (interns) program to become equine specialists. All resident house officers have a DVM and minimum of a one-year internship or two years of private practice experience. These clinicians also play an integral role in the teaching and clinical practice aspects of the college.

There are four full-time equine veterinary technicians on staff who monitor hospitalized cases and aid in the educational process of training veterinary students.

Dr. Shane DeWitt is an equine internist who provides on-farm routine health care and emergency services. Dr. DeWitt has a special interest in offering preventive medicine programs and managing horses with complex dental care needs.

Dr. Laurie Beard is an internist with a focus on geriatric equine medicine. Her research focus involves equine hormonal and metabolic abnormalities in equine patients and how they are linked to specific diseases.

Dr. Michelle Delco has surgical expertise in performance horses suffering from musculoskeletal disease and lameness conditions. Her research is on mechanisms of implementing effective prokinetic drugs, which stimulate intestinal function following colic surgery.

Dr. Maria Ferrer is the equine theriogenologist at K-State. She provides routine and complex reproductive strategies applied to equine infertility and reproductive biotechnologies, with a specialty in the implementation of low-dose insemination.
The Saturday after Thanksgiving, Holly Neary made an unsettling discovery on her Ottawa, Kan., farm. Her 1-year-old Hanoverian gelding, Regis, wasn’t acting like himself. The normally gregarious Warmblood wasn’t playing with the other horses in the pasture. Instead, he was standing alone in a grove of trees.

Upon closer examination Neary discovered, to her horror, a large tree limb protruding about two feet from Regis’ right side.

She figured something had scared him and he had run too close to a broken tree limb that impaled into his body. Neary immediately called her veterinarian to come and assess the situation, which she knew could be fatal.

A Unique Clinical Application of Emergency Equine Care

Students, residents and clinicians work as a team to treat impaled horse

Regis, a 1-year-old gelding, being treated at the Veterinary Medical Teaching Hospital after a tree branch penetrated his chest. The wound is covered with a blue bandage and an air tube used to release air from his chest can be seen just to the left of the wound.

By Brennan Engle

Dr. Phillip Jones, a resident in equine surgery at the Veterinary Medical Teaching Hospital, was on call when Neary’s veterinarian called about transporting Regis to Manhattan. Her veterinarian, Dr. Trent Lancaster, CVM ’91, determined that although the horse’s respiration was rapid, his condition was stable enough to make the trip.

Dr. Jones said he was somewhat relieved when he learned the limb had entered the body at an angle instead of straight in behind the shoulder. “I felt better about it once we knew there wasn’t a danger of it touching the heart,” he
said, adding that it was still potentially deadly. “I knew that depending on the orientation of the limb we may have gotten lucky, but there are a lot of important structures in the body there.”

Dr. Jones advised that they cut the limb off close to Regis’ body to avoid any further injury before bringing him to K-State.

A shaken Neary said she wasn’t convinced Regis would make the two-hour drive. “I got to Manhattan not knowing if I had a horse that was dead or alive in the trailer,” she recalled. “It was a scary moment opening the trailer door.”

Due to the unknown extent of Regis’ injuries, Dr. Jones called in senior equine surgery resident Dr. Wendy Ray-Miller. Knowing there was likely some level of internal damage, Dr. Ray-Miller called for assistance from Dr. Beth Davis, assistant professor of equine internal medicine and equine section head. Several senior students were also summoned as well. The team got equipment ready for Regis’ arrival. “We were prepared for a life-threatening situation,” Dr. Davis said.

She said horses can get scared easily and it is not uncommon for them to injure themselves by running away from whatever startled them. Barbed wire is a common culprit. “Horses are a flight species. When they get startled the first thing they do is run, and sometimes they can impale themselves on things.”

A Deeper Problem

Regis was very much alive and still stable when he arrived at the teaching hospital. His heart rate and blood pressure were normal. The medical team ordered an ultrasound to evaluate internal damage. After the ultrasound was performed, they thought the limb might be imbedded only a few inches under the skin. After a local anesthetic was given and an incision made, it became evident that was not the case.

“We started to cut, and things looked good, but then we realized the stick actually had a crook and headed inward. It was further imbedded than we had anticipated,” Dr. Jones explained.

It was possible that it had punctured the thoracic cavity, abdominal cavity or lacerated an important blood vessel. An arterial blood gas analysis was performed to evaluate Regis’ pulmonary function, which would help determine the severity of lung damage. The analysis showed a partial pressure oxygen level of 80 mmHg (millimeters of mercury), low but adequate, with 95 to 100 mmHg considered normal.

Dr. Jones removed the branch with a slow, twisting motion and learned that...
it had imbedded about 10 inches below
the skin, puncturing the thoracic cavity
and slightly lacerating the right lung.

Once it was removed, but before the
wound could be covered, Regis inhaled
air through the wound into the pleural
space, creating a condition called
pneumothorax.

Dr. Davis said that severe infection
was an immediate concern and Regis
was placed on intravenous antibiotics.
“There is no doubt he had serious, seri-
ous contamination from the branch,”
she said. “There was no way he couldn’t
have.”

Regis tolerated the procedure well, but
Dr. Davis said it was obvious he was in
pain, and she knew further treatment
would need to wait until his pain could
be managed. “We rode a little bit of a
fine line as far as treating the pain and
maintaining his stability.”

Regis was monitored closely through-
out the night and into the next day as
his condition remained guarded.

Dr. Abra Wright, equine internal
medicine resident, examines a radi-
ograph of Regis’ chest during treat-
ment. The black area is air in the
horse’s thoracic cavity that had to
be removed. The tube inserted into
his chest to let the air escape is also
visible on the radiograph.

It was a long trip home that night for
Neary, but she planned to come back
the next day to see her beloved Regis.
“That night when I had to leave him,
the seriousness of the situation hit me. I
woke up the next morning and cried
every time I thought about him or saw a
picture of him,” she said.

Regis was being cared for now by the
internal medicine service. He was
brighter and more alert the next morn-
ing but was becoming increasingly rest-
less and anxious. The specialists did
some investigating and found that his
lung had collapsed. Enough air had
entered his chest cavity through the
wound that his lung wasn’t able to re-
inflate when he took a breath. An ultra-
sound was done to find out exactly how
much air had filled the pleural space
and to check for any additional damage.

Removing the Air
An air tube was inserted into his chest
with a pump attached to remove air
every few hours, which allowed the lung
to re-inflate. Dr. Abra Wright, equine
internal medicine resident, explained
that changing the dressing on Regis’
wound created problems. “We suc-
tioned air off his chest every two to four
hours, but every time the bandage was
changed, some air was naturally sucked
in.”

The solution would require continual-
ly releasing small amounts of air
through the pump until the wound had
time to heal. It would also require a lot
of patience.

“That was a bit of a vicious cycle,” Dr.
Davis said. “But the main concern for
the first 72 hours was to keep removing
as much air as we could and treat him
for the pain and infection.”

Regis was also suffering from pneu-
monia localized to his right lung. He
was ultrasounded daily for progress of
air removal and to monitor treatment of
the pneumonia. He was on three antibi-
otics for gram negative and positive
infections and anaerobic infection. “We were trying to cover all our bases because we didn’t know what had been on the branch before it went into his chest,” Dr. Wright said.

Another complication that they were watching for was pleuropneumonia, a build up of fluid around the lung. Regis’ prognosis was still very guarded.

**Time Will Tell**

The team would have a better idea of the Regis’ chances of survival as the days passed.

Fourth-year veterinary student Kim Rainwater was the student assigned to Regis’ case and spent a great deal of time checking on him and administering his medications daily.

“We watched him closely to see if his body would respond by producing more white blood cells to fight the infection, or if he would continue to be immunosuppressed,” she explained. “We were still very concerned, but everyone was pulling for him.”

Rainwater said treating Regis was a unique bonding and learning experience. “He’s my most memorable case from my entire senior year because I spent so much time with him. I also learned a lot about what to look for as far as infection and interpreting blood chemistry in horses.”

Regis continued to improve during the coming days and weeks until he spiked a fever and his antibiotics were changed to compensate. Removal of air from his thoracic cavity continued until the wound closed enough that he could breathe without taking in more air through it. Three weeks after the injury occurred, Neary was finally able to take Regis home.

Everyone agrees his youthful and fighting spirit helped him pull through. He was also fortunate that his injury did not cause more damage than it did and that his constellation of problems – which could have easily been life-threatening at various stages – were treated promptly.

“I think it’s definitely a story of human nature as much as it is about Regis’ condition,” Neary said. “Every person at the teaching hospital took an interest in him and noticed small changes before they became bigger problems that could have taken his life.”

**More Than Medicine**

Neary was also impressed with the compassion that she was shown by all of the students, clinicians and staff during his stay at the teaching hospital. “Everyone was completely honest with me about the road we had ahead,” she said. “Dr. Davis was calm and aware of what was going on, and she was ready to deal with whatever came up. In that way I was reassured and able to keep my sanity through the whole thing.”

It was Neary’s first experience with K-State, but one that probably saved her horse’s life. “I didn’t feel dread or regret about the accident because I knew that Regis was given a chance to live.”
The Veterinary Medical Teaching Hospital at the College of Veterinary Medicine has a newly-renovated dental suite thanks to a $100,000 grant from Pfizer Animal Health.

The suite is specially designed with two dental tables that allow for easy access on either side and will accommodate any size of dog or cat. The tables are equipped with drains that allow for efficient water removal during dental procedures. Newly-installed adjustable lighting and a piston-operated swing arm that holds dental instruments are identical to what can be found in human dental offices. Special warming mats maintain the animal’s temperature while under anesthesia.

The suite’s advanced technology includes digital radiography equipment which allows images to be viewed instantaneously on a computer screen. The speed of working with these digital images means less time under anesthesia for pets.

Dr. Matt Riegel, assistant professor of small animal dentistry, examines a radiograph of the maxillary incisor of a dog. The colored area on the computer screen shows a feature that allows for viewing the teeth and bone with greater contrast and depth.

“**You will have a much healthier animal overall if you take care of its teeth.**”

Dr. Matt Riegel, assistant professor of small animal dentistry, examined a radiograph of the maxillary incisor of a dog. The colored area on the computer screen shows a feature that allows for viewing the teeth and bone with greater contrast and depth.

Dr. Matt Riegel, assistant professor of small animal dentistry, said pet owners’ increasing awareness of the importance for good oral health is driving the need for high quality facilities.

He said practicing preventive care and educating owners on how to routinely care for their pets’ teeth is crucial. “Prevention is the key,” Dr. Riegel said. “A lot of what we do is preventive, and it is important that owners understand that brushing their pets’ teeth, just like they would their own, is the single best thing they can do to prevent disease.”

Not all breeds of dogs require the same frequency and level of dental care. The anatomy of most dogs’ mouths allows for some natural cleaning as the dog chews hard food. However, brachycephalic breeds (such as pugs,
Boston terriers and boxers) and small breeds have a dental anatomy which prevents natural cleaning and requires more preventive care.

Dr. Riegel said some conditions such as gingivitis are reversible, but periodontal disease, which involves the loss of bone, gingiva and gum line, is irreversible. He said 75 to 80 percent of companion animals over three years of age have some level of periodontal disease, which can exacerbate other health problems such as diabetes and gestational complications. Bacteria in the blood can lead to heart problems, liver and kidney failure, and suppression of bone marrow. “There is a distinct relationship between the mouth and the rest of the body. You will have a much healthier animal overall if you take care of its teeth,” Dr. Riegel noted.

The dental suite also exposes students to new techniques in dental care and gives them the skills that animal owners will expect from them as veterinarians.

“The students get a chance to see more dental cases, which will increase their interest in the field of veterinary dentistry. It also allows us to give them the skills they will need to provide services that more owners are seeking,” Dr. Riegel said.
Employee Touched Lives, Left Legacy of Generosity

On Jan. 4, K-State lost a dear friend. Mike Luse, a security guard at the veterinary medicine complex, died of emphysema. A memorial service was held in Mike's honor on Jan. 9 at the All Faiths Chapel on campus.

All who were acquainted with Mike knew him as a generous man. Shortly after his death, his generosity became even more evident.

The college revealed that Mike was the donor of the “Jimmy the Cat” scholarships. These $300-$500 awards are presented to three or four seniors who are randomly chosen at the Seniors’ Awards Banquet in May.

The money is intended to defray end-of-year expenses for these graduating veterinary students. When Mike established the endowment in 1989, he requested that his identity as the donor remain anonymous. “Everything about him was generous and compassionate,” said Dr. Ronnie Elmore, associate dean for academic affairs. “He really wanted to help students.”

Mike always had a smile on his face and a joke to share. He chatted with new students to make them feel more comfortable and often carried candy in his pocket to give to any children he might see during the day.

Although Mike didn’t have any children of his own, he referred to veterinary students as his kids.

Mike worked as a security guard at K-State for a total of 35 years, with the last 23 of those years at the College of Veterinary Medicine.

Ronnie Grice, director of campus security, said that although Mike had many health problems in recent years, his job meant everything to him.

“Mike was a very dedicated and loyal employee,” Grice said. “He worked every day, even if he was sick. I wish I had five or six more employees who were like him.”

Mike is survived by his wife, Terry, and their cats, Snowflake, Tweety and Bow-wow; and his mother, Elizabeth Ann Martin, of Leawood, Kan.

Professor from Afghanistan Visits K-State

Dr. Nasrin Stanikzai, a professor of biochemistry at Kabul University in Afghanistan, is spending two months at the college as part of an exchange program between K-State and Kabul University.

The connection was begun last summer when Drs. Walter Renberg and Chris Ross from the CVM traveled to Kabul to meet with professors at the Kabul University veterinary school to explore opportunities for collaboration.

While at K-State, Dr. Stanikzai hopes to learn some teaching techniques that she can use in her classes. “I want to know the methodology of teaching here and how to use new technology in teaching,” she said.

Researchers Receive Grant for Stem Cell/Cancer Studies

Two researchers at the College of Veterinary Medicine have received a $100,000 grant to research stem cell therapy in the treatment of lung cancer. The grant was awarded by Joan’s Legacy: The Joan Scarangello Foundation to Conquer Lung Cancer.

The research, being conducted by Drs. Masaaki Tamura and Deryl Troyer in the Department of Anatomy and Physiology, involves using stem cells to deliver therapeutic drugs to cancerous lung tumors.

The stem cells used in this research were discovered in the cushioning material, or matrix, of the umbilical cord by K-State scientists.

In mice, the matrix stem cells have shown to successfully deliver the anti-cancer drug interferon beta to intended tumors.

In large numbers inexpensively.

In mice, the matrix stem cells have shown to successfully deliver the anti-cancer drug interferon beta to intended tumors.

The researchers plan to test the interferon beta therapy in combination with other chemotherapy drugs and new immune system enhancing compounds.
Biosecurity Institute Named for Senator Roberts

K-State’s Biosecurity Research Institute (BRI) was recently dedicated to a man whose influence helped bring the facility to K-State.

The building was named for United States Senator Pat Roberts in a special dedication and ribbon cutting ceremony on Oct. 27, 2006.

The $54 million biosafety level 3 facility will provide K-State scientists a secure location to research threats to U.S. crops, livestock and citizens, be it man-made or naturally occurring.

It is the only biocontainment facility in the country to integrate plant pathology, food safety, entomology, veterinary medicine and molecular biology.

Researchers from veterinary medicine and other disciplines will have the capability in the new building to study dangerous pathogens and the ways they spread. Those pathogens could include avian influenza, brucellosis, soybean rust, salmonella and E. coli.

Sen. Roberts has been a prominent voice for better protection of the nation’s agriculture. As chairman of the influential Senate Select Committee on Intelligence, he addressed Congress prior to 9/11 about the possibility of attack on America’s farms and food supply.

“The outstanding foresight of Sen. Roberts is why this building will be appropriately named,” Gov. Kathleen Sebelius said at the event. “Without Pat’s vision and without him making sure this happened here in Kansas, we wouldn’t have this facility.”

Dr. Jane Brunt Returns as 2007 Alumni Fellow

Dr. Jane Brunt, CVM ’80, was the College of Veterinary Medicine’s 2007 Alumni Fellow.

Dr. Brunt is the founder and owner of the Cat Hospital At Towson (CHAT) in Baltimore, Md., a feline exclusive veterinary hospital that she opened in 1984 which has a 23-member staff, including five veterinarians. In 2000 she opened a second clinic, the Cat Hospital Eastern Shore, in Cordova, Md.

At the time Dr. Brunt opened her practice, it was the only feline specialty clinic in the Baltimore metropolitan area. Dr. Brunt said she has always had an affinity for cats, a species she believed was underserved. “At that time there were more dogs than cats in the U.S., and they definitely got less attention then,” she said. “We realize that they have different problems and different needs.”

Getting involved with feline humane projects has been important to Dr. Brunt. She has provided free medical help to abandoned cats, and in 1996 she founded Animal Relief Inc., which assists organizations in the healthcare of animals, felines in particular.

Dr. Brunt has been very active in professional associations. “These professional associations have allowed me to make ‘life friends’ – a network of colleagues who share professional and personal triumphs and challenges,” she said.

Dr. Brunt recently completed a term as president of the American Association of Feline Practitioners (AAFP) and is currently on the Leadership Identification Committee of the American Animal Hospital Association (AAHA). She serves on a joint panel of the two organizations on small animal pain guidelines.

Since becoming a member in 1980, Dr. Brunt has held 13 different positions of the Maryland Veterinary Medical Association (MVMA), including serving as its president in 1994. She is also a member of the Greater Baltimore Veterinary Medical Association (GBVMA) and the American Veterinary Medical Association (AVMA), where she served in the House of Delegates for eight years.

Dr. Brunt also has an interest in reaching the public about feline issues. She writes a column for the newsletter of the Maryland Society for the Prevention of Cruelty to Animals, and routinely contributes to Cat Watch and other feline publications. In 1997, Dr. Brunt was selected as one of Baltimore Magazine’s “top vets” and appeared on the magazine’s cover.
**CVM Alumni Recognition Awards**

**Dr. James Hall ('83)** received a 2006 Alumni Recognition Award at the Central Veterinary Conference in Kansas City, Mo., on Aug. 26. Dr. Hall received a bachelor’s degree in animal science and industry in 1979, a master’s in animal science in 1981 and his DVM in 1983, all from K-State.

He practiced at the Hays Veterinary Hospital in Hays, Kan., for three years before going to work at Belcaro Animal Hospital in Denver, Colo. In 1989, he became part owner of the Hays Veterinary Hospital and returned there to work.

After five years, Dr. Hall decided to look for a new facet of veterinary medicine. He began working at Ft. Dodge Animal Health in Overland Park, Kan., where he had a regulatory responsibility for the investigation of potential product-related adverse events. He reported findings to Ft. Dodge, FDA, USDA and EPA.

Dr. Hall is now senior director of Professional Services and manages 10 veterinarians, seven technicians and seven support staff members. Dr. Hall also manages the Ft. Dodge professional services department regulatory compliance for the FDA, USDA and EPA. His primary area of interest is in food animal medicine.

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**Dr. Manuel Thomas ('66)** received a 2006 Alumni Recognition Award at the annual convention of the American Association of Equine Practitioners in San Antonio, Texas, on Dec. 4.

Dr. Thomas received his DVM from K-State in 1966. After graduation, he joined the U.S. Air Force and was sent to Vietnam for a year. During his time overseas he was chief of the veterinary service for the Air Force Dispensary.

He spent three years teaching at Sheppard Air Force Base, then in 1974 he transferred to the United States Air Force Academy in Colorado. After three years he was promoted to director of Veterinary Services and Falconry.

Dr. Thomas left active duty in 1979, returned to K-State and earned a post graduate degree in epidemiology, high-er education and continuing education.

In 1984, Dr. Thomas went to Texas A&M to teach epidemiology, food safety and regulatory medicine. After six years, he became employed at the United States Department of Agriculture where he trained personnel to perform food inspections to ensure public safety.

At the end of last year Dr. Thomas retired from federal service, but hopes to continue to serve as a consultant in emergency preparedness.

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**Dr. Glenn E. Hurley ('53)** received a 2007 Alumni Recognition Award at the North American Veterinary Conference on Jan. 14, in Orlando, Fla.

After graduating from K-State with his DVM, Dr. Hurley served two years as base veterinarian at Bowling Air Force Base in Washington, D.C.

In 1956 he worked in a large animal veterinary practice with Dr. Lee Railsbach in Ellsworth, Minn. A year later, Dr. Hurley opened his own large animal practice in Boxholm, Iowa, where he worked until 1975. From then until his retirement in 1991, he co-owned a veterinary practice in Waverly, Iowa, where he specialized in the treatment of cattle, swine and horses.

Since retirement, Dr. Hurley and his wife, Lois, have been involved in volunteer work around the world. They completed a term in the United States Peace Corps, living in Morocco, where Dr. Hurley trained veterinary technicians.

The Hurleys have also volunteered in Kenya, El Salvador, Ghana, Mongolia, Jamaica, Puerto Rico, Guatemala, St. Vincent and Granada.

Dr. Hurley has been involved with Heifer International for over 35 years, an organization that supplies livestock to developing countries.

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**Dr. Donald E. Jackson ('51)** was honored with a 2007 Alumni Recognition Award at the Kansas Veterinary Medical Association’s Gala Brunch on Jan. 21 in Wichita, Kan.

Growing up as a black male in segregated Kansas City, Dr. Jackson made it his goal to become a credible professional. He had met a few black veterinarians in Kansas City, so he decided to pursue a veterinary education and open his own practice.

After being trained as a B-25 bomber pilot at Tuskegee University, Dr. Jackson attended Kansas State University where he received his DVM in 1951.

After graduating, Dr. Jackson was employed at Dr. Bronson’s Dog and Cat Hospital in Wichita for six years. In 1957, Dr. Jackson opened his All Pets Clinic in Wichita. He treated small animals for more than 40 years, until retiring in 2001.

In addition to his professional achievements, Dr. Jackson has been actively involved in the Wichita community. He has been active in Boy Scouts, the Oz Bicycle Club, Kansas Sentencing Commission, University United Methodist Church and is currently president of the Foreign Relations Committee in Wichita.
Alumni Class News

1941
Dr. Gilbert Carl celebrated his 90th birthday with friends and family on Oct. 8, 2006.

1968
Dr. Jerry D. Weil recently sold his practice in Great Bend, Kan., and moved to Liberty, Mo., where he is doing relief work. He keeps busy working the MO-KAN livestock market, judging competitive trail rides, and working at two different practices just outside Kansas City.

1980
Dr. Guy Palmer has become one of the select veterinarians who are members of the National Academy of Science’s Institute of Medicine.

In Memoriam


Hugh E. McClung, DVM 1929, Hayward, Calif., died Aug. 16, 2006


George W. Eberhart, DVM 1941, Granite Bay, Calif., died Mar. 13, 2006


Leo J. Garvert, DVM 1944, Springfield, Ill., died April 27, 2006

John B. Healy, DVM 1944, Port Saint Lucie, Fla., died Sep. 13, 2006

Paul J. Lindsay, DVM 1946, Madison, Ga., died Oct. 31, 2006

Bernard Lehman, DVM 1949, Manchester Township, N.J., died May 21, 2006

Peter C. Kennedy, DVM 1949, Davis, Calif., died Aug. 2, 2006

Donald L. Croghan, DVM 1949, Nevada, Iowa, died Aug. 11, 2006


Victor D. Lundstrom, DVM 1951, McPherson, Kan., died Sep. 16, 2006

Irwin J. Collinge, DVM 1951, Emporia, Kan., died Nov. 2, 2006

Norman E. Gray, DVM 1956, Morrilton, Ark., died Nov. 13, 2006

Edward L. Gillette, DVM 1956, Fort Collins, Colo., died Nov. 17, 2006

John M. Dial, DVM 1962, Atlanta, Ga., died Apr. 5, 2006

One of the goals of the Veterinary Medical Library is to acquire books that have been written by graduates of the College of Veterinary Medicine about their experiences in veterinary medicine and the history of veterinary medicine.

We have been actively collecting these books over the years and adding them to our historical collection. Some that we currently have are reminiscences of veterinary practice such as “Doctor, Spare my Cow!” and “Doctor, Matilda’s in Labor!” by Dr. James A Porter; “Creatures, Characters, and Chaos” by Dr. D. L. Waddell; “Loyal to the Land: the Legendary Parker Ranch, 750-1950” by Dr. Billy Bergin; and “The Other Family Doctor” by Dr. Roy E. Stewart.

Some examples of our histories of veterinary medicine include “Our History of Women in Veterinary Medicine” by Dr. Phyllis H. Larsen; “The Legacy: A History Of The Tuskegee University School of Veterinary Medicine” by Dr. Eugene W. Adams; “History of the American Society for Veterinary Clinical Pathology 1965-1985” by Dr. Steven Stockman; and “A Century of Excellence: Kansas State University College of Veterinary Medicine” co-authored by Dr. Howard Erickson.

We also own books for children written by our graduates such as “Large Animal Veterinarians” by Drs. Rod and Cheryl Bellville and “A Tale about Santa, the Reindeer, and Christmas” by Dr. Charles Stinchcomb.

We also have many typed reminiscences that contain valuable veterinary history but have never been formally published. To find out if we have books by a specific CVM graduate, a search by author or title can be done in our online catalog at https://catalog.lib.ksu.edu.

If readers of this column know of other books that we could add to our collection, please call us at 785-532-6006 or e-mail us at Library@vet.k-state.edu with your information. We also accept donations of works written by graduates.

Did you know that you can request searches and articles at http://www.vet.kstate.edu/depts/library/research.services.htm?
It was reported in the Summer 2006 issue of Healing Hands that researchers from the College of Veterinary Medicine were investigating an emerging outbreak of disease associated with porcine circovirus type 2 (PCV2) in Kansas swine herds. Producers with infected herds were experiencing a death loss of 20 to 40 percent in finisher pigs.

The researchers have completed testing a commercial vaccine that was recently developed. The field trial results showed that the vaccine is safe and effective in controlling PCV2. The study resulted in a 50 percent reduction in mortality of vaccinated pigs compared to non-vaccinated pigs. Vaccinated pigs were also 20 pounds heavier than non-vaccinated pigs of the same age.

The two-shot vaccine is now available for sale commercially. Producers who suspect their pigs are experiencing a PCV2 associated disease outbreak should contact their veterinarian first to confirm diagnosis.

Dr. Kyle Horlen looks over a swine herd for signs of PCV2.

Dr. Dick Hesse, a CVM virologist, works with PCV2 cells.