



Dr. Laura Armbrust

Thoracic radiographs reveal helpful pet health information

K-State biology undergrad helps Dr. Laura Armbrust with promising research project

Pets need regular veterinary check-ups as they age. Research in the CVM suggests a radiographic testing measure proves to be useful in these visits in order to maintain health in older cats and dogs.

Dr. Laura Armbrust, associate professor of radiology (in clinical sciences), and Dakota Chambers, LaCygne, Kan., a sophomore in biology, studied the effectiveness of thoracic radiographs as a screening measure to detect nonclinical disease in geriatric dogs and cats. The study showed this test helped identify significant abnormalities in the observed pets.

“Screening tests are an important part of health care,” Dr. Armbrust said. “However, it is important to know the benefit of a particular test to determine if it is indicated in a certain population.”

Dr. Armbrust said information about the importance of thoracic radiographs as a screening test for older cats and dogs is lacking in the veterinary literature. A thoracic radiograph looks inside the chest cavity and is particularly useful for finding heart and lung disease.

The researchers wanted to determine the incidence of disease detected on thoracic radiographs of dogs and cats undergoing geriatric screening. The geriatric age for dogs in the study was 7 years and older and for cats who were 11 years and older.

“Pet owners often bring their animals in for regular checkups,” Chambers said. “Geriatric screening tests provide a means of early treatment in hopes of curing or slowing the progression of disease.”

At the Veterinary Medical Teaching Hospital, senior animals can be enrolled in a program that includes screenings every six to 12 months. Chambers said the exam includes a thorough physical examination, blood work, urinalysis and fecal examination. A thoracic radiograph is included in the 12-month screening.

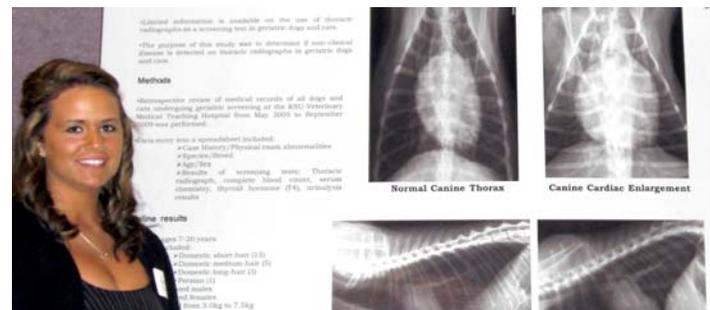
For their study, Dr. Armbrust and Chambers reviewed medical records from the teaching hospital of all dogs and cats that had undergone geriatric screening from May 2005 to September 2009. The data included results from the screening tests, with their main focus on the results from thoracic radiographs. The researchers were most interested in looking for thoracic disease in animals that did not have signs of clinical disease.

“Thoracic radiographs may be helpful in identifying thoracic diseases, even if the animal does not present with any symptoms,” Chambers said.

The researchers found that significant thoracic radiographic abnormalities were present in 17 percent of the cats in the study and 4 percent of the dogs. Chambers said examples of diseases that were identified were cardiac enlargement and lung disease.

“These findings provided information that was useful in the management of these cases,” she said.

Chambers presented the findings at K-State’s Developing Scholars Research Poster Symposium in April. She plans to get a master’s in biology or zoology and focus on the study of animals.



Dakota Chambers presents her research poster on thoracic radiographs at K-State's Developing Scholars Research Poster Symposium in April.



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Rounding up black-footed ferrets in western Kansas

Drs. Carpenter and Phair lend assistance to preservation efforts for endangered species

Drs. James W. Carpenter and Kristen Phair, Zoological Medicine, recently participated in the semi-annual black-footed ferret round-up near Russell Springs in Logan County (western Kansas). The black-footed ferret is the nation's most endangered mammal, and at one time was thought to be extinct.

Dr. Carpenter had overseen the U.S. government's endangered species (including black-footed ferrets) captive propagation program prior to coming to K-State in 1990. When he was invited to participate in the round-up of the black-footed ferrets, Dr. Carpenter said he viewed it as his work with this rare species was coming "full circle."

Black-footed ferrets were introduced into western Kansas more than two years ago. Although the actual number of ferrets in the release site is not known, 35 ferrets were live-trapped over an eight-day period this last March. This includes eight that were live-trapped on the evening that Dr. Carpenter participated (unfortunately, none were trapped on the evening that Dr. Phair participated).

Capturing ferrets involves using spotlights attached to vehicles and searching from "dusk till dawn," looking for a ferret's "eye-shine." Once eye-shine is spotted, a team drives to the prairie dog burrow in which the ferret is residing and sets a trap. The trap is checked at least every hour throughout the night until the animal is, hopefully, caught.

Following capture, the ferret is taken to a small trailer which is set-up for veterinary use. The ferret is anesthetized via a chamber with isoflurane. While anesthetized, the animal is examined, weighed, vaccinated, blood is obtained,

samples of ectoparasites are obtained, and a transponder chip is surgically implanted. Once the ferret's examination is completed and it has recovered from anesthesia, it is released in the exact same burrow where it was trapped.

Although the decimation of the ferret population was a result of habitat destruction, prairie dog control programs, and agricultural land-use changes, Dr. Carpenter said it is encouraging the species is making a come-back in Kansas. This is the first time in 50 years there have been black-footed ferrets born in Kansas.



"Eye-shine" is used to help locate black-footed ferrets that live in prairie dog burrows.



Dr. James Carpenter obtains a culture sample during an examination.



Dr. Kristen Phair examines the abdomen on a European ferret, which serves as a medical model for treating black-footed ferrets.

Rural veterinary program graduates its first class

“If you build it, they will come” says the catchphrase in the film “Field of Dreams.” In real life, the state of Kansas decided that if you educate them, they will stay — in rural Kansas — where there has been a shortage of veterinarians to serve producers and small towns.

This year’s graduating class in the College of Veterinary Medicine included the first five graduates of the Veterinary Training Program for Rural Kansas (VTPRK). This was the program passed by the state legislature in 2006 to provide a financial incentive to bring new veterinarians to rural areas.

VTPRK participants are eligible for up to \$20,000 in loans per year to pay for college expenses and advanced training. Upon completion of their DVM, each student is required to work in a full-time veterinary practice located in any of 91 Kansas counties with less than 35,000 residents. For each year the student works in rural Kansas (up to four years), \$20,000 worth of loans will be forgiven by the state.

“This funding from the VTPRK is going to alleviate some of the pressures off of us to find the high-paying jobs needed to repay our student loans,” Trent Glick said. “We’re able to go to a rural community and maybe take a little less money so we can still pursue our goals.” Trent, who is originally from southeast Kansas, has accepted a job in Oberlin.

Each student in the VTPRK is required to participate in additional activities beyond what is required for their veterinary degrees. The scholars spend their summer breaks learning about foreign-animal disease preparedness, natural disaster preparedness, rural sociology and public health.

Brock Hanel, from Courtland, said, “I have been able to see different parts of the United States and see how different levels of agriculture and the livestock industry is utilized. It gave me a greater appreciation for rural



K-State’s 2010 class of VTPRK graduates are: Nick Luke, Brock Hanel, Jessica Whitehill-Winter, Trent Glick and Kyle Berning.

America.” Brock is planning to work in his father’s practice in Courtland. Dr. Lannie Hanel earned his DVM from K-State in 1971.

Jessica Whitehill-Winter hasn’t accepted a position yet, as she is expecting a baby in August. She plans to interview for jobs and then start working after the baby arrives.

“The VTPRK has allowed me to pursue my career as well as my dream of raising my family in small community like my parents did for me,” she said. Jessica is from Latham in Cowley County. “I have sent resumes to a 90-mile radius from where Mom and Dad live. It’s great to be able to go back home and have the financial assistance from the VTPRK, but it’s also very nice to know I’ll be serving an area that needs it.”

Nick Luke plans to work in Beloit, which is also where he grew up. He is thankful for the advanced training provided in the VTPRK.

“This program has brought us in contact with people who have been involved with researching and responding to foreign animal diseases,” he said. “We’ve made connections with the people who are going to be running the response programs.”

Kyle Berning added, “Going to Iowa our sophomore year and taking part in the regional USDA surveillance testing center was a pretty good experience. Some of the diagnostics and sample taking that we practiced the last four years will definitely come in handy.” Kyle, who is originally from Lakin, has accepted a position in Scott City.

Dean Ralph Richardson said he’s proud of this year’s graduates and is extremely pleased to see the VTPRK making an impact in Kansas.

“We are dedicated to supporting the livestock industry and believe veterinarians create a positive influence on communities of all sizes, particular small rural communities,” he said. “This year’s graduates are going to make an immediate difference in the communities where they will be working. These graduates bring a great skill set to rural areas, especially with what they’ve learned about foreign-animal diseases and public health. With more VTPRK classes following this one, the future looks bright for rural Kansas.”



Under the microscope:
Dr. Jennifer Akers
Clinical Instructor
Pet Health Center



Place of birth: Anita, Iowa

Family Information: Husband, Brian Lubbers; daughter, Olivia , 6 years old; and son, Brock, 20 months old.

Pets: Indoor cat, Yanni; outdoor cat, Boots; dog, Copper; and horses, Jack and Shadow; and chickens.

What is something interested or something that people don't know about you? I played 6-on-6 basketball in high school (Iowa switched to only 5-on-5 two years after I graduated). I was a fairly intense player, and thus I earned the nickname, "The Intimidator." However, I played only defense, and cannot shoot baskets well to this day.

What projects are you working on, work or personal? My family and I moved to an acreage recently. There is never a shortage of things to do! I am helping my daughter learn to ride a pony this summer, and I am hoping she and I can enjoy some trail rides together soon.

What are some words of advice you give to the graduating seniors? Work hard while you are working; give it your full attention and ability. Then, at the end of the day, go home and enjoy what is really important: your family and friends. In years to come, when you are leaving this world, you probably won't wish you would have worked more.

Congratulations class of 2010



Commencement was held May 14 at McCain Auditorium as the class of 2010 was conferred with their doctors of veterinary medicine degrees. Left: Cameron Duncan receives his doctoral hood. Right: Dr. Dan Thomson delivers the commencement address.

CVM News Ticker



Dr. David C. Poole was given the 2010 Pfizer Award for Research Excellence. He is a professor in the Department of Anatomy and Physiology in the College of Veterinary Medicine and in the Department of Kinesiology in the College of Arts and Sciences. Dr. Poole is recognized internationally for his contributions to the fields of pulmonary gas exchange and skeletal muscle structure/function relationships.

Dr. Frank Blecha has recently been appointed as the CVM's new Interim Associate Dean for Research. He will be wearing two hats: department head of Anatomy and Physiology as well as associate dean.

Dr. Roman Ganta was invited to serve on the Review Editorial Board *Frontiers in Cellular Microbiology*, which is a specialty section of *Frontiers in Microbiology*, a journal that publishes major and in-depth research findings focused on host-microbe interactions that decipher these interactions from a molecular, biochemical, cell biological or immunological perspective.

Dr. T.G. Nagaraja has been approved by the National Institutes of Allergy and Infectious diseases to be the new director of the Veterinary Medicine Training Program at K-State.

Dr. Heather Towle was selected by the senior students for Excellence in Teaching during the Clinical Training Program. She is an assistant professor in small animal surgery in Clinical Sciences.



Dr. James W. Carpenter was named the 2010 Western Veterinary Conference Avian & Exotics Continuing Educator of the Year.

Megan Jacob was recognized as the 2010 outstanding Graduate Research Assistant at K-State. The award is given annually by the Kansas Chapter of the Golden Key International Honor Society.