



May-June 2018

Update

for Veterinarians



VMC Advances Research in Feline Chronic Kidney Disease

Chronic kidney disease (CKD) is a common disease in cats, affecting about 50 percent of elderly felines. Medications can address the symptoms of weight loss, frequent urination and drinking water excessively among cats with the disease, however more information is needed to understand which medications best help cats and what methods are best to administer these therapies, says **Dr. Jessica Quimby**, associate professor at the Ohio State Veterinary Medical Center.

“We know we have treatments that could help, but in order to demonstrate that these medications make a difference, we need good clinical trials,” she said. “They’re not necessarily new medications, but these clinical trials will allow us to say whether it’s a medication that’s at the top of the list. Cats can be challenging to medicate and it’s important to know that every pill counts.”

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From the Director



With emergencies usually front and center this season, spring is also a good time to assess how some of your older patients are faring. With that in mind, in this issue of *Update for Veterinarians*, we feature clinical trials focused on improving care for felines with chronic kidney disease (CKD), a common disorder among older cats.

Dr. Jessica Quimby, a specialist in companion animal internal medicine, discusses the symptoms of the disease and the four clinical trials that she and other clinical researchers are conducting for cats with CKD. We’re proud to know that their work will

document for the first time the types of medications that safely reduce troubling CKD symptoms and the stress that cats experience with taking medications. Read more about how to enroll your patients in these exciting trials.

In other news, we salute two valued leaders at the Veterinary Medical Center (VMC) who will soon retire and seek new personal and professional paths: **Dr. David Wilkie**, professor of Comparative Ophthalmology and Chair of the Veterinary Clinical Sciences Department, and **Dr. James Belknap**, professor, Trueman Chair-Equine Clinical Medicine and Surgery.

We know you have options for where to seek care for your patients, so we thank you for choosing the VMC each time you refer a patient who needs extra care. As always, we welcome your feedback.

Karin Zuckerman, MHSA, MBA
VMC Director

Drs. Wilkie and Belknap to Retire

Two of the Veterinary Medical Center's longtime leaders will retire as Professor Emeriti from the College of Veterinary Medicine on June 30, 2018. We thank them for their exceptional teaching, research and service.

Dr. David A. Wilkie, professor of Comparative Ophthalmology and Chair of the Veterinary Clinical Sciences Department, has been with Ohio State since 1985. A Toronto, Canada native, Dr. Wilkie received his DVM degree in 1984 from the University of Guelph followed by a Small Animal Internship at the University of Pennsylvania. He arrived at Ohio State in 1985 to begin a 3-year residency and a master's degree in comparative ophthalmology and has remained at Ohio State ever since.

Dr. Wilkie has authored numerous articles, abstracts and scientific papers, lectured all over the world and served as a research consultant to national and international research institutions. In addition to his publications and many teaching and service awards, Dr. Wilkie has helped to train more than 34 veterinary ophthalmologists from 12 countries, including 21 residents who are now board-certified in veterinary ophthalmology.

He recalls how dramatically caseloads and technology have changed since his beginnings at Ohio State. Procedures that have fundamentally changed veterinary ophthalmology practice include the surgical implantation of intraocular drug delivery devices and the use of laser technology to treat intraocular tumors, glaucoma and retinal detachment.

"We're now practicing ophthalmology at a level comparable to human ophthalmology," he said. Caseloads increased from perhaps one cataract surgery a month in the 1980s to three to four per week now.

He applauds the improved connection between the first-opinion veterinarian and specialist over the years. "We work together with the first-opinion veterinarian to ensure the best care for our patients and their owners."



Dr. Wilkie is proud to have overseen the growth of the Comparative Ophthalmology program in the Department of Veterinary Clinical Sciences. "When I started (teaching) at Ohio State, at times it was just me in ophthalmology. Today we have three faculty, three graduate-resident students and two technicians. That makes me incredibly proud."

Over the years the Wilkie family, including his son and daughter (both currently training in human medicine), has spent summers at a cottage on a lake in Canada, which they now plan to renovate. They also plan to do more of the outdoor activities they love, including canoeing, camping, skiing and scuba diving.

The next chapter for Dave and his wife, Dr. Susan Johnson (Professor Emeritus, Ohio State's College of Veterinary Medicine), involves dividing time between Columbus and the Great White North. Dr. Wilkie plans to stay active in veterinary medicine by lecturing internationally, serving as editor-in-chief of *Veterinary Ophthalmology*, and stepping in to teach and assist at the college wherever he is needed.

Save the Date

College of Veterinary Medicine Continuing Education

Dinner CE: **What's New in the Diagnosis and Management of Atopic Dermatitis**
Dr. Lynette Cole

Date/Time: May 31, 2018, 7 p.m.

Location: El Meson Restaurant
903 E. Dixie Drive, Dayton

CE credits: 1 hour

No cost to veterinarians. Dinner and non-alcoholic beverages generously provided by Edward Kimball of Zoetis. Space is limited to the first 50 registrants.

Future CE events are scheduled for Toledo and Cleveland/Akron.
See vet.osu.edu/alumni/continuing-education for updates.

Find us on



The Ohio State University College of Veterinary Medicine
The Ohio State University Veterinary Medical Center
The Ohio State University Veterinary Medical Center at Dublin

Dr. James Belknap, professor, Trueman Chair-Equine Clinical Medicine and Surgery, joined the equine surgery faculty in 2004. As a specialist in equine laminitis, his time at the VMC has been marked by advancements in research and clinical practice. “When I started doing laminitis research 30 years ago, we knew nothing about the disease,” he said. “We’ve gone from knowing very little to understanding a great deal of its pathophysiology.”

High-resolution images of digital radiography now allow clinicians to use objective measurements to diagnose, closely monitor and provide more effective therapy for laminitis. Collaborations with researchers from Ohio State’s College of Medicine, especially The James Cancer Center, have allowed Belknap and his team to apply cutting-edge molecular techniques in their research.

Dr. Belknap says those developments have made his work exciting, a journey that began in Goshen, Kentucky, where his family ran a livestock farm of 700 beef and two dairy cattle, two horses and his own pony. The second half of that journey was moving to ranch country in the Colorado mountains at the age of 13, where he worked with a local veterinarian on the many ranches. “I loved going out to the ranches,” he said.

He went on to receive his DVM from Colorado State University (CSU), completed his residency in equine surgery and MS at Michigan State University, and returned to CSU for a PhD. But it was an internship at the University of Georgia, where laminitis work was being conducted, that sparked his interest in the field.

Dr. Belknap accepted his first faculty position at Auburn University and was later recruited to the Ohio State equine surgery faculty in 2004, where he performed soft tissue surgery, lameness and podiatry (with talented farrier Todd Adams) and continued his laminitis research. Over the years, he has authored over 50 peer-reviewed journal

articles and 12 book chapters on laminitis pathophysiology and treatment, and lectured extensively on the topic, nationally and internationally.

In 2012, Dr. Belknap was inducted into the International Equine Veterinarians Hall of Fame for his contributions to the knowledge and recognition of proper hoof care for horses. In 2017, he was responsible as editor for the publication of the first textbook on equine laminitis, providing researchers and clinicians throughout the world with up-to-date information on this disease.

He says he’s most proud of how the Veterinary Medical Center equine staff and faculty treat each other and clients. “We really emphasize the human side of veterinary medicine here,” he said. “We have an incredibly invested staff. We work hard and we have fun.” And, he notes, the fact that many residents who train at Ohio State want to stay on is a sign of the quality of the work atmosphere.



Dr. Belknap will now be taking his veterinary skills to Westport, Washington, a small fishing town on the Pacific Ocean, where he will practice alongside a single veterinary practitioner. “I’ll change to small animals a few days a week, and fish a few days a week,” he said. His wife, a physician, plans to work in a small, nearby hospital. “This is an exciting new venture for us.”

Transitions



Congratulations to **Alicia L. Bertone**, DVM, PhD Diplomate ACVS, ACVSMR, professor in the Department of Veterinary Clinical Sciences, who was recently appointed to serve as Vice Provost for Graduate Studies and Dean of the Graduate School at The Ohio State University.

Board-certified in Equine Surgery and Equine Sports Medicine and

Rehabilitation, Dr. Bertone has served as an equine orthopedic surgeon at The Ohio State University

Galbreath Equine Center for over 25 years, managing cases and training veterinary students and equine surgery residents. As a faculty member of the College of Veterinary Medicine, she mentored many PhD and MS graduate students, surgery residents and research fellows.

Dr. Bertone will still have a home in the Department of Veterinary Clinical Sciences and will be helping with her transition out of the clinics. Drs. Matt Brokken and Sushmitha Durgam will continue to be available for any orthopedic consultations and case referrals.

To read more about Dr. Bertone, please visit oaa.osu.edu/bertone-appointed-dean-graduate-school.

Feline Chronic Kidney Disease *continued from page 1*

Dr. Quimby, who conducts clinical trials to improve care for cats with CKD, works with a unique interdisciplinary team of board-certified, urinary tract specialists from internal medicine, clinical pathology and anatomic pathology at the Veterinary Medical Center (VMC). The team includes **Dr. Cathy E. Langston** (acute kidney injury and chronic kidney disease); **Dr. Rachel Cianciolo** (nephropathology); **Dr. Jessica Hokamp** (biomarkers of kidney disease); **Dr. Julie Byron** (lower urinary tract and interventional procedures); **Dr. Val Parker** (nutrition and kidney disease); and **Dr. Karina Creighton** (acute kidney injury).

Current clinical trials for feline CKD include:

- **Gabapentin Sedation Dosage:** A study to assess the safe dosage of gabapentin — used to reduce stress in cats during veterinary visits — by comparing the drug’s use in cats with CKD with use in cats without CKD.
- **Transdermal Application of Appetite Stimulation:** A study to test the appetite stimulation properties of mirtazapine (proven to successfully stimulate weight gain) when the drug is formulated as a transdermal gel applied to the inside of the ear.
- **Omeprazole Effects:** A study to evaluate whether omeprazole is effective in alleviating gastrointestinal problems in cats with CKD.
- **Aluminum Concentration Levels:** A study to determine whether there is a significant difference in blood aluminum levels between healthy cats, cats with CKD, and cats with CKD receiving the phosphate binder aluminum hydroxide.

Mirtazapine has long been used to increase appetite and Dr. Quimby’s previous studies have demonstrated its success in increasing weight and appetite in cats with CKD. Providing the medication in the transdermal form works and the trial is to demonstrate this scientifically. The clinical trial for omeprazole also seeks to provide evidence of its benefit.

Dr. Quimby calls gabapentin “a transformational medication” in feline medicine. She cites a recent University of California-Davis study that shows gabapentin decreases hospital visit stress when the patient receives a single dose one-to-two hours before the visit.

Support Feline CKD Research

Thanks to the planned estate gift of Tom Jackson, the Buttons Feline Kidney Research Fund, named in memory of Buttons Duh Cat, supports feline research and diagnostic fees for cat owners.

Visit giveto.osu.edu/makeagift/?fund=315869

CKD: What to look for

- Weight loss
- Excessive drinking of water
- Picky appetite
- Frequent urination

“The cat is much more relaxed and it’s easier to examine them and get blood samples,” she said. The dose may need to be decreased depending on the degree of kidney disease.

The aluminum trial, Dr. Langston’s study, will determine whether the medication aluminum hydroxide used to decrease phosphorus levels in cats with CKD, results in measurable blood levels of aluminum. “Our suspicion is that the small amount of medication we give does not lead to concerning levels of aluminum in the blood, but we want to make certain,” said Dr. Quimby.

The team’s expertise makes the VMC’s feline CKD research a robust and distinctive effort. The VMC is one of only two veterinary medical centers in the world, alongside Texas A&M, that specializes in kidney pathology. “We have a really unique group of individuals in pathology and clinical sciences focused on the urinary system, in particular, kidney disease,” she said. “We expect good things to come.”

For more information about the CKD Clinical Trials and enrollment, contact the Blue Buffalo Veterinary Clinical Trials Office, CVM-ClinicalTrials@osu.edu.



*Dr. Jessica Quimby
and Sophie*