Welcome Dr. Keith E. Stein

Dr. Keith E. Stein has joined the Department of Veterinary Clinical Sciences as a Clinical Assistant Professor in Veterinary Dentistry and a member of the Community Practice, Shelter, and Outreach Medicine Service. He will perform dental procedures on Mondays and Tuesdays with a plan to add appointments on other days as the caseload in the Dental Service increases. Dr. Stein has Bachelor’s degrees in Psychology and Animal Science, and received his DVM in 1997 from Auburn University. He worked in private practice for several years before completing a residency in Oral Surgery and Dentistry at the University of Illinois College of Veterinary Medicine in 2004. Dr. Stein has worked in private specialty practices in Columbus, New Jersey and Maryland. He is board-certified by the American Veterinary Dental College (Diplomate AVDC) and is a member of the American Veterinary Dental Society.

Dr. Stein will be offering dental procedures, including but not limited to, routine dentistry, particularly on high risk patients, periodontal therapy, endodontic therapy, oral surgery, restorative and prostodontic, medical orthodontics, and dental radiology.

Veterinary Medical Center Services

Small Animal, Equine, and Farm Animal:

- Anesthesiology & Pain Management
- Arthroscopy
- Cardiology
- Dentistry
- Dermatology & Otology
- Diagnostic Imaging
  - Digital Radiography
  - Computed Tomography
  - Nuclear Scintigraphy
  - Teleradiographic Interpretation
  - Ultrasoundography

Small Animal:

- Animal Blood Bank
- Audiology & Hearing Testing
- Behavioral Medicine
- Canine Physical Rehabilitation
- Greyhound Health and Wellness
- MRI Imaging
- Neurosurgery
- Total Joint (Hip and Knee) Replacement

Equine:

- Blood & Plasma Transfusion
- Monitoring High-Risk Pregnancy in Mares
- Neonatal Intensive Care
- Performance Evaluation & Sports Medicine
- Lameness Evaluation
- Dynamic Endoscopy on High-Speed Treadmill
- Regenerative Medicine Therapy

Farm Animal and Camellids:

- Blood & Plasma Transfusion
- Downer Cow Stalls with Hoist, Sling, Hip Lifters
- Hydrostatic System
- Theloscope (Teat Endoscopy)

Correction

In the November-December issue of “Update for Veterinarians” a mistake was made in the description of the study, “Improving outcome in dogs with glomerular disease via pharmacodynamic-based dosing of enalapril.” Please see the study description for the correct serum creatinine concentration levels at go.osu.edu/enalapril.

From the Director

I would like to wish all of you a Happy New Year and hope that you were able to spend time with your friends and families over the holidays, without too many emergency interruptions. Once again, we are partnering with the Ohio Veterinary Medical Association to bring you the latest updates from the Veterinary Medical Center.

In this issue of Update for Veterinarians we would like to remind you of the expert faculty we have on staff at the VMC. Additionally, provided is an overview of the specialty services that we offer. We have chosen three unique and expanding specialty services to feature, Neurology and Neurosurgery, Interventional Medicine, and Theriogenology and Reproductive Medicine.

Our Interventional Medicine Specialty boasts the expertise of Dr. Brian Scansen, one of only five veterinarians in the country to complete an interventional medicine fellowship and receive advanced training in this discipline. Additionally, both our Neurology and Neurosurgery Specialty and Theriogenology and Reproductive Medicine Service have expanded with new faculty in recent years, and we are thrilled with the new ideas they are bringing to the table that will allow the services to reach new levels of expertise.

As always, I appreciate the opportunity to reach out to you, our referring veterinarians, and provide helpful information for you to share with your colleagues and clients. If you would like to see a particular topic discussed in these updates, please let me know, and I will do my best to accommodate your request. Furthermore, if you are ever in need of additional information, please do not hesitate to contact one of our faculty members, as we are always here to assist in your endeavors. I profoundly appreciate your partnership and look forward to working with you in 2012.

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Interventional Medicine

The Ohio State University Veterinary Medical Center is proud to offer the relatively new specialty area of Interventional Medicine for its patients. Interventional Medicine involves the use of catheters, stents, and devices guided by fluoroscopy or ultrasound to treat disease and it has evolved out of an increasing desire to provide patients with minimally-invasive procedures to reduce pain and shorten recovery time. Dr. Brian Scansen, one of only five veterinarians in the country to complete an interventional medicine fellowship and receive advanced training in this discipline, offers a number of advanced procedures and diagnostic tests to patients at the VMV.

Some services provided through Interventional Medicine include implanting pacemakers, closing abnormal vessels, placing stents to open diseased airways or urinary tracts, ballooning narrowed vessels in the body, and delivering targeted therapy directly to tumors throughout the body. Common procedures performed by Dr. Scansen include cardiac pacing, transcatheter PDA closure, tracheal stenting, ureteral stenting, intrathecal port systemic shunt closure, arterial embolization to slow tumor growth, and foreign body retrieval from the GI tract and respiratory tract.

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Theriogenology and Reproductive Medicine Service

The Theriogenology and Reproductive Medicine Specialty at Ohio State's Veterinary Medical Center offers a variety of clinical reproductive services for all species, including small animal, equine, and farm animals. The VMC’s board-certified Theriogenology clinicians have even shared their expertise with veterinarians treating and managing reproductive cases at Ohio zoos. Dr. Carlos Pinto and Dr. Marco da Silva lead the specialty team and are excited to announce the expansion of the Reproductive Medicine Service to include resident Elizabeth “Betsy” Coffman who received her DVM from the University of Tennessee. The Theriogenology service is also fortunate to have embryologist Chelsey Messerschmidt as a research assistant and for clinical technical support.

Beginning in the spring of 2012, the Theriogenology Specialty will be offering select reproductive services for cattle, horse, and alpaca breeding farms. This is not a typical ambulatory service; it is a means of assisting our referring veterinarians on cases that require more advanced diagnostics and services that can be scheduled in advance, such as breeding soundness evaluations, embryo and semen freezing, and embryo collection and transfer. In addition to several assisted reproduction services we currently offer, we are proud to announce that we are the only facility in the state of Ohio that offers the ability to sex bovine embryos. We welcome any and all reproductive medicine cases at the VMC.

Neurology and Neurosurgery

The Neurology and Neurosurgery Specialty at The Ohio State University Veterinary Medical Center (VMC) led by Dr. Ronaldo da Costa and Dr. Sarah Moore, has expanded and welcomes Dr. Laurie Cook to the faculty. Some common neurological conditions treated at the VMC include brain and spinal cord tumors and traumatic injuries, vestibular disease, cauda equina syndrome, intervertebral disk herniation, as well as epilepsy and seizure disorders. The VMC is equipped with state-of-the-art diagnostic equipment including CT and MRI.

Veterinarians in the Neurology and Neurosurgery Specialty are engaged in clinical research. One study is looking at Great Danes with cervical spondylomyelopathy (CSM), and another trial is examining dogs with acute spinal cord injury secondary to intervertebral disk extrusion. The VMC welcomes referrals for a variety of diverse neurological and neurosurgical conditions or cases suspected of having neurologic disorders.

Groundbreaking spinal cord injury study now accepting patients

Dr. Sarah Moore, assistant professor of Neurology and Neurosurgery at Ohio State's Veterinary Medical Center, is accepting patients for a promising study on dogs with spinal cord injuries (SCI). Currently, dogs with severe spinal cord injuries, which lack deep pain on presentation, only have a 50 to 60 percent chance of recovery. Secondary inflammatory molecules present in the cerebrospinal fluid (CSF) seem to be an important reason for failure to recover after SCI. Recent studies on rodents have shown that by inhibiting the secondary inflammatory molecules IL-1β, TNF-α, and possibly heat shock protein 70 (hsp70), through the systemic administration of purinergic receptor antagonists, functional outcomes after SCI were significantly improved. Dr. Moore’s study intends to characterize the inflammatory response seen in the CSF of dogs with naturally occurring acute spinal cord injuries secondary to intervertebral disk extrusion (IVDE) and correlate the levels of hsp70, IL-1β, and TNF-α with long-term functional outcome.

Dogs are eligible for the study if they require surgery for their IVDE, have been down for 48 hours or less, and have not received steroids within the seven days prior to referral. Dogs chosen for the study will be divided into two groups: those with loss of deep pain perception on presentation and those with less severe SCI. A CSF sample will be taken at the time of surgery to determine the character and degree of hsp70, IL-1β, and TNF-α responses. Levels of these inflammatory biomarkers will be correlated with neurologic outcome 90 days after surgery. Clients will receive a $100 credit toward their surgery bill for enrollment in the study and the cost of three post-operative rechecks will be covered by the study.

Patients will need to come in for three follow-up visits after surgery; the first about a week after surgery for removal of sutures and assessment of progress, and the second and third appointments will be roughly one and three months after surgery to measure long-term progress. “This is a really exciting study,” said Dr. Moore. “It will help us to gain a better understanding of the inflammatory mechanisms that occur after SCI so that therapies can be developed to improve long term outcomes in our canine SCI patients, and the results will also be highly translational to human medicine.”

For more information on this and other studies, or if you have a patient you would like to enroll in this trial, please contact our Clinical Trials Office at clinicaltrials@cvm.osu.edu or visit their website at vet.osu.edu/vmc/clinical-trials.
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The VMVC’s Interventional Medicine specialists are frequently in consultation with pediatricians from Nationwide Children’s Hospital on several animals. Dr. Scansen has collaborated with pediatric interventional cardiologists from Nationwide Children’s Hospital on several canine patients requiring novel interventional procedures. In Dr. Scansen’s words, “if it can be done for people, we can do it for their pets.”

The VMC's Interventional Medicine service treats a variety of conditions affecting the heart and vessels. Some services provided include tumor embolization, vessel occlusion, atherectomy, angioplasty, stenting, ureteral stenting, intrahepatic portosystemic shunt closure, arterial embolization to slow tumor growth, and foreign body retrieval from the GI tract and respiratory tract.

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