Our beautiful fall season is passing, and soon the holidays will be upon us. Even during the busy months of November and December, the Veterinary Medical Center remains open 24 hours a day, 7 days a week, for emergency care. We’re also open 8 a.m. to 5 p.m. Monday-Friday for your clients’ referral appointments. We know that your patients need assistance at all times of the year and we are here for them.

We also know that your clients may want the option of clinical trials as a treatment for their animals. Clinical trials represent the cutting edge of medicine: research expertise meets new treatments and improved outcomes, including a better understanding of animal diseases. At the time of this writing, we have more than 20 trials that are currently recruiting participants, including the national canine lymphoma study highlighted in this issue of “Update for Veterinarians.” You can find a list of all the trials at our Clinical Trials Office website, vet.osu.edu/vmc/clinical-trials.

We occasionally like to let you know in this newsletter about the success of our clinical trials. In this issue, we share a success story from our equine bone healing study. You will also read about the results of a clinical trial where autologous protein solution (APS) was used to treat equine osteoarthritis. You can find out more information about these and other ongoing studies at the Clinical Trials Office website.

Finally, in this issue we introduce you to three new faculty members, with expertise in diagnostic imaging, small animal medicine, and surgery. These veterinarians come to us with impressive backgrounds in scholarship and practice.

We encourage you and your clients to learn more about and take part in our clinical trials. And as always, we thank you for trusting us with your referrals. We take that responsibility very seriously and always strive to provide the best of care and service. Thank you for your partnership.
The VMC is currently participating in a nationwide clinical trial sponsored by the National Cancer Institute: COTC007b: Preclinical Comparison of Three Indenoisoquinolines Candidates in Tumor-Bearing Dogs. This clinical trial will evaluate the safety and efficacy of three structurally related, newly developed chemotherapy agents when administered to dogs with lymphoma. Although most dogs with lymphoma respond initially to current chemotherapy drugs, many eventually develop drug resistance. This study is the first time this class of drugs will be assessed in dogs with cancer.

Eligibility requirements include the patient having a histologically confirmed diagnosis of lymphoma, nodal presentation with at least one lymph node larger than three centimeters, and a favorable performance status. In addition, dogs must be feeling well and otherwise have good overall health with adequate organ function as determined by recent blood work. A two-week washout period from previous chemotherapy or radiation therapy is required, and dogs must not have received corticosteroids or L-asparaginase seven days prior to entry into the study. Both newly diagnosed dogs and those with recurrent/relapse diseases are eligible.

The trial is divided into two phases: a dose escalation phase to determine safety and a validation phase for biological assay development. All dogs enrolled in this study will receive pre-treatment tumor fine needle aspirate and biopsy, as well as pre-treatment bone marrow aspirate and blood collection. They will receive daily IV administration of an indenoisoquinoline for five consecutive days, with 24-hour serial PK collections on day 1 and day 5. Subsequent tumor aspirates, biopsies, and bone marrow aspirates will be taken throughout the 29-day study period. Dogs with a complete response or partial response may receive additional treatments, and dogs with stable disease or progressive disease will have the option to pursue a different off-study treatment option.

The sponsor will cover all study-associated costs once the dog is enrolled, as well as provide clients with a $1,000 account credit for any further veterinary care for their pet at the Veterinary Medical Center. Information from this study will provide potential benefit for dogs with lymphoma and also will assist in prioritization of indenoisoquinoline lead candidates for Phase II clinical trials in humans. For more information, contact the Clinical Trials Office at clinicaltrials@cvm.osu.edu or (614) 688-5713.
Clinical trial shows promising results for treatment of osteoarthritis in horses

Osteoarthritis (OA) is a problem equine veterinarians face on a daily basis. Although there are numerous treatments for OA with varying efficacy, the use of biotherapy is becoming more widely available, and in some areas of the country, is now the treatment of choice. Recently, Dr. Alicia Bertone, Trueman Chair for Equine Clinical Medicine and Surgery at the College of Veterinary Medicine, conducted a clinical trial in which autologous protein solution (APS) was utilized to treat horses with OA.

The prospective, double-blinded study enrolled 40 client owned horses diagnosed with lameness due to naturally occurring OA in a high-motion joint (fetlock, carpus, stifle, or upper hock joint). The horses were assessed at baseline and serially after injection for two weeks by measurement of joint circumference, pain-free range of joint motion (goniometer), lameness (AAEP scale), force plate analysis (vertical force peaks and impulses), and synovial fluid analysis. They were housed at the VMC for two weeks and exercised on days 1, 4, 7, 10, and 13 on a high speed equine treadmill.

The results of the study were quite remarkable. APS-injected horses showed significant improvement in lameness grade, vertical force, and pain-free range of motion at days 7 and 14 post-injection, compared to their pre-treatment levels and the control group. Intra-articular APS was shown to have a clinically modifying effect in improving lameness and joint pain in treated horses. Subjective assessments by the clients also indicated significant improvements in pasture/stall lameness and comfort levels between the baseline and the three-month follow-up. No adverse effects from the treatment were evident.

The relatively short time required for APS preparation and the availability of portable centrifugation equipment will allow intra-articular APS therapy to be a quick, point-of-care, ambulatory-based equine procedure in the future. It can be considered an effective and safe treatment option for equine OA with clinical sign-modifying effects on lameness and joint pain.

“One of the most significant things about APS is that it is a treatment option that can lead to the resolution of clinical signs of OA,” says Dr. Bertone. “This is not just a palliative therapy.” Please contact the Clinical Trials Office at clinicaltrials@cvm.osu.edu or (614) 688-5713 for more information about this study.

Update on success of ongoing equine bone healing study

The ongoing clinical trial on cell-mediated bone morphogenetic protein (BMP2) gene therapy for bone healing in horses has led to some very successful outcomes for horses with severe bone injuries. One notable case is an adult Quarter Horse that presented with a comminuted humeral fracture. Upon presentation, cells were collected for cell-mediated BMP2 therapy. At day 30, ultrasound-guided injection of the cells at the fracture site was performed. Radiographs were taken to assess healing at day 60 and revealed a dramatic response to the therapy.

An additional round of cell-mediated BMP2 therapy was utilized, and by six months the fracture was healed and the horse was comfortable and trotting free of pain. Typically, adult horses with humeral fracture suffer extended convalescence with secondary complications such as supporting limb deformity or founder. The before and after radiographs above show the acceleration of bone healing in this horse. More information about this study is available from the Clinical Trials Office at clinicaltrials@cvm.osu.edu or (614) 688-5713.
Welcome new faculty

Dr. Amy Habing, DVM, DACVR
Dr. Amy Habing is a 2004 graduate of the University of Illinois, joining the Veterinary Medical Center as a clinical assistant professor in diagnostic imaging. After graduation, Dr. Habing worked as an associate veterinarian in a busy five-doctor practice and then began a three-year residency in diagnostic imaging at Michigan State University (MSU) that she completed in 2010. During her residency, she developed a CT angiographic technique to image the pulmonary vasculature, which has been applied to clinical patients at MSU with immune hemolytic anemia to assess pulmonary thromboembolism. After her residency, Dr. Habing served as a faculty member in the diagnostic imaging service at MSU. She is a diplomate of the American College of Veterinary Radiology. Dr. Habing enjoys all aspects of academic radiology, including clinical service, teaching, research, and outreach. She especially enjoys teaching veterinary students and instructing residents, and she plans to continue her clinical investigations using CT angiography and other imaging modalities while at Ohio State.

Dr. Valerie Parker, DVM, DACVIM
Dr. Valerie Parker, a 2007 graduate of Tufts University, is joining the VMC as a clinical assistant professor in small animal internal medicine. After graduation, Dr. Parker completed a rotating internship in small animal medicine and surgery at the Animal Medical Center in New York City and then a three-year residency at Iowa State University, finishing in 2011. She also pursued a nontraditional residency in clinical nutrition, which she completed in 2012. A diplomate of the American College of Veterinary Internal Medicine, Dr. Parker will be pursuing her certification by the American College of Veterinary Nutrition. She was the recipient of the ACVIM Resident Research Award in 2011. Dr. Parker is passionate about clinical medicine and teaching and has an interest in clinical research. Her research interests include nutritional management of chronic kidney disease, gastrointestinal disease, and critical illness, as well as vitamin D status in chronic kidney disease and amino acid status in protein-losing nephropathy.

Dr. Katy Townsend, BVSc (hons), MS
Dr. Katy Townsend joins the VMC as a clinical instructor in small animal surgery. A 2004 graduate of the Veterinary Sciences Program at the University of Sydney, she worked in a general small animal practice in London, UK, before starting a rotating small animal internship at The Animal Health Trust in Newmarket, UK. She then completed an orthopedic research fellowship at Ohio State before moving to Ithaca, New York, to work at Syracuse University in their comparative orthopedic laboratory with Dr. Matthew Allen. In 2008, Dr. Townsend returned to Ohio State and began a four-year combined masters/residency program in small animal surgery, which she completed in 2012. Her thesis dealt with imaging modalities used to assess bone quality of the canine proximal femur in preparation for total hip replacement. Dr. Townsend is interested in all aspects of surgery, particularly soft tissue and surgical oncology, as well as in clinical research. She also looks forward to participating in the clinical instruction of students.

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