

WINTER 2015

2014 Potomac Regional Veterinary Conference Recap

by Kris Evans, DVM, DACVS, CCRT

The Fourth Annual Potomac Regional Veterinary Conference (PRVC) was held at the Hyatt Regency Hotel at Baltimore's Inner Harbor November 7-9, 2014. The conference location is on a rotating schedule between Washington DC (2011), Virginia (2012), West Virginia (2013); and in 2014, Maryland. The conference is sponsored by the four veterinary medical associations and offers 18 hours of continuing education. The conference has been successful each year, with 226 attending the Baltimore conference.

The PRVC has offered small animal, equine and practice management tracks over the past three years. This year there was a small general session on Friday centered on one health. All speakers for the tracks were well received. The small animal speakers Dr. Seim, Dr. Twedt, and Dr. Breitschwerdt, all well know national speakers, were especially well received and praised by the small animal attendees.

The PRVC offered two new tracks this year: a technician track and practice management track. Both were one-day events and offered 7 hours of CE. Bash Halow lectured dynamically on practice management. The technician lectures offered seven hours of practical topics in diverse areas of small animal practice; all were well attended, with positive comments.

The location of the PRVC this year at the Inner Harbor was great for meals and entertainment. The Hyatt provided a central location and easy access to restaurants for dining. However, the Inner Harbor is a busy and competitive location for conferences and rooms in the Hyatt sold out about one month in advance.

The location for our supporting sponsors and vendors also took a new twist this year, with the vendors' tables being set out in the common space like an open market. Breakfast, lunch, and snacks were also served in this area. The public space on the second floor was bright and airy, with skylights and great view of the Inner Harbor. Many vendors and attendees liked the open arrangement even though the spacing was a bit tight. We thank all our sponsors for their support this year and hope to see them back again next year!

Last, but not least, the cornhole competition should be mentioned. Cornhole was a new competitive event this year, replacing the bowling tournament from last year. A team from each VMA competed on Friday night. Maryland's VMA was the big winner again this year! Elanco graciously sponsored the event, donating t-shirts to all participants. The winners received the cornhole boxes that were made specially for the event.

Hope to see everyone in 2015 when we return to the Greenbriar in West Virginia.

-Prescribing and Dispensing Requirements and Establishing VCPRs
by David L. Handel, DVM, Chairman
Maryland State Board of Veterinary Medical Examiners

The pharmacy is an integral part of most small animal veterinary practices. It is a value-added service for most hospitals, and a way to provide one-stop shopping for veterinary clients. When clients get their medication from their veterinarian, they can feel good about the medication and where it came from. The pharmacy also has the potential to serve as a profit center for the hospital.

The Code of Maryland Regulations (COMAR) 15.14.01 through 15.14.17 was designed to regulate the practice of veterinary medicine in the State of Maryland and to ensure that Maryland consumers are receiving a certain standard of care. There are several regulations specific to prescribing and dispensing medication. COMAR 15.14.01.12-1A (Prescriptions) states, "A veterinarian may issue a prescription only under the following conditions: (1) [a] veterinarian-client-patient relationship exists; and (2) [t]he veterinarian is willing to dispense the drug for the patient." A veterinary-client-patient-relationship (VCPR) is defined to exist when all of the conditions of COMAR 15.14.01.03B(13) (Definitions) are satisfied. At a minimum, most states require that a patient has been physically examined within the preceding year in order for a valid VCPR to exist in veterinary medicine. Veterinarians frequently ask the State Board of Veterinary Medical Examiners (SBVME) whether or not they can fill a prescription for an animal they have not examined. COMAR 15.14.01.12-1F states, "A veterinarian may supply a veterinarian at a different veterinary hospital with a prescription drug to alleviate a shortage or supply need, but may not fill a prescription for a client that has been written by a veterinarian who is not an employee of that hospital." The regulations are very clear about this requirement. If a neighboring hospital is experiencing a shortage of a medication, they may request to borrow medication from you to dispense at your own clinic, but they cannot send a client to you to fill a prescription they have written. Why does this regulation exist? If a new pet owner requests a refill of an NSAID for a patient that your hospital has never seen, and you illegally comply with their request, you become responsible for a pet you have never examined. Continuing with this scenario, two days after you give the NSAID, the animal has a gastrointestinal bleed and dies. What was the cause? What was the patient's status prior to death? The short answer is that you have no idea because you did not examine the animal. The longer answer is that you are now responsible for this case and liable should a complaint come before the SBVME.

Another area that COMAR is very clear about is the usage of expired medications. COMAR 15.14.01.12-3 states, "A veterinarian may not administer expired medications to an animal." Because manufacturers cannot guarantee the potency of a given medication beyond its expiration date, it is not appropriate for a veterinarian to administer or dispense expired medications. This includes medications used for euthanasia. There are no exceptions. While waiting to appropriately dispose of expired medications, those expired medications shall be labeled and stored separately from the working stock. The pharmacy is an area of a veterinary hospital that is closely scrutinized by the SBVME's inspectors. Hospital owners and responsible veterinarians need to be aware that if the SBVME's inspectors find several expired

medications—to include biologicals—in and amongst the working stock of medications which would prompt a follow-up inspection, formal charges by the SBVME will likely be forthcoming. The SBVME is not required to issue warning letters for these types of violations.

Although the inspectors have specific tasks to perform when they come to your facility to conduct an inspection, they can also serve as a resource and offer suggestions to address issues that they have identified.

Additionally, it is important to be aware of the laws and regulations surrounding controlled substances stocked by your hospital. By definition, these medications have a high abuse potential and must be carefully secured and monitored. It is your duty, as the prescribing veterinarian, to be sure that all controlled drugs are logged and stored appropriately. Section C of COMAR 15.14.01.12 requires that veterinarians maintain all Schedule II drugs under lock at all times, however, a registered veterinary technician may have access to a working stock of Schedule II drugs kept under separate lock. Section D of this same regulation requires that veterinarians maintain all Schedule III-V drugs under lock when not in use.

Veterinarians are required to destroy all Schedule II-V drugs in accordance with U.S. DEA rules and regulations. These regulations were revised on October 9, 2014. Information about disposal options for expired drugs may be found

at:www.deadiversion.usdoj.gov/drug_disposal/index.html

In closing, as a practicing veterinarian in the State of Maryland, it is incumbent upon you to familiarize yourself with the laws and regulations governing veterinary medicine. All SBVME regulations can be found at <http://mda.maryland.gov/vetboard/Pages/regulations.aspx>.

Questions concerning the SBVME's laws or regulations may also be directed to the SBVME's office, at 410.841.5862, mailed to: State Board of Veterinary Medical Examiners, 50 Harry S Truman Parkway, Room 102, Annapolis, MD 21401.

-Equine Medical Center Celebrates 30th Anniversary
by Michael Erskine, DVM, DABVP (Equine), Interim Director
Equine Medical Center

The Marion DuPont Scott Equine Medical Center (EMC), in Leesburg, Virginia, one of three campuses of the Virginia-Maryland College of Veterinary Medicine (CVM) celebrated its 30th Anniversary this year. Since opening its doors in October 1984, the EMC has cared for more than 60,000 patients, helped to educate 4th year veterinary students, trained interns and residents, and contributed to new knowledge through important research and clinical discovery.

Throughout its history, the EMC has established itself as a first class equine hospital known for innovative expertise in a wide range of clinical services. And it has been an invaluable asset to the equine community and referring veterinarians in the region.

This year has also been a year for review and self-appraisal. With the changes in the economic landscape, the EMC has experienced significant financial challenges. Therefore, a comprehensive business review by an equine practice management consulting group was ordered by Dr. Cyril Clarke, Dean of the CVM. Their report was studied by key advisory council members and numerous faculty, staff and administrators from EMC and CVM. After an

exhaustive review process, a “Plan for a New Horizon” emerged that will guide reforms and new initiatives to ensure the EMC continues its important service to the equine community for the next 30 years.

Even while the “Plan for a New Horizon” was being developed, the EMC undertook significant steps to create a solid foundation on which to build a new future. For example, case coordinators are being assigned to all clinical cases and are tasked with overseeing and facilitating all aspects of the clinical case. They will help to ensure that cases are managed efficiently within the hospital, and that clients and referring veterinarians are kept informed about appointments and hospitalization. Case coordinators are key to improved client and referring veterinarian service.

In addition, the EMC hosted a number of events for referring veterinarians and clients throughout the year. Two veterinary CE seminars, one veterinary technician CE seminar and one Client Appreciation Day (that included a picnic, lectures, demonstrations and hospital tours) were all extremely well attended and successful. All of the events were complimentary to the attendees.

The recent CE seminar on January 16, 2015 focused on “Podiatry and Conditions of the Foot” and was open to veterinarians and farriers. Lectures and a wet lab were held. It was also complimentary.

Perhaps as a result of these and other improvements in client service and a significant investment in outreach, the EMC experienced considerable growth in caseload this summer. I can report that everyone at EMC is completely dedicated to excellent patient care and client service. And on behalf of the EMC, I’d like to thank Dr. Clarke, for his leadership and support of the EMC.

In the coming months, more initiatives will be launched. They include enhancements in patient care, improvements in client and referring veterinarian service and exciting investments in new clinical services, equipment and facility upgrades. They are ambitious plans, but we believe they are critical to the success of the EMC.

-VMCVM Mentor Program
by Bob Silcox, DVM

The VVMA/MVMA/WVVMA officially kicked off their Mentoring Program on October 16-17, 2014 at the Virginia – Maryland College of Veterinary Medicine. The program continues to grow and be increasingly successful. To date, there are over 350 students and 135 mentors participating in this very rewarding experience.

The Mentoring Program began this year with a Barbecue meet and greet in the recently renovated student commons at the College of Veterinary Medicine. Mentors had the opportunity to enjoy a delicious meal with their student mentees and exchange background information in a relaxed “get to know you” format. The Maryland students and mentors then changed venue to

the Bull and Bones Brewhaus and Grill to continue building camaraderie and take in the Virginia Tech vs. Pittsburgh Football game.

On Friday morning, the mentors were treated to a tour of VMCVM before sitting down with small groups of students to converse about a wide range of topics from what's the best strategy for paying off student loans to how do you make a good impression when looking for your first job. The morning wrapped up with a mentor panel question and answer session and a pizza lunch. Overall, it was a great start to this year's program and the efforts of the volunteer mentors are greatly appreciated by the student body. A special thank you goes out to all the Maryland mentors, especially Tom Armitage, Mike Erskine, John Kable, Jenny Krueger, Andrew O'Carroll, Pete Radue and Bob Silcox, all of whom made the trip to Blacksburg for the event. We need your support. Become a mentor today! Visit <http://www.vvma.org/Mentor-Program> to sign up.

Mentor Program Goals

- Match students with enthusiastic mentors in the student's area of interest
- Facilitate meetings with mentors and students in conjunction with MVMA events such as the mentor program kick-off breakfast and the MVMA Summer Conference
- Foster lasting friendships among peers
- Encourage student involvement in the MVMA

Expectations of our Mentors

- Enthusiasm for working with students
- Provide advice and support to assigned students
- Willingness to field phone calls and emails from students and possibly host clinic visits
- Meet with students either at the organized meetings or individually

What You Get Out of the Program

- Potential future associates
- Enjoy a sense of pride when you see your students grow and succeed
- Enhance your personal growth as a result of your exchanges with your students
- Model veterinary ethics and professionalism
- Feel a sense of accomplishment as you know you have helped guide tomorrow's leaders
- Refine your interpersonal skills and gain a greater sense of cultural diversity
- Keep informed with the latest medical and surgical information as it's taught today

-MVMA VMVCM Student Chapter Update by Kari Meidenbauer, Class of 2016

The MVMA student chapter at Virginia-Maryland College of Veterinary Medicine is doing extremely well and as of this fall semester 2014, our membership has burgeoned to over 60 members representing all four years of students at VMCVM. Last summer several students had the opportunity to attend the Annual MVMA Summer Conference in Ocean City, Maryland. These individuals were able to attend lectures specific to their interest as well as meet and interact with local veterinarians. There has been overwhelming positive feedback from their

experience and we have a large cohort of students looking forward to attending next year's conference as well.

More recently we cosponsored a weekend seminar on "Veterinary Leadership Development" hosting guest speakers Dr. Betsy Charles, Executive Director for the Veterinary Leadership Institute, and Dr. Julie Settlege, VMCVM Clinical Assistant Professor Large Animal Surgery Department. This event was a huge success with over 50 students attending the day-long seminar.

The club also participated in VMCVM's annual mentor day, where veterinarians from both Virginia and Maryland come to the school for a day to meet with students, answer questions, and build relationships. Mentor day was a continued success this year with a robust turnout from Maryland practitioners and a highly attended meet and greet social hour after the event at a local restaurant.

The club is currently is planning a "behind the scenes" trip to the National Aquarium lead by their veterinarians over Christmas Break. We are looking forward to several speakers over the course of the year that will provide students with a chance to hear about potential career paths in the future. If you will be near the Blacksburg campus or are interested in coming down to speak or meet with members of the MVMA-SC we would love to have you! We are always looking for more speakers. Please contact Kari Meidenbauer at kmeid@vt.edu.

-Ebola Virus: A Problem for Companion Animals?

by Celeste A. Clements, DVM, DACVIM

Veterinarians in the US should have little reason to be concerned that dogs or cats will become infected with Ebola virus and become clinically ill, or capable of infecting people or other animals. According to the Centers for Disease Control (CDC) Ebola Virus Disease (EVD) has not been confirmed in African dogs living where the problem is epidemic, and thus our canine or feline companions pose little risk of transmitting the infection.

<http://www.cdc.gov/vhf/ebola/transmission/qas-pets.html>

In fact, the CDC notes this among the "Top 10 Things You REALLY Need to Know about Ebola: Your Dog or Cat is not spreading Ebola."

<http://www.cdc.gov/vhf/ebola/pdf/top-10-things.pdf>

Despite these reassurances veterinarians are encouraged to review the natural behavior of Ebola to help educate pet owners and to prepare themselves for any future change in official positions about EVD and companion animals. There is a precedent for quarantine of US pets that have contacted symptomatic Ebola patients, so veterinarians should notify the responsible authorities if such contact is deemed likely. The AVMA suggests that you 1) Notify first your local Department of Public Health, 1-410-795-7365; 2) Then, consider reporting to the state veterinarian, Dr. N. Jo Chapman, Acting State Vet for Maryland, (410) 841-5810, or animalhealth.mda@maryland.gov; 3) And finally, contact the APHIS regional office for Virginia, Maryland, and Delaware, 804-343-2560, or VSVAMDDE@aphis.usda.gov. These officials would then be responsible assessing risk and for directing any veterinary quarantine or treatment.

Ebola Virus Disease (EVD) was first described in 1976 after simultaneous outbreaks of hemorrhagic fever in two Central African villages in Sudan and Democratic Republic of the

Congo (formerly Zaire), according to the World Health Organization (WHO) fact sheet. Sporadic outbreaks have occurred since then, but none rivaling the recent epidemic in West Africa, affecting principally Liberia, Guinea and Sierra Leone, which was ruled a Public Health Emergency of International Concern by the WHO on August 8, 2014. The disease spread rapidly in more urban settings, with over 7800 deaths and a high case fatality of approximately 50%.

<http://www.who.int/mediacentre/factsheets/fs103/en/>

Zaire ebolavirus (ZEBOV), one of 5 species of Ebolavirus within the family Filoviridae, is responsible for this most severe outbreak. There have been 4 confirmed cases in the US, with only one fatality: two health care workers were infected after handling the index patient who had traveled from Liberia to Texas, and a medical aid worker for Doctors Without Borders. Only the original African patient died.

<http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/united-states-imported-case.html>

EVD's hemorrhagic fever is characterized by immune suppression and a systemic inflammatory response that impairs vascular, coagulation, and immune systems, leading to multi-organ failure and shock (Feldmann, Lancet, 2011).

[http://www.ncbi.nlm.nih.gov/pubmed/?term=14.%09Feldmann+H.+et+al.%2C+Lancet.+2011+Mar+5%3B377\(9768\)%3A849-62](http://www.ncbi.nlm.nih.gov/pubmed/?term=14.%09Feldmann+H.+et+al.%2C+Lancet.+2011+Mar+5%3B377(9768)%3A849-62)

The WHO describes the clinical signs of EVD. After a variable incubation period of 2-21 days infected people develop fever, fatigue, muscle pain, headache and sore throat, signs similar to the common flu. Progressive signs include vomiting, diarrhea, and rash, with kidney and liver dysfunction, and mucosal or gastrointestinal hemorrhage in some, which may be confused for such regionally important concerns as meningitis, malaria or typhus. Common laboratory findings include low white blood cell and platelet counts and elevated liver enzymes.

<http://www.who.int/mediacentre/factsheets/fs103/en/>

Until specific vaccines or treatments are available patients with EVD should be aggressively supported with IV fluids and pressor agents, as needed, to maintain hydration and blood pressure; oxygen, if needed; pain control; nutrition; and treatment of any secondary bacterial infections and co-morbidities. The CDC does inform clinicians that FDA authorization of investigational use of vaccines, antiviral drugs, or convalescent plasma may be applied for on an individual basis, noting that these products have been used during the current African outbreak.

<http://www.cdc.gov/vhf/ebola/hcp/clinician-information-us-healthcare-settings.html>

Until an effective vaccine is available the major focus of disease control is limiting transmission through community engagement. Rapid recognition, prompt diagnosis and appropriate burial practices are some of the key objectives proposed by WHO to curtail the epidemic of EVD. It is currently thought that that fruit bats of the Pteropodidae family are natural hosts for the virus and that Ebola is introduced into the human population through close contact with the remains of infected bats, primates, forest antelope and porcupines, often eaten as bush meat. Human to human transmission occurs via direct contact through broken skin or mucous membranes with the blood, secretions, organs or other bodily fluids of infected people or the deceased, and fomites contaminated with these fluids.

<http://www.who.int/mediacentre/factsheets/fs103/en/>

Information about transmission of Ebola to domestic species and subsequent potential for zoonotic transmission is limited. Pigs infected with ZEBOV showed mild clinical signs and were able to transmit the virus to non-human primates in Weingartl's 2012 publication.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3406178/figure/F1/>

Consultants for the Veterinary Information Network (VIN), Radford Davis and J. Scott Weese prepared FAQs about Ebola on 11/12/2014, summarizing the information about some other species: "Guinea pigs, goats, and horses remain subclinical or develop mild clinical signs after experimental infection, but Ebola virus infection has never been observed in these species in the wild."

<http://www.vin.com/members/proceedings/proceedings.plx?CID=MEDFAQ&PID=95069&O=VIN>

In 2005 Allela et al reported on the behavior of Ebola in dogs in Emerging Infectious Disease: Ebola virus antibody prevalence in dogs and human risk. Dogs in Gabon were seroconverting and producing detectable levels of Ebola specific IgG after eating infected carcasses during an outbreak. None of the 439 dogs tested, however, demonstrated clinical signs of illness or was determined to be antigen or PCR positive for the virus. There was no proof of viremia in the dogs tested, but the authors concluded that dogs can be infected by Ebola virus and that the putative infection is asymptomatic.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=Allela+L%2C+Bourry+O%2C+Pouillot+R%2C+Delicat+A%2C+Yaba+P%2C+Kumulungui+B%2C+Rouquet+P%2C+Gonzalez+J-P%2C+Leroy+EM.+Ebola+virus+antibody+prevalence+in+dogs+and+human+risk.+Emerg>

In another VIN FAQ Doctors Weese and Radford discriminate between infection and seroconversion, stating that seroconversion only requires that antigen be presented by antigen-presenting cells to lymphocytes, while infection requires invasion of host cells, replication, and shedding.

<http://www.vin.com/members/proceedings/proceedings.plx?CID=MEDFAQ&PID=95069&O=VIN>

Since there are some additional questions about the possibility of dogs serving as fomites for the transmission of Ebola the CDC advocates for extra care in handling of companion animals in contact with known or suspected Ebola victims.

<http://www.cdc.gov/vhf/ebola/transmission/qas-pets.html>

As a noted microbiologist and member of the the Centre for Public Health and Zoonoses of the Ontario Veterinary College Dr. Weese was included in a multidisciplinary team headed by the CDC, the AVMA Ebola Companion Animal Response Plan Working Group, to offer interim guidance on the status of dogs and cats exposed to Ebola virus and for their quarantine. He references these guidelines and describes his handling of "Merlin" to simulate a quarantine situation in his blog

<http://www.wormsandgermsblog.com/2014/11/articles/animals/dogs/animal-ebola-guidance-documents-hot-off-the-press/>

<http://www.wormsandgermsblog.com/2014/12/articles/animals/dogs/merlin-had-ebola-today/>

Bentley, the dog, was actually quarantined for 21 days by the City of Dallas at a cost of \$27,000 after his nurse-owner was diagnosed with EVD, reported the Associated Press. Bentley was

housed in a refitted military facility, with attendants and playmates attired in full Hazmat gear. The logistics and expenses of confining one small and agreeable dog underscore the challenges of providing appropriate levels of care to larger numbers of pets, especially large or aggressive ones.

<http://www.wfaa.com/story/news/local/2014/12/03/dallas-officials-ebola-response-cost-155k/19854273/>

Maryland veterinarians are unlikely to be faced with the specific challenge of a dog or cat needing an Ebola quarantine, but spending a few moments to think about it offers a good lesson in preparedness. Pet owners may have questions and concerns to address. Happily, we have many resources to aid us as we advocate for pets and pet owners.

-Canine Distemper Virus Could Be Significant Driver Toward Tiger Extinction Smaller Populations More at Risk

Along with the pressures of habitat loss, poaching and depletion of prey species, a new threat to tiger populations in the wild has surfaced in the form of disease, specifically, canine distemper virus (CDV). According to a new study from the Wildlife Conservation Society (WCS) and its partners, CDV has the potential to be a significant driver in pushing the animals toward extinction.

While CDV has recently been shown to lead to the deaths of individual tigers, its long-term impacts on tiger populations had never before been studied.

The authors evaluated these impacts on the Amur tiger population in Russia's Sikhote-Alin Biosphere Zapovednik (SABZ), where tiger numbers declined from 38 individuals to 9 in the years 2007 to 2012. In 2009 and 2010, six adult tigers died or disappeared from the reserve, and CDV was confirmed in two dead tigers—leading scientists to believe that CDV likely played a role in the overall decline of the population. Joint investigations of CDV have been an ongoing focus of WCS and Russian scientists at Sikhote-Alin Zapovednik and veterinarians at the regional Primorye Agricultural College since its first appearance in tigers in 2003.

A key finding of this study: Modeling shows that smaller populations of tigers were found to be more vulnerable to extinction by CDV. Populations consisting of 25 individuals were 1.65 times more likely to decline in the next 50 years when CDV was present. The results are profoundly disturbing for global wild tigers given that in most sites where wild tigers persist they are limited to populations of less than 25 adult breeding individuals.

The scientists used computer modeling to simulate the effects of CDV infection on isolated tiger populations of various sizes and through a series of transmission scenarios. These included tiger-to-tiger transmission and transmission through predation on CDV-infected domestic dogs and/or infected wild carnivores (such as foxes, raccoon dogs and badgers). High and low-risk scenarios for the model were created based on variation in the prevalence of CDV and the tigers' contact with sources of exposure.

Results showed that CDV infection increased the 50-year extinction probability of tigers in SABZ as much as 55.8 percent compared to CDV-free populations of equivalent size.

“Although we knew that individual tigers had died from CDV in the wild, we wanted to understand the risk the virus presents to whole populations,” said WCS veterinarian Martin Gilbert. “Tigers are elusive, however, and studying the long-term impact of risk factors is very challenging. Our model, based on tiger ecology data collected over 20 years in SABZ, explored the different ways that tigers might be exposed to the virus and how these impact the extinction risk to tiger populations over the long term.”

WCS Russia Program Director Dale Miquelle said, “Tigers face an array of threats throughout their range, from poaching to competition with humans for space and for food. Consequently, many tiger populations have become smaller and more fragmented, making them much more susceptible to diseases such as CDV. While we must continue to focus on the primary threats of poaching and habitat destruction, we now must also be prepared to deal with the appearance of such diseases in the future.”

Priorities for future research, according to the authors, include identifying the domestic and wild carnivore species that contribute to the CDV reservoir, and those that are the most likely sources of infection for tigers. Tigers are too rare to sustain the virus in the long term, so CDV must rely on more abundant carnivore species to persist in the environment. Understanding the structure of the CDV reservoir will be a critical first step in identifying measures that might prevent or control future outbreaks.

In addition, since we now know that small tiger populations are at greater risk to diseases such as CDV than larger populations, conservation strategies focusing on connectedness between populations become all the more important.

“Estimating the potential impact of canine distemper virus on the Amur tiger population (*Panthera tigris altaica*) in Russia,” appears in the current online edition of PloSONE. Authors include: Martin Gilbert of WCS and Boyd Orr Centre for Population and Ecosystem Health at the University of Glasgow; Dale G. Miquelle of WCS; John M. Goodrich of Panthera; Richard Reeve, Sarah Cleaveland and Louise Matthews of Boyd Orr Centre for Population and Ecosystem Health at the University of Glasgow; and Damien Joly of WCS and Metabiota.

[For a link to the paper, click here.](#)

This study was made possible through generous support from [Morris Animal Foundation](#), Zoo Boise Conservation Fund, AZA Tiger Species Survival Plan Tiger Conservation Campaign, and the Biotechnology and Biological Sciences Research Council.

“Morris Animal Foundation is thankful to Dr. Miquelle and his team for helping protect the Amur Tigers,” said [Diane Brown, DVM, PhD, DACVP and Chief Scientific Officer](#) for Morris Animal Foundation. “Our Foundation values their hard work and dedication to this study and we look forward to many more partnerships with the Wildlife Conservation Society.”

-MVMA EVENTS

Bovine Conference Set for March 26-27

If you are a practitioner of bovine veterinary medicine, register today for MVMA's Mid-Atlantic States Conference for Bovine Practitioners. The conference is a premier opportunity for

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