

WEST COAST VETERINARIAN

DECEMBER 2016 | Nº 25

UBC'S DAIRY EDUCATION & RESEARCH CENTRE



**BJ HUGHES CENTRE
FOR CLINICAL LEARNING**

RADIATION SAFETY STANDARDS

AIMING FOR A BIRD'S EYE VIEW

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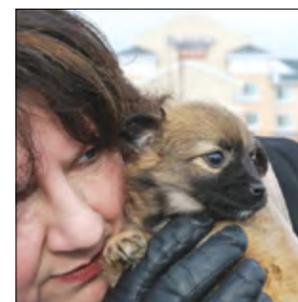
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COREY VAN'T HAAFF
EDITOR

» TO THE EDITOR

Letters from members are welcome. They may be edited for length and clarity. Email us at wcveditor@gmail.com.

» ON THE COVER

UBC Dairy cows grazing. Photo by Martin Dee, UBC Communications & Marketing.

I love life's 'I didn't know that' moments, and in this issue of *West Coast Veterinarian*, I had several of them. I've never known why people want to have their dogs' ears or tails docked, despite having had tail-docked dogs in my early life. It seems now, to me anyway, to be rather barbaric, slicing off ears and tails for what is loosely referred to as a cosmetic purpose. The findings of UBC's research indicate that not only do these cosmetically altered dogs appear more aggressive to the public, their owners do too. Perhaps one way to counter this terrible alteration of dogs is to find a way to encourage the public perception that owners of altered dogs are super sweet and huggable. I am certain, at the very least, that the dogs surely are. Not all owners of cosmetically altered dogs are inclined to toughness, although some may be. Perhaps by taking away the toughness factor for those owners, we can remove their urge to surgically change an animal solely to suit their own tender egos.

In November, the Board met in person, and we heard from the Dean of the WCVM about the BJ Hughes Centre for Clinical Learning. This uber-cool facility allows students to get hands-on experience without necessarily involving an animal. I did not know it was even possible for students to practise skills without enlisting animals (as I learned when we previously discussed fistulated cows). At the WCVM, students can practise to their hearts' content, even repeatedly, without needing to consider animal welfare concerns.

Finally, we are very happy to include another article by Dr. Veronica Gventsadze about wildlife health and the veterinarians' role. Again, veterinarians are called upon to have difficult conversations with people to change their way of thinking, all in the protection of an animal's welfare, such as with outdoor cats and their predation of wild birds (the concept of outdoor cats is something else I have never understood). Veterinarians are in such an enviable role to be able to sway public opinion about animal welfare topics, and I am thrilled that Dr. Gventsadze will provide a regular column on wildlife welfare for our readers to consider.



ERRATUM

In the September issue of *West Coast Veterinarian*, we neglected to provide credit for the photo accompanying the article "Fallout from the Quest for Gold" on page 34, written by Veronica Gventsadze, DVM. We apologize for this oversight. Please see her article "Aiming for a Bird's Eye View" on page 16 of this issue.

Photo courtesy of Radio-Canada/Claudiane Samson



KOHARIK ARMAN, DVM, graduated from the Atlantic Veterinary College in 2007 and entered feline-specific practice in Ottawa, ON. She moved to

Vancouver in 2009 and started working at Cats Only Veterinary Clinic where she is currently employed. She also does locum work at Vancouver Feline Hospital and North West Nuclear Medicine for Animals. Koharik is a member of the Board of Directors of the CVMA-SBCV Chapter.



LINDA CREWS, BScH, DVM, graduated from Ontario Veterinary College in 1997. She is involved in reviewing, investigating, and teaching the

benefits of medical records to veterinarians—previously with the CVO for nine years, and for the past five years with the CVBC. She is the founder of Advise a Vet Services which helps teach veterinarians the benefits of good quality medical records.



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MARINA (NINA) VON KEYSERLINGK, BSc, MSc, PhD, is a Professor and a NSERC Research Chair. Nina grew up on a cattle ranch in British

Columbia. She co-leads UBC's Animal Welfare Program whose mission is to improve the lives of animals through teaching, research, and outreach. She has been recognized nationally and internationally for her scientific contributions to the field of animal welfare.



JESSICA ROBERTSON, DVM, completed an undergraduate degree in Agroecology at UBC in 2002 before moving to Saskatoon to attend the WCVCM.

After graduation in 2009, she came back to the West Coast and has been working in small animal general practice since then, first as an associate and more recently as a locum veterinarian. Jessica is a member of the Board of Directors of the CVMA-SBCV Chapter.



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HORACE YEUNG, DVM, graduated from Atlantic Veterinary College in 2009. After graduating, he moved to Vancouver Island and joined Hillside

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WCV

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UBC'S DAIRY EDUCATION & RESEARCH CENTRE



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RADIATION SAFETY STANDARDS



deceember

“THE CANADIAN VETERINARY RESERVE IS CALLING ON CANADIAN VETERINARIANS TO HELP ADDRESS THE NEEDS OF ANIMALS IN LARGE-SCALE DISEASE EMERGENCIES AND NATURAL DISASTERS”

The CVMA sent The Honourable Jane Philpott, Minister of Health, a response to Canada Gazette's Part I publication on Regulations Amending the Food and Drug Regulations. The CVMA supported the general direction taken by the proposed regulations with respect to strengthening veterinary oversight of the use of antimicrobial drugs in animals. It raised concerns, however, regarding gaps in the proposed regulation of Active Pharmaceutical Ingredients in Canada. Read the complete letter on the CVMA website, under News & Events.

During the first CVMA National Issues Forum in July, veterinarians were asked for their opinions on the draft CVMA position statement “Importation of Dogs into Canada.” It will be presented to the CVMA Council for approval by the end of 2016/early 2017. The Report of the Canadian National Canine Importation Working Group can be found on the CVMA's website, under the Policy & Advocacy tab, National Issues section.

The following revised position statements are on the CVMA's website, under the Policy & Advocacy tab: Castration of Piglets, Disbudding and Dehorning of Cattle, Induced Moulting of Poultry, Tail Docking of Dairy Cattle, and Use of Thermocautery for the Treatment of Lameness in Horses.

The Canadian Veterinary Reserve is calling on Canadian veterinarians to help address the needs of animals in large-scale disease emergencies and natural disasters. All members receive appropriate training specific to the disaster response and are remunerated for their service upon deployment. Learn more and join under the Science & Knowledge tab of the CVMA website.

The 2017 CVMA Award Nominations opened on November 1. Nominations for awards are being accepted until January 31, 2017. We invite you to consider nominating a deserving colleague for one of our prestigious awards. Visit the CVMA Awards section of www.canadianveterinarians.net for more information.

The 2015 CVMA National Practice Owners Economic Survey Report is now available. The survey gathers data on revenue, expenses, income, numbers of current and new clients, fees, and DVM and non-DVM staff compensation. Visit the Business Management Program section of the CVMA website to view this report.

Did you know that CVMA members can subscribe to the global edition of Clinician's Brief™ for free? Visit the CVMA website, Member Benefits & Services section, and log in to access the CVMA subscription form. Members can also receive an exclusive 30 per cent discount on Plumb's Veterinary Drugs™. Purchase the discounted individual or practice subscription by entering a special coupon code at checkout. Contact the CVMA office for the code.

I and the staff of the CVMA, as well as the Board and staff of the CVMA-SBCV Chapter, value your continued support as a CVMA and Chapter member so we may continue to provide a voice for Canadian veterinarians. The CVMA and the CVMA-SBCV Chapter welcome your comments and enquiries.



Troy Bourque, DVM, originally from Fredericton, NB, graduated from the Atlantic Veterinary College in 2000. Dr. Bourque was a mixed animal veterinarian for 14 years in Okotoks, until 2014, when he began working as an emergency veterinarian at Fish Creek 24-Hour Pet Hospital in Calgary. He now also works at

Big Rock Animal Clinic in Okotoks, practicing small animal medicine. Dr. Bourque was involved in the Alberta Veterinary Medical Association (ABVMA) for 14 years and served on council from 2006 to 2012, and as president in 2010. He has been involved with the CVMA for over five years on various committees including the Executive Committee, the Communications Advisory Group, and most recently as the Chair of the Veterinary Pharmaceutical Stewardship Advisory Group.

It feels as though 2016 has flown by in a snap. I have been to many veterinarian association meetings this year and have come back more motivated than ever. The CVMA-SBCV Chapter is keen to work hard for BC veterinarians by promoting the profession and educating the public. At our council meeting this November, in conjunction with our yearly conference, we discussed setting up a strategic meeting to execute a plan to do this and roll some of our ideas out in 2017.

In October, in conjunction with the CanWest conference in Banff, veterinary association representatives attended the WAVA (Western Assembly of Veterinary Associations) meeting to discuss both regulatory and member services issues across Western Canada. WAVA meets twice a year, and this meeting was attended by representatives from the MVMA, SVMA, ABVMA, CVBC, and of course the CVMA-SBCV Chapter. I have been to three of these meetings, and I really love this group of people who are all leaders in the field and share the goal of enhancing and protecting our profession and our relationship with the public.

Some great topics emerged from the WAVA meeting which the CVMA-SBCV Chapter hopes to help promote and share with its members. One, which came out of the 2016 CVMA Summit, is the 10 suggested standards of prescribing and dispensing antibiotics. This is in response to the changes in prescribing antibiotics across Canada which will happen in 2018 according to the CVR. We discussed actions to take

at provincial levels to help implement oversight, and what each province is doing. Many are implementing mandatory CE for education on this topic, and providing educational videos and information on their websites for their members. The SVMA has kindly offered to share their antimicrobial stewardship video with the CVMA-SBCV Chapter, and we will be posting the video live in the very near future.

Another hot topic was canine importation across borders from the US and Central America to rescue groups in Canada. We discussed the responses of each province to this issue of public and animal health. Most of the provincial associations have active animal welfare groups who work toward providing veterinary and public education. The crux of the problem has been identified as a border control issue, and until the government actively patrols animal border crossing and sees it as a public health risk, canine importation through rescues and thus the import of potential contagious/zoonotic disease will continue. Veterinary leaders such as provincial veterinary associations and the CVMA must continue to pressure the government and educate their members and the public on this issue.

The CVMA-SBCV Chapter will continue to help its members promote the profession and educate the public on the above topics and more. We will do so through this magazine, our website, and our yearly conference, by reaching out to the media, and with our new committee, the animal welfare committee. As always we invite you, our members, to step up and take an active role in helping us do this. We are always looking for volunteers for committees and for council members.



Sarah Armstrong, DVM, graduated from OVC in 2007. Following graduation, she worked full time in general practice and worked part time at a local emergency practice in Southern Ontario before moving to Vancouver, BC, where she currently works at the Vancouver Animal Emergency Clinic.

“ANOTHER HOT TOPIC WAS CANINE IMPORTATION ACROSS BORDERS FROM THE US AND CENTRAL AMERICA TO RESCUE GROUPS IN CANADA”



IT'S OKAY TO ASK FOR HELP

The Homewood Health Employee and Family Assistance Program Distress phone line is available 24/7 to all British Columbia veterinarians: 1.800.663.1144 | 1.888.384.1152 (TTY) | www.homewoodhealth.com.

Additional mental health and wellness resources are listed at: www.canadianveterinarians.net/documents/mental-health-support-resources.

ONE WELFARE CONFERENCE

Recently, I was fortunate enough to be able to attend the International One Welfare Conference in Winnipeg, MB. You may be familiar with the One Health concept, which tries to bring the areas of Agriculture, Environment (wildlife), and Human Health together to address issues that overlap all three areas. An example is influenza, sourced in wild waterfowl, a significant economic and health issue in poultry, and a challenging and serious disease in human health.

The One Welfare concept is a framework that combines human and animal health and welfare. The conference highlighted the need for collaborations between governments, behavioural health specialists, and animal welfare agencies, as well as front-line social workers, practicing veterinarians, policymakers, and other stakeholders to support successful outcomes when both human and animal welfare issues are present.

The concept for this conference started with the challenging issue of dealing with animal hoarding. Too often, the responsibility rests with only the human or the animal side. It was clear that not dealing with the welfare of the animals, or not dealing with the support required by the impacted people, results in less than adequate resolution on both sides.

Personally, I had never really considered the behavioural health issues that lead to an animal hoarding situation. Now, having some understanding of it, I hope that we can make sure the people involved are supported appropriately, which does not necessarily mean banning them from owning animals again. Their relationship with their animals may be the only positive thing in their lives, and to remove that completely is not being humane to them, despite our need to address the animal welfare issues.

I was familiar with the equine and canine programs in jails and with at-risk groups that use animals to help humans deal with complex issues. I have heard about the work with homeless pet owners and the support needed for them. I was amazed at the work of an Irish group working with veterinary practitioners in outlying regions to help them recognize the link

between animal welfare issues and the risk of abuse within the farm family. Veterinary practitioners are often the only professionals with access to the property or with contact with the family. This Irish group educates the veterinarians on recognition and reaction to these issues and provides support for them. I was shocked to hear that when at-risk family members do open up to a veterinarian, providing written information to them would only put them at higher risk. After contact with anyone, these individuals are often searched, and that contact information would show they had shared the 'secret.'

I heard how critically important social workers are becoming at veterinary schools, not just to support the faculty and staff, but in supporting the clients who come to clinics in crisis due to the challenges faced by their animals. I was astonished by the information that farmers as a group have one of the highest risks for suicide.

I have come away from this conference with a different approach to the clients of both our Plant and our Animal Diagnostic labs. I now see both the need and the opportunity to work with crisis-support agencies, university social work programs, and BC agricultural associations to increase awareness of available services that can help our clients in their time of need.



Jane Pritchard, DVM, MVetSc, graduated from OVC in 1977, and completed a Masters in Anatomic Pathology at WCVM in 2000, continuing as an Associate Professor in the Department of Pathology for two years before embarking on a career with the BC Ministry of Agriculture in 2004. With the

exception of a two-year international development project in China from 2007–2009, she has remained with the BC Government. In 2013, she was appointed to the role of Director of the Plant and Animal Health Branch, and Chief Veterinary Officer for the Province of British Columbia.

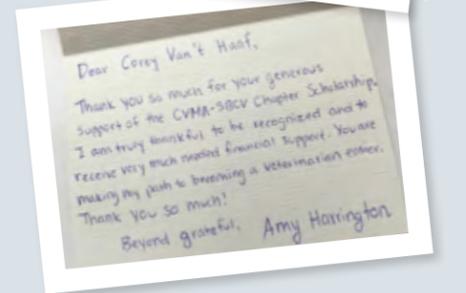
“I WAS ASTONISHED BY THE INFORMATION THAT FARMERS AS A GROUP HAVE ONE OF THE HIGHEST RISKS FOR SUICIDE”



PHOTO BY DEBRA MARSHALL



PHOTO COURTESY OF WCVM



ABOVE BC-quota students who are part of the WCVM's Class of 2020. **RIGHT** (from top) Amy Harrington, the CVMA-SBCV Chapter 2016 Scholarship winner, with Dr. Al Longair and Dr. Doug Freeman; Amy's thank-you note to Corey.

THANK YOU TO THE CVMA-SBCV CHAPTER'S FALL CONFERENCE SPONSORS

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PHOTO BY CHRISTINA WEISE

BJ HUGHES CENTRE FOR CLINICAL LEARNING

This past week, my classmates and I had the pleasure of being the first users of the BJ Hughes Centre for Clinical Learning at the WCVM. At the beginning of a bovine health class, our professor, Dr. Chris Clark (who also happens to be our newly appointed Associate Dean, Academic), asked us to put on our lab coats and head to the Centre after class to participate in the grand opening photo shoot, and in return we would get free coffee. To be honest with you, my attention was piqued at the thought of free coffee, so I immediately headed to the Centre after class along with about half of my classmates. What we found in the Centre was unexpected and amazing, to say the least. There were about 13 stations set up around the room which allowed students to practice various clinical skills, everything from suturing and inserting endotracheal tubes, to palpating internal structures in large animals, and performing inhalation anesthesia in a surgery setting. The lure of free coffee forgotten, we were thrilled at the prospect of practising our clinical skills, and we busily set about exploring and performing all of the activities at each station. So here is the catch—and the thing that makes this new facility so incredible—there wasn't a single real animal in the room!

The BJ Hughes Centre for Clinical Learning is a simulation centre, designed to help veterinary students learn and refine their clinical skills without the involvement of animals. Planning for the Centre began over five years ago, and was made possible through a substantial donation of \$340,000 from Bev Hughes and the BJ Hughes Foundation (followed by a further \$250,000 donation on opening day to ensure the smooth operation of the Centre). Simulation-centred learning has already been adopted in many medical schools as a way for students to become more proficient in their clinical skills, so it was only natural that the WCVM followed suit. As the WCVM's Dean Dr. Douglas Freeman said, "The development of this new centre will place the WCVM at the forefront of these developing technologies and give our students the best learning experience possible. We are so thankful for the vision and drive of Bev Hughes, whose gift has put ideas into action at the WCVM."

While learning on real animals is an essential component of veterinary school and does occur in the later years of the program, obviously this presents animal welfare challenges as it calls into question our use of such animals for learning purposes. For a number of years now, there has been a push towards

replacement, refinement, and reduction in terms of animals involved in research and teaching. This simulation centre will offer students an alternative to practising their skills on live animals until our techniques are perhaps a bit more refined and thus easier on the animals involved. Similarly, the Centre can also provide students with opportunities to practise certain procedures we would not generally undertake until working in a clinic, thereby assisting us in becoming more proficient and competent veterinarians upon graduation. All in all, this is a huge and important development for the WCVM.

So how is the Centre going to work? The current plan is that students will have 24-hour access, which means they can visit at any time (provided the Centre isn't in use by a class) to practise and refine their skills. The models at each simulation station are as lifelike and technologically advanced as possible, allowing students to get hands-on experience under conditions that are as close to reality as it gets. It will also allow students the ability to repeat these procedures a number of times and thereby gain confidence and become proficient in them, something that simply wouldn't be possible (or ethical) to do using real animals.

I am looking forward to using the Centre throughout my remaining two years of veterinary school and am confident that it will allow me to leave the WCVM as a more highly skilled graduate. I feel that the BJ Hughes Centre for Clinical Learning is a major leap forward for the WCVM and for veterinary schools in general. Not only will it benefit the students who use it, but it is also clearly a reflection of the concern and compassion for animals that led many of us down this career path to begin with. I am proud to be a student of the WCVM and be a part of such an important innovation in our education and learning. My only complaint regarding the Centre is that it wasn't around when I first started veterinary school, but I guess the free coffee makes up for that!



Amber Backwell was born and raised in London, ON, and moved to BC in 2009 to pursue a Masters of Public Health. She is looking forward to returning to BC upon graduation from WCVM to work in a mixed animal practice and hopes to be involved in wildlife medicine one day.

When not in school, she likes to hike, camp, ride horses, and do anything else involving the outdoors. She is currently in her third year of the DVM program at the WCVM.

LEFT Third-year veterinary student Jackie Harrison at the Centre.



BY MARINA VON KEYSERLINGK, BSc, MSc, PhD

TAIL DOCKING AND EAR CROPPING DOGS

DO THESE PROCEDURES INFLUENCE PUBLIC PERCEPTIONS OF THE DOGS AND THEIR OWNERS?

PHOTO AT LEFT BY LEBEDINSKI VLADISLAV/SHUTTERSTOCK.COM

T

ail docking and ear cropping are two common procedures performed on a variety of dog breeds. They are primarily done for cosmetic purposes, but do they influence how dogs and their owners are perceived?

New research from the University of British Columbia (UBC)'s Animal Welfare program has focused on the public's awareness and perceptions of these two common practices. This research was divided into three different studies that involved surveying members of the American public through an online survey platform. The surveys assessed awareness of tail docking and ear cropping, perception of dogs that undergo these procedures, and perception of the owners of these dogs.

In the first survey, we found that 42% of participants (n=810) were unable to correctly explain why tail-docked and ear-cropped dogs had short ears and tails—believing that they were a consequence of genetics rather than something that the owner or breeder had done. The results of the second study provide evidence that the participants (n=392) perceived dogs that had been ear-cropped and tail-docked as more aggressive, more dominant, less attractive, and less playful when compared to dogs in their natural state. Equally interesting were the results from the last study (n=410 participants), which provide the first evidence that the owners of dogs that had undergone these procedures were perceived more negatively, specifically as more aggressive, more narcissistic, less playful, less talkative, and less warm compared to owners of dogs with intact tails and ears.

This work is the first to focus on a sample of public participants to determine their views on medically unnecessary veterinary procedures—tail docking and ear cropping in dogs. Until this point, survey-based research on this topic has only included samples of veterinarians and dog breeders, both of whom are very familiar with these practices. However, the general public is a key stakeholder, and research that includes the public needs to be added to the discussion.

Legislation banning and/or restricting these procedures is being put in place around the world; in 2015, the College of Veterinarians of British Columbia banned ear cropping despite strong opposition from dog breeders. The problem is that while these procedures are extremely common, and people have most likely seen a dog that has had its tail docked or ears cropped, they may not have realized that the dog has been surgically modified. Interestingly, since many participants (42%) were unaware of tail docking and ear cropping, it appears that they unconsciously attached negative attributes to both the modified dogs and their owners.

This research is important because it can add to the conversation surrounding the acceptability of these practices by the public who collectively make up our society. Previous research has also shown that there is pain associated with these procedures, in addition to negative impacts on social interaction—both between humans and other dogs. This research also provides evidence that, in the case of tail docking and ear cropping of dogs, public perception—both of the owner and the dog—can be negatively impacted as well.

This study is one part of a larger research program within the UBC Animal Welfare Program aimed at improving the lives of animals. [WCV](#)

“THE COLLEGE OF VETERINARIANS OF BRITISH COLUMBIA BANNED EAR CROPPING DESPITE STRONG OPPOSITION FROM DOG BREEDERS”



Example of natural and modified full body images presented to participants to assess participants' perceptions of ear cropping and tail docking in dogs. Additional dog breeds presented to participants include Brussels Griffon, Boxer, and Miniature Schnauzer. Photos by Mary Bloom, with permission.

RVT? VT? VTS? AHT? RAHT? WHAT'S THE DIFFERENCE?

BY HEATHER L. SHANNON, AHT, RVT

Let's see if we can clear up what all these initials mean in the vet tech world! I have been a Registered Veterinary Technologist for over 27 years, and I have come to realize that many of us in the veterinary profession frequently mix up the abbreviations or use them incorrectly. I hope this list will help everyone, including Veterinary Technologists/Technicians, and diminish any confusion.

Let's start at the beginning, with school. Techs will graduate from either an accredited Animal Health Technology program or a Veterinary Technology program. There are non-accredited programs in Canada; be sure to check qualifications.

Once graduated, techs have earned a diploma and are eligible to write the Veterinary Technology National Examination (VTNE). If they pass, they become Veterinary Technicians/Technologists, or VT for short.

In order to put the R in front of the VT to become an official RVT, a tech must register with the provincial association in the province of residence. For BC, this is the British Columbia Veterinary Technologist Association (BCVTA). In order to be a member in good standing of the BCVTA, the tech must meet certain criteria, including graduating from an accredited program, passing the VTNE, and maintaining yearly continuing education. For more information on becoming an RVT, be sure to check out www.bcvta.com. Included in the yearly BCVTA fee is a membership with the Registered Veterinary Technologists and Technicians of Canada (RVTTTC), which provides magazines, online CE links, etc.

What about the AHT (Animal Health Technologist/Technician) or RAHT (Registered Animal Health Technologist/Technician) initials? Here's the scoop; those terms are obsolete in most of Canada but might still be used in Alberta, Quebec, and Manitoba.

“VETERINARY TECHNOLOGISTS/ TECHNICIANS SHOULD ONLY BE USING THE INITIALS RVT IF THEY ARE REGISTERED WITH THEIR PROVINCIAL ASSOCIATION AND ARE MEMBERS IN GOOD STANDING”

A tech may have graduated from an Animal Health Technology program and is entitled to add those letters behind their name to show that they graduated from an AHT program. However, the initials RAHT no longer apply or are accurate to use in BC. Nationally, vet techs decided to use the term RVT (Registered Veterinary Technologist/Technician), and in BC, the BCVTA voted to follow suit, for reciprocity.

The designation RVT now has occupation title protection, meaning only VTs who are registered in good standing through their provincial association may use these initials.

An RVT (but not a VT) may choose to become a VTS (Veterinary Technician Specialist). This is maintained by the National Association of Veterinary Technicians in America (NAVTA) and includes extra education, training, examinations, and specialized continuing education. Veterinary Technician Specialist (VTS) initials are written after a technician's name followed by the specialty, for example, John Doe, RVT, VTS (anesthesia). For more information on vet tech specialties, please see the NAVTA website: www.navta.net.

RLAT may also be added after the RVT initials, indicating Registered Laboratory Animal Technician, identifying technicians who are qualified to work in research and have had more training, examinations, and continuing education. RLATs are associated with the Canadian Association for Laboratory Animal Science (CALAS). For more information, please refer to: www.calas-acsal.org.

LVT (Licensed Vet Tech) and CVT (Certified Vet Tech) come from the US or other parts of the world. Be sure to check the tech's qualifications to ensure that training is from an accredited program and that Canadian standards to qualify as RVTs in the province have been met.

VOA (Veterinary Office Assistant) refers to someone who has taken a six-month certificate program. The term VA (Vet Assistant) is used for a layperson who has been trained on the job without any formal education.

To sum up: Veterinary Technologists/Technicians should only be using the initials RVT if they are registered with their provincial association and are members in good standing. Otherwise, they are VTs. [WCV](http://www.wcv.com)

| INITIALS | STANDS FOR | MEANING/EDUCATION |
|----------|---|--|
| VT | Veterinary Technologist/Technician | Has completed an Animal Health or Veterinary Technology Diploma program and passed the VTNE. |
| RVT | Registered Veterinary Technologist/Technician | Nationally recognized term for a Veterinary Technologist/Technician who is registered with a provincial association, from an accredited program, and is a member in good standing. |
| VTS | Veterinary Technologist/Technician Specialty | Nationally recognized specialist with additional education and training. The VTS initials are followed by the specialty. For example: VTS (critical care). |
| AHT | Animal Health Technologist/Technician | A tech who has graduated from an AHT program. Note that the initials are not used to describe a membership qualification. |
| RAHT | Registered Animal Health Technologist | No longer used in BC. |
| RLAT | Registered Laboratory Animal Technician | An RVT with formal education and training in Laboratory Animal Care. |
| VTNE | Veterinary Technology National Examination | National exam written after completion of an AHT or VT program. |
| BCVTA | British Columbia Veterinary Technologist Association | A BC tech must be a member in good standing with this association to be called an RVT. |
| RVTTTC | Registered Veterinary Technologists and Technicians of Canada | National RVT Association. |
| CALAS | Canadian Association for Laboratory Animal Science | An RLAT's Association, CE, and examination support. |
| NAVTA | National Association of Veterinary Technicians in America | A VTS's Association, CE, and examination support. |
| VOA | Veterinary Office Assistant | A six-month Certificate program. |
| VA | Veterinary Assistant | The result of on-the-job training, but no formal education. |

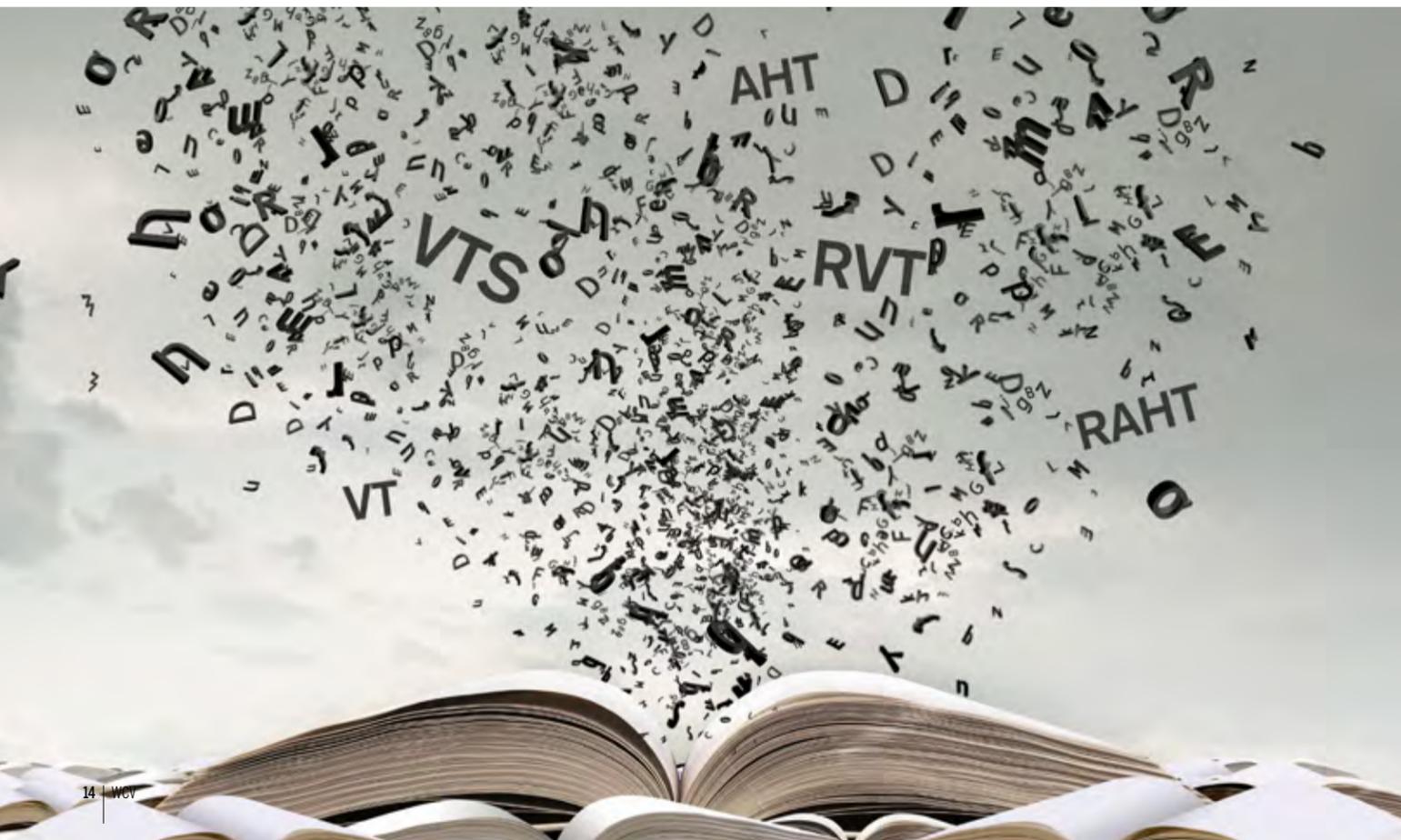


PHOTO BY SERGEY NIVENS/SHUTTERSTOCK.COM



AIMING FOR A BIRD'S EYE VIEW

BY VERONICA GVENTSADZE, MA, PhD, DVM

As I mark my ninth year in private practice, I reflect on how the past few months have reshaped my personal calling as a veterinarian. Still very much besotted with cats, dogs, and the occasional rabbit and guinea pig, I recently welcomed wild animals into my sphere of affection and worry. First, the sad discovery of dead moose trapped in telegraph wire (see the September 2016 issue of *West Coast Veterinarian*) opened my eyes to the necessity of speaking for wildlife as well as for pets. Then, in June, an unplanned motherhood resulted from raising a fledgling robin found on the ground in a heavy cat traffic area. Together, these two events have broadened the scope of what I believe I can and should be doing as a veterinarian and a person.

Veterinarians hardly need convincing that wild animals deserve consideration. The goal of the One Health Initiative is "...to attain optimal health for people, animals, and the environment." While veterinarians are in a unique position to educate their clients, it is not surprising that many of us are reluctant to discuss the potential minefield of keeping cats indoors. In mainstream media, the interests of cats and of wild birds are all too often presented as incompatible, resulting in a very unfortunate and unnecessary standoff between defenders of wild birds and advocates of cats. The recently published book *Cat Wars: The Devastating Consequences of a Cuddly Killer* (Peter P. Marra and Chris Santella; Princeton University Press, September 2016) has added barbed wire to a fence that needs to be torn down instead of reinforced. As veterinarians and as Canadians, we are doubly averse to anything that might alienate the client, and we understandably avoid mentioning conservation of wildlife lest a cat owner lose trust in us. When we do discuss the subject, it is from the standpoint of the cat's safety and health. That is fair enough; the cat's safety and health are indeed our main concern, and it is cats and not birds with whom we have a VCPR (veterinarian-client-patient-relationship). But what if, like me, you have fallen in love with wild birds and strongly feel that they deserve safety from unnatural predators? Is there a way to incorporate this conviction into the constructive practice of veterinary medicine?

The beginning of this journey was not easy. We have all met owners who are firmly convinced that cats belong outdoors, and that a few prey here and there, and even a few battle wounds on the cat itself, are an unfortunate but acceptable side effect. As I did my usual best to heal a sick outdoor cat or to keep a healthy one healthy, I often felt like a traitor to wild birds and to myself. A former university professor who loves public speaking, I found myself at a loss for words with which to broach the subject with owners. A chance remark during an appointment made me realize how much people would like to know from their veterinarian

but may be too shy to ask. A woman who reluctantly inherited an outdoor cat simply had no idea that the cat could be retrained, or that it could be happy inside. Since then I have made a point of simply asking, "Would you want to see Fluffy as an indoor cat?" I have been pleasantly surprised by how many people are glad to receive information and practical tips. Silence creates a barrier of mutual assumptions and misunderstanding between veterinarians and their clients. If we ask nothing when giving an annual feline leukaemia vaccine, the client may quite rightly assume that we endorse an outdoor lifestyle for their cat, even believe it to be healthy and natural. By not bringing up the subject with a willing owner, we miss out on important opportunities. Of course, not everyone wants to or is ready to discuss the issue, not everyone likes birds or cares how many are killed, and not all outdoor cats can be successfully converted even with consistent effort. But gauging the client's readiness is the first step, and it is up to us to make it.

"THE RECENTLY PUBLISHED BOOK *CAT WARS: THE DEVASTATING CONSEQUENCES OF A CUDDLY KILLER* HAS ADDED BARBED WIRE TO A FENCE THAT NEEDS TO BE TORN DOWN INSTEAD OF REINFORCED"

In my search for help and allies, I came across the Compassionate Conservation initiative whose aim is "to promote the consideration of animal welfare in a conservation context." I realized that this stance describes perfectly my attitude toward the practice of TNR (Trap-Neuter-Return) for feral cats which I perform in the framework of the Canadian Animal Assistance Team's health initiatives at First Nations reserves in BC. In response to my request, the Stewardship Centre for BC mailed me a batch of client education brochures titled "The Happy Cat." They bring birds into the picture and provide impressive but mercifully brief statistics on predation. (In my experience, statistics should indeed be brief to have the desired effect. A barrage of facts and figures is of little use in persuading people or changing their minds.) A great reward on this journey has been the realization of how many owners are already on board with the idea and practice of a healthy indoor lifestyle for their cats, and how many of them love both their cats and the wildlife they protect through their choices. I am convinced that, as more and more people realize their own place and their pets' places in the ecosystem, the indoor life will become a given for any cat. As veterinarians, we must find ways to promote this difficult and complex transition: in the long run, owners will respect us all the more for taking the initiative. [WCV](#)

PHOTO BY VERONICA GVENTSADZE

VETERINARY MEDICAL RECORDS

CAPTURING MORE INFORMATION WITH LESS WRITING

BY LINDA CREWS, BSCh, DVM

“THE TASK CAN SEEM OVERWHELMING THE FIRST TIME A MEMBER OF STAFF ATTEMPTS TO CREATE A CUSTOMIZED FORM, BUT ONCE THERE IS AN EXAMPLE TO FOLLOW, IT CAN BE MODIFIED ACCORDING TO WHAT THE CLINIC USES”

In our last issue, we displayed an example of an average veterinary anesthetic monitoring form. Keep in mind that there are numerous ways to capture information during anesthetic monitoring, and these ways may vary according to:

- ▶ the types of drugs available at your clinic, and your familiarity with their uses, doses, and effects
- ▶ the monitoring tools your clinic owns, and the staff's abilities to use them well
- ▶ the types of patients you see, and the kinds of surgeries you perform on a regular basis
- ▶ the types of good and bad experiences that you, your staff, and your patients have had in the past

This new example of an anesthetic monitoring form is used to demonstrate how a clinic can create its own form on any computer using software like Word, Numbers, or Form Maker. The benefit of creating such an individualized form is that staff can design the form once or twice and then use it to capture more details and information during each anesthetic than they would normally have time to write out. This can be done by customizing the form to list the exact types of medication that the clinic stocks, the doses routinely used, and the methods of administration. The form can also be pre-set with the types of monitoring equipment, fluids, and thermoregulatory devices that the clinic has available. Clearly, the task can seem overwhelming the first time a member of staff attempts to create a customized form, but once there is an example to follow, it can be modified according to what the clinic uses by referring to each anesthetic that takes place over the course of a week or two. Trends will become apparent.

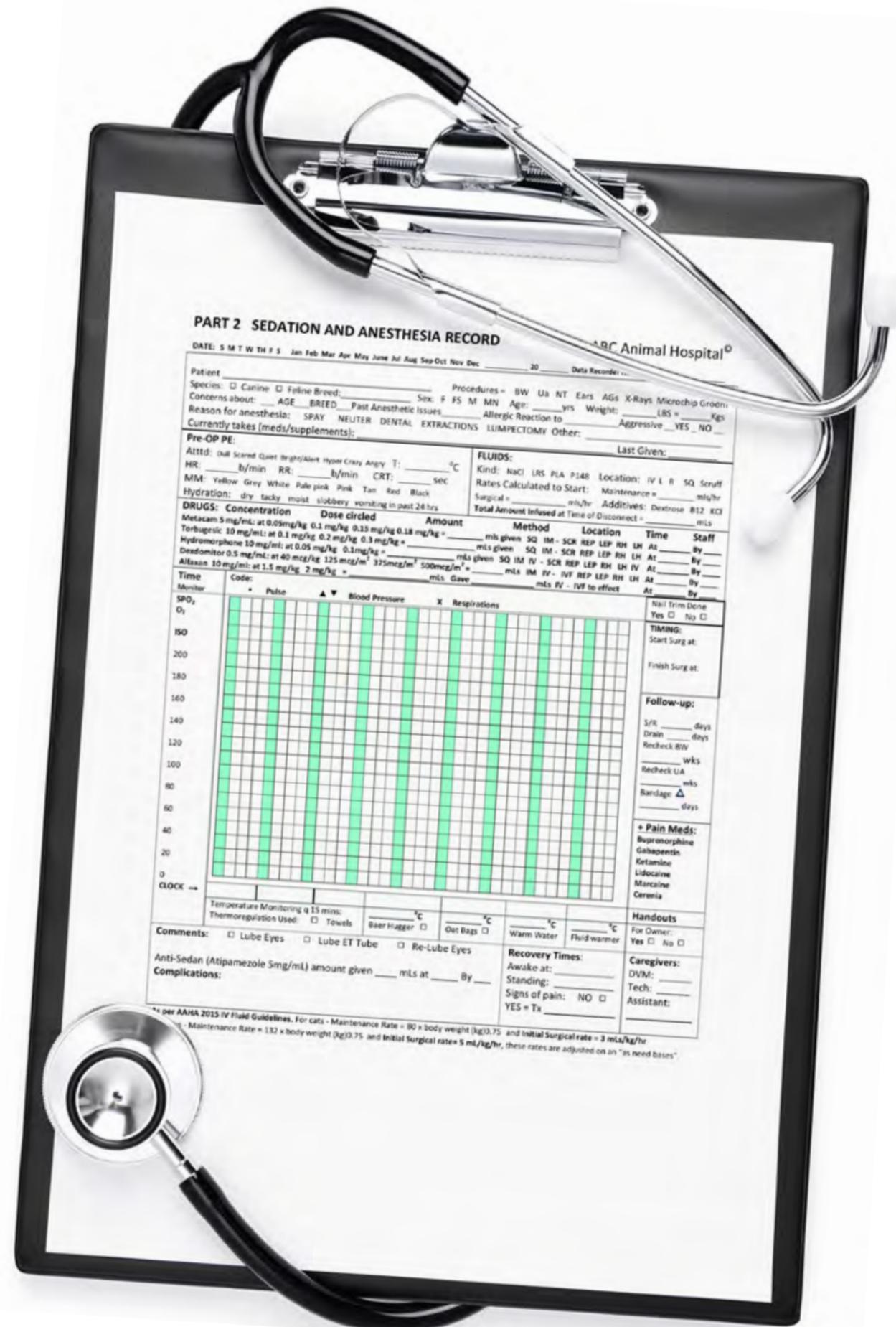
The common descriptors that an individual veterinarian uses for each monitoring category are difficult for staff to remember in the midst of busy beeps, bells,

and the pressure of monitoring. But if a form contains the details, a staff member can easily:

- ▶ Circle or check an individualized anesthetic plan quickly and efficiently
- ▶ Prevent the omission of any important components (like lubricating the eyes or the ET tube)
- ▶ See what types of information must be captured to ensure safe anesthetic monitoring
- ▶ Be acutely aware that there is just as much information needed about the patient's status after anesthesia (which is often when troubles occur) as there is during the anesthetic
- ▶ Remember to review the past medical record prior to surgery, and ask the owner the correct pre-surgical information about medications, allergies, and any other procedures that are needed
- ▶ Help prevent accidental adverse drug reactions, breed-related complications, poor anesthetic recovery, hypothermia, hyper- or hypovolemia, uncontrolled pain cascade, and the many other things that staff members remind their veterinarians of every day in their support role
- ▶ Succeed at their job when there is a visual reminder of the options available at their clinic with a requirement to fill in all the blanks or to cross out the ones that are not applicable

Many will find the example too busy. Create your own, space it out, use both sides of the page. Just make it as detailed as possible and as simple to use as circling a box or checking a box. Get credit for all the hard work that you and your staff do. A lot of supportive care occurs behind the scenes during anesthesia. Be sure to record it all.

Next issue, we'll look at in-hospital monitoring and care forms. [WCV](#)





UBC'S DAIRY EDUCATION & RESEARCH CENTRE

STORY BY JIM THOMPSON, PhD

PHOTOS BY MARTIN DEE
UBC COMMUNICATIONS & MARKETING



“MUCH OF THE TEACHING AND MANY OF THE RESEARCH DISCOVERIES AT THE CENTRE ARE DIRECTLY RELEVANT TO THE PROVINCE’S DAIRY INDUSTRY AND ARE USED BY PRODUCERS AND VETERINARIANS THROUGHOUT THE INDUSTRY”

PHOTO COURTESY OF UBC DAIRY CENTRE

ABOVE Cows feeding; **PAGE 23** (from top) Young heifer being monitored by graduate students; graduate student feeding a newborn calf. **PAGES 20 & 21** Newborn calf resting in the maternity area.

In 1997, the University of British Columbia (UBC) and Agriculture and Agri-Food Canada (AAFC) entered into a unique partnership. AAFC (Agassiz) agreed to lease land to UBC provided that UBC establish a dairy education and research centre on the Agassiz site. Milk quota, dairy cattle, and farm equipment owned by each party were consolidated at the Agassiz site to help establish the UBC Dairy Education and Research Centre.

The Dairy Centre is located immediately adjacent to the centre of BC’s dairy industry, and consequently much of the teaching and many of the research discoveries at the Centre are directly relevant to the province’s dairy industry and are used by producers and veterinarians throughout the industry. The Centre was designed to provide sufficient land to grow the grass and corn required to meet pasture and silage requirements of a financially sustainable 500-head dairy research herd.

The Centre is operated like a normal modern dairy farm housing a total of 500 calves, heifers, and cows, all of which are involved in teaching and research projects in addition to producing milk. The rate of milk production by the herd is well above industry standards, attesting to the relevance of research results from the

Centre. Proceeds from the sale of milk and excess animals are used to help cover the costs of developing and maintaining buildings, all services, farm-staff salaries, animal care and feed, and basic farming operations.

Over the past 10 years, with financial assistance from donors that include the BMO Financial Group, BC Dairy Association (DIREC), Greenbelt Veterinary Services, Hi-Pro Feeds, Kamloops Okanagan Dairymen Association, Mainland Milk Producers Association, and Westgen, UBC demolished the old AAFC buildings and replaced them with 150,000 square feet of new state-of-the-art facilities that can support modern dairy cattle research. Each building provides unique research facilities. Independent, specialized buildings for calves, heifers, and adult animals are equipped to enable researchers to continuously monitor individual animal or group behaviour, including milk, water, and hay and grain intake patterns. Overhead video cameras continuously monitor individual animal or group behaviours while activity monitors continuously monitor lying and standing behaviour throughout the day.

In addition to building experimental animal facilities, UBC has constructed and equipped the BMO conference rooms which hold at least 65 people and are extensively used for meetings, video-conferencing lectures, and industry training programs. Analytical laboratories, student offices, and walk-in refrigeration and freezer rooms are included in the conference building.

Last summer, UBC completed construction of on-site student housing facilities which provide students with

safe and ready access to their experimental animals and research equipment around-the-clock. This also reduces the time and energy consumed by driving back and forth to the Vancouver campus. The residence building comprises eight modules, each containing four bedrooms, two bathrooms, and a common living and kitchen area. The Centre can provide housing for a total of 32 students and other researchers at any given time. An important component of the residence is the well-used community area where scholars meet for seminars, academic discussions, and social events.

The Dairy Centre’s outstanding living and research facilities and internationally known productive faculty members have attracted students and other scholars from across Canada and from more than 40 different countries. During the past year alone, more than 55 different individuals have studied at the Centre for periods of time ranging from weeks to a year. International students are important as they greatly increase the Centre’s reputation and research productivity and contribute to its rich international educational environment. They bring new research questions, ideas, and techniques to the Centre and help develop lasting links between their home countries and Canada. Scholars at the Centre from outside of Canada are largely funded by international agencies.

The Dairy Centre is an integral part of UBC, one of the world’s leading research universities. Researchers at the Centre work at uncovering the fundamental scientific basis underlying dairy cattle health, production, and well-being. Much of this research quickly ‘breaks





ABOVE (from top) New residence building at the Dairy Centre; on-site laboratory. **PAGE 25** Dr. John Dick examining a sick cow.

out of the ivory tower' and becomes integrated into common practice in the dairy industry.

The UBC Dairy Centre supports three major research and teaching programs addressing dairy cattle welfare, dairy cattle reproduction, and the environmental impact of dairy cattle production. The Dairy Cattle Welfare Program is led by Professors David Fraser, Marina von Keyserlingk, and Dan Weary. All three hold NSERC Industrial Research Chairs in Dairy Cattle Welfare, demonstrating the level of national importance of their research and teaching activities at the Dairy Centre. The Dairy Cattle Welfare Program is the largest program in the Centre and is recognized internationally as the leading program of its type. The Program's outreach is broad, reaching throughout the general public. For example, recent research demonstrating that calves housed in pairs learn much faster than calves housed alone has been featured in *The Economist*, *Scientific American*, *Globe and Mail*, *New York Times*, and *Canadian Geographic*, among others.

The relatively new Dairy Cattle Reproduction Program, led by Professor Ronaldo Cerri, is growing rapidly. It addresses the infertility of lactating dairy cows which is one of the major issues facing the modern dairy industry. Like other scientists working at the Centre, Dr. Cerri and his students work closely with many sectors of the local dairy industry. When data from very large numbers of animals are required for an experiment, researchers will sometimes include data from animals located across the country or even internationally in their experiment.

The Dairy Centre places considerable emphasis on developing methods of reducing the impact of dairy farming on the environment. For example, the Centre uses readily available sand in place of wood shavings for bedding as sand less readily supports microbial growth, thereby reducing the incidence of mastitis in the herd. With new equipment recently installed, about 80% of the sand in the dairy manure is recovered and reused as bedding, reducing soil compaction by heavy equipment operating on the fields. The Centre also recycles water used initially for cooling milk. Energy conservation is paramount at the new student residence which is largely heated by two 35 x 60 x 8 ft. horizontal geothermal fields. The Dairy Centre provides facilities in support of research, in collaboration with scientists in UBC's Department of Civil Engineering, designed to recover and reuse phosphorous isolated as struvite which acts as a slow release fertilizer. In recognition of the Centre's contributions towards developing a sustainable dairy industry, the UBC Dairy Centre was selected as a finalist for the Dairy Farmers of Canada Dairy Farm Sustainability Award in 2015.

All research at the Dairy Centre is funded through competitive grant applications to a number of different agencies including AAFC, Dairy Farmers of Canada, Mitacs Inc., NSERC, and Westgen.

A primary function of the Dairy Centre is education,



PHOTO COURTESY OF UBC DAIRY CENTRE

which involves all sectors of the Centre. Visitors learn about the health care and well-being of dairy cattle, about production of high quality milk, and about Canada's advanced dairy industry. Undergraduate students, graduate students, and post-doctoral fellows gain valuable experience interpreting their research results for the Centre's curious visitors.

Each year, the Dairy Centre contributes to training high school work-study students, hosting DIREC's Dairy Production Technician Apprenticeship Program, instructing students from the University of the Fraser Valley's dairy production classes, and providing large-animal exposure to students in animal health technologist programs offered by Thompson Rivers University and Douglas College. The main activity of faculty members is to develop the teaching and research skills of Masters and doctoral students from UBC and other universities around the globe. Many students seeking acceptance into schools of veterinary medicine apply to work at the Dairy Centre so that they can gain experience working with large animals and with many of the graduate students who have had training in veterinary medicine.

New research findings from scientists working at the Dairy Centre are quickly distributed to the dairy industry through frequent presentations at industrial and academic meetings across Canada and internationally. Lay articles appear in publications ranging from *Hoards Dairyman* to the Centre's popular periodic publication, *Research Reports*. The Centre's researchers are prolific publishers in relevant leading, international, refereed journals such as the *Journal of Dairy Science*.

National Codes of Practice have been developed by the National Farm Animal Council as guidelines for the care and handling of farmed animal species in Canada. Researchers working at the UBC Dairy Centre have provided the underlying scientific basis for many of the requirements and recommended best

practices described in the Code of Practice for the Care and Handling of Dairy Cattle. Animal welfare scientists working in the UBC facilities have placed particular emphasis on studying animal husbandry practices, including disbudding and dehorning calves and tail docking, as well as nutrition, health, and welfare management issues such as feeding unweaned calves and lameness, which is widely recognized as one of the most serious

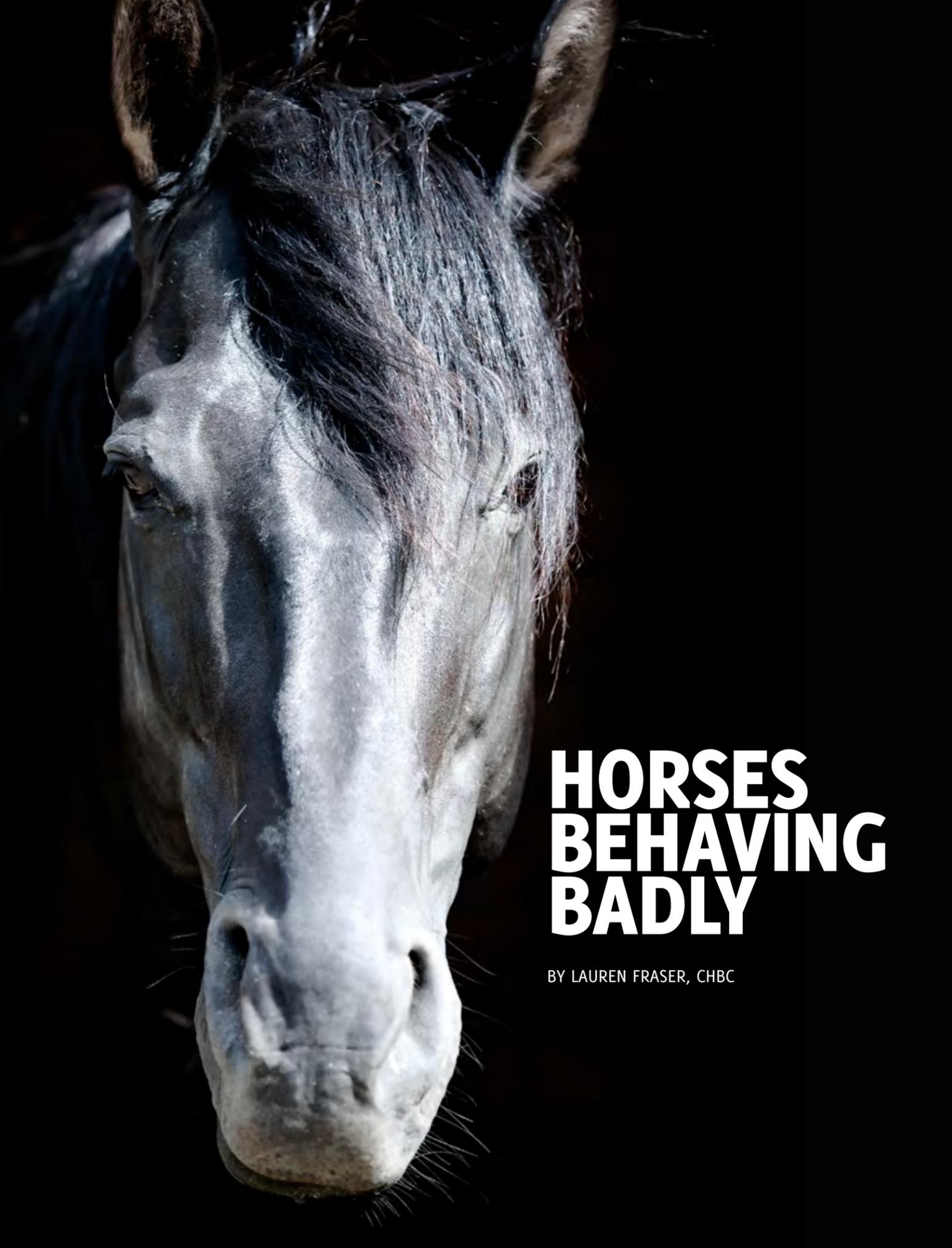
animal welfare issues affecting dairy cattle.

With the completion of building, furnishing, and equipping its excellent animal research facilities, analytical laboratories, conference facilities, and student residences, the UBC Dairy Education and Research Centre is well positioned to further increase

“RESEARCHERS AT THE CENTRE WORK AT UNCOVERING THE FUNDAMENTAL SCIENTIFIC BASIS UNDERLYING DAIRY CATTLE HEALTH, PRODUCTION, AND WELL-BEING”

its world-class teaching and research activities. Three important goals in the future development of the Centre are to hire a new faculty member in the area of dairy cattle nutrition, complete negotiations with AAFC to renew the Centre's lease of lands required to grow the Centre's grass and corn, and raise funds to support scholarships to help attract and retain the world's best graduate students and other scientists.

The Dairy Centre has an open-door policy and welcomes visitors throughout the year to meet its scientists and to explore its research and farming facilities. The Centre annually provides guided tours to more than 2,500 producers, veterinarians, international farm groups, and students, etc. Visitors learn about the Centre's research programs and about the dairy industry in BC and across Canada. [WCV](#)



HORSES BEHAVING BADLY

BY LAUREN FRASER, CHBC

“UNRULY EQUINE PATIENTS CAN NEGATIVELY IMPACT A VETERINARIAN’S DAY”

Simply seeing a certain horse’s name on the morning schedule can cause dread in equine veterinarians and their staff. Whether difficult to handle, needle-phobic, quick-to-kick, impossible to trailer load—or all of the above—unruly equine patients can negatively impact a veterinarian’s day. At best, the horse’s behaviour can result in minor delays in the schedule. At worst, they may cause serious injury to staff. Recent UK research discovered that the profession of equine veterinarian is more dangerous than that of any other civilian profession, including fire fighter and police officer.

WHY DO HORSES DISPLAY UNWANTED OR DANGEROUS BEHAVIOURS?

Horses may display unwanted behaviours for a number of reasons. Veterinary interventions that involve novel, painful, or aversive stimuli may result in involuntary flight behaviours such as pulling or leaning away, snatching back a hoof, raising the head, or anything else that delays or halts a procedure. If escape is prevented, the horse may escalate their attempts to leave the situation, and fight behaviours such as biting, barging, kicking, or striking may occur.

Horses may also develop serious fear issues about specific stimuli. These powerful, involuntary associations can be created when a previously neutral stimulus (e.g., needles, clippers, farrier) is paired closely in time with painful or frightening events. Even only one such pairing may result in fear conditioning.

Horses can also learn that performing a behaviour results in a desirable outcome, and thus will repeat the behaviour when faced with similar situations in the future. For example, an owner inserts the tip of a deworming syringe into a horse’s mouth, and the horse raises its head, which results in the tip being removed. The behaviour of head raising has been negatively reinforced, and will likely occur again in the future. Such inadvertent negative reinforcement is a common cause of unwanted behaviours.

WHAT HELP IS AVAILABLE?

Traditionally, an unruly horse would be sent to a horse trainer to address problem behaviour. But while trainers may be adept at teaching new, wanted behaviours to the horse, it takes a different knowledge base to resolve an existing unwanted behaviour, or change conditioned emotional responses. Methods used by trainers without specialized training may include punishment or flooding, both of which carry risk for worsening the problem or creating new problems. Members of a relatively new profession to the horse world—behaviour consultants—have studied animal behaviour and learning theory, and use this knowledge to resolve serious behaviour problems. Consultants utilize a Least Invasive, Minimally Aversive approach that carries little risk for worsening behaviour.

CONSULTANTS & VETERINARIANS WORKING TOGETHER

Undiagnosed pain is a frequent cause of unwanted behaviours, and consultants work with veterinarians to ensure that physical reasons for the behaviour have been eliminated before retraining begins. Occasionally, after pain has been resolved, consultants may need to address lingering unwanted behaviour related to a pain memory. For example, a horse that previously experienced saddle-induced pain may still associate the saddling process with impending pain—even after the veterinarian has treated the source of the pain. Such horses may pin their ears, or attempt to bite when saddled. Using punishment in response to this behaviour (e.g., smacking the horse) is not generally recommended by behaviour professionals, as it carries a risk of side effects (such as worsening the problem), or it may create additional behaviour problems (e.g., fear or aggression). Punishment is also not necessary when counter-conditioning, systematic desensitization, extinction, differential reinforcement, and other less aversive approaches have been shown to be effective in addressing even the most serious problems in a number of species.

Consultants also work collaboratively with veterinarians when prescription medications are required. These may include pharmaceuticals, nutraceuticals, or pheromone-releasing products to aid in successful behaviour modification.

While the profession of equine behaviour consultant is relatively new to the horse world, behaviour consultants have been working alongside veterinarians for many years to resolve behavioural issues in a diverse range of species. Like veterinarians, consultants use current, evidence-based techniques to achieve the best results for both the horse and the client. They are complementary professionals to whom veterinarians can turn when a patient’s behaviour has become problematic or even dangerous.

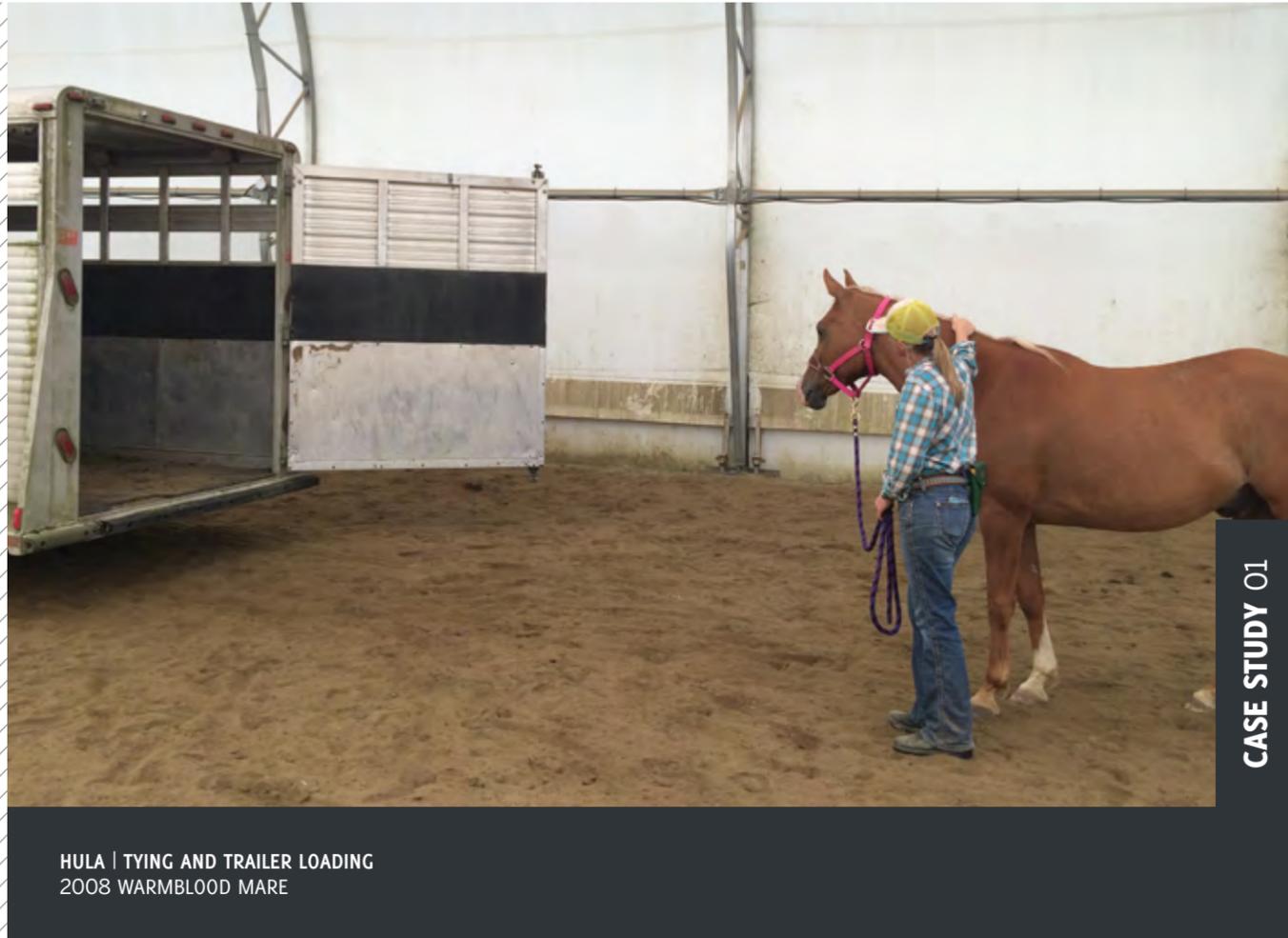


PHOTO BY DAVID TAYLOR

CASE STUDY 01

HULA | TYING AND TRAILER LOADING
2008 WARMBLOOD MARE

Primary behavioural complaint: Difficulty trailer loading, runs backwards out of horse trailer.

Other complaints: Paws when tied; anxious, pulls back in cross ties; anxious for injections, paws in trailer.

Initial occurrence: Owner loaded and tied the mare, and was exiting the trailer when the mare pulled back, breaking the halter and running out backwards. Owner caught, haltered, and reloaded mare. Mare once again pulled back when tied, breaking the new halter, and ran backwards out of trailer. Owner states that she then proceeded to load mare from outside of the trailer, utilizing punishment, and trapped the mare inside once she entered.

Other occurrences: Hula had several other trailering episodes since the initial event. They all involved the use of punishment when Hula refused to load, and trapping her loose inside once she had loaded. Hula's fear-based behaviour started appearing earlier in the loading process.

Assessment: One of Hula's primary issues was that she had never been properly taught to tie, and had a history of pulling back when tied. Hula's fear of being tied then generalized to the trailer. Hula's baseline arousal while being handled, ridden, and trained was also high due to the training methods employed.

Immediate recommendations: It was advised to not tie Hula, or haul her (unless in an emergency) until this behaviour issue was resolved. It was also recommended that Hula be examined by a veterinarian to ensure no injuries had occurred as a result of pulling back. The client was advised to avoid the use of punishment, and alternative training techniques were discussed and shown.

Behaviour modification plan: A custom retraining plan was developed to address Hula's behaviour. The techniques recommended for retraining included counter-conditioning to the loading process and the trailer, as well as retraining Hula to calmly accept tying, using shaping and positive reinforcement.

Outcome: I met with Hula's owner both in person and by phone to instruct and supervise them while they worked the provided plan. Hula learned how to tie, both in the barn, and in the trailer, and she now loads and hauls calmly. Hula's arousal level when being trained or ridden has also decreased, and her owner reports she is much easier to work with overall.



PHOTO BY LAUREN FRASER

CASE STUDY 02

MARTINI | AGGRESSION DURING INJECTIONS
2010 IRISH SPORT HORSE GELDING

Primary behavioural complaint: Rears and strikes when approached for injections or blood draws, even under sedation. Four incidents have occurred with current owner.

Other complaints: Sheath can't be touched; can't be twitched; legs can't be clipped even under sedation.

Initial occurrence: Three months after purchase, Martini was being seen by primary veterinarian for routine dental, Coggins blood draw, and vaccines for upcoming CA show. Martini was in the cross ties, and he reared when his jugular was occluded by the veterinarian. He was unclipped from cross ties, a stud chain was placed over his nose, and he was backed into the corner. The veterinarian was able to sedate the horse, and both he and the owner continued with the treatments.

Other occurrences: The second occurrence was at a show in CA, one month after the primary occurrence. Martini was selected for random drug testing. He was held by owner, with a stud chain over his nose. The attending show veterinarian had owner place Martini in the stall corner. The veterinarian attempted to occlude his jugular, resulting in Martini running circles around owner and veterinarian. When the veterinarian inserted the needle in the occluded jugular Martini reared and struck at the veterinarian. The blood draw was aborted.

The third occurrence was approximately three months after the initial

occurrence. Martini was at home, and the veterinarian arrived to vaccinate him, and sedate him for clipping. Martini was held in the cross tie area, with a stud chain over his nose. The veterinarian was unable to occlude the jugular, as Martini exploded out of the cross tie area when his jugular was stroked. It was decided that Martini could not be safely sedated, and the veterinarian elected to only vaccinate Martini, which was done as he nervously circled around the veterinarian.

The fourth occurrence was approximately nine months after the primary occurrence. Martini had been given 1.5 tubes of oral Dormosedan by owner, 55 minutes prior to appointment for blood draw and vaccines. Martini was placed in cross ties, and when the veterinarian occluded the vein, Martini reared and struck. A twitch was placed on the horse's upper lip, but once again he reared and struck when approached. An ear twitch was applied, and access to a leg vein was attempted, which resulted in the horse kicking at the veterinarian. Further attempts to access a vein were abandoned, and Martini was given vaccine in the hind quarters.

Assessment: Martini had learned to fear the injection process. His behaviour was escalating. Confinement and aversive restraint (e.g., backing into a corner, using a stud chain) exacerbated the issue. The behaviours of rearing, kicking, and striking had also inadvertently been reinforced.

Immediate recommendations: It was advised to avoid injections (unless in an emergency) until this issue was resolved. It was also recommended that all clipping cease until Martini could be retrained to accept clipping.

The client was advised to avoid the use of punishment to correct the behaviours. Punishment could worsen the behaviours, greatly increase the risk for human injury, and increase resistance to successful behaviour modification.

Behaviour modification plan: A custom retraining plan was developed to address Martini's behaviour. The attending veterinarian prescribed Zylkene, and EMLA gel to facilitate the first injection process. The techniques used included counter-conditioning (to approach, occlusion, and injection by the veterinarian), and shaping and positive reinforcement to teach standing with minimal restraint during veterinary exams and handling.

Outcome: I met with Martini's owner both in person and by phone to instruct and supervise them while they worked the provided plan. My work with the client culminated in the horse being able to receive both a blood draw and injection from the primary veterinarian, without the previously seen behaviour. [WCV](#)

RADIATION SAFETY STANDARDS

BY KOHARIK ARMAN, DVM



“ALMOST ALL PROFESSIONALS WITHIN THE VETERINARY INDUSTRY ARE AT INCREASED OCCUPATIONAL RISK FOR RADIATION EXPOSURE COMPARED TO THE GENERAL PUBLIC”

Radiation safety standards, while helpful and protective, can be confusing to many veterinarians, given the varied rules, multiple organizations involved, and changes to the standards that have occurred over the years. Purchasing new X-ray equipment and getting it installed, certified, and running can be a veritable, and costly, headache. Nonetheless, safety regulations and standards exist for good reason: long-term increased exposure to ionizing radiation comes with serious health consequences. Almost all professionals within the veterinary industry are at increased occupational risk for radiation exposure compared to the general public. To that end, the regulations and standards that have been developed and enforced by several different associations are meant to help veterinary professionals provide quality diagnostic imaging and therapeutic radiation services, while keeping the members of the profession, and the public, safe from harm.

Ionizing radiation is the energy released from the disintegration of atoms, and this energy takes the form of electromagnetic waves (gamma rays and X-rays) and particles (alpha, beta, and neutron particles). The potential harm caused by exposure of individuals to ionizing radiation is measured in sieverts (Sv), which denote the effective dose of radiation exposure by accounting for both the type of radiation and the sensitivity of the tissues and organs exposed. In general veterinary practice, acute radiation poisoning is less of a concern than chronic low-level, or stochastic, effects; chronic exposure causes genetic mutations that increase the risk of cancers and of passing genetic defects to offspring. Additionally, prenatal exposure can cause brain damage to developing fetuses.

There are two organizations that bear the primary responsibility for the safety of diagnostic X-ray equipment and its usage in the veterinary

profession in BC: the College of Veterinarians of BC (CVBC) and WorkSafeBC. The CVBC has legal authority over the operation of all veterinary facilities within the province, and specifically, Appendix B of the CVBC Bylaws Facility Practice Standards contains the regulations and standards regarding radiation equipment, clinic structural shielding standards, and information about radiation monitoring and practice inspections. WorkSafeBC issues, adapts, and enforces radiation safety standards developed by Health Canada on a federal level, and those developed by the Radiation Protection Services (RPS), a division of the British Columbia Centre for Disease Control (BCCDC). The primary legislation pertinent to radiation safety in veterinary practice is Health Canada's Radiation Emitting Devices Regulations Safety Code #28.

In order for veterinarians to operate ionizing radiation equipment in practice, equipment must be inspected and approved by a Radiation Protection Surveyor, and a shielding assessment of the facility must be done. After a successful radiation survey is conducted, the surveyor must issue a Certificate of Safety and register the X-ray machine(s) in the CVBC Ionizing Radiation-Emitting Equipment Database maintained by RPS. Radiation protection surveys should be performed routinely every three years, although for dental equipment or any X-ray machine operating below 70 kVp,

every five years is an acceptable interval. Any modification of equipment, changes in workload, or damage to machines require that a new radiation survey be performed.

If equipment is registered in the database and no Certificate of Safety is obtained within 90 days, the registration is then void and the equipment cannot be used. If a Certificate of Safety has not been obtained, then the CVBC is notified, and a practice inspector will assess the situation. If there is a persistent problem, the Practice Inspection Committee does have the power under the Bylaws to restrict practice, but typically the Discipline Committee deals with such a deficiency.

Due to the risks of chronic radiation exposure, the As Low As Reasonably Possible (ALARA) principle is applied to radiation exposure in veterinary medicine. It is the Designated Member (DM)'s responsibility to ensure that ALARA is achieved and that the Safety Code and Practice Standards are met; the DM is held responsible for any infractions of the CVBC's safety regulations. The DM must ensure that Certificates of Safety are up to date, that staff members operating X-ray equipment are appropriately trained on safe usage, a radiation safety officer is assigned, personal protective equipment is functional, that personal radiation dosimetry services are used for exposure monitoring of

personnel, and that all radiation records are kept for 10 years.

When violations of regulations are found on radiation protection surveys, a clinic can still be issued a Certificate of Safety as long as the problems are addressed and corrected within a period of 90 days. If there is a wait time for a radiation survey to be completed, then a clinic may apply for an interim provisional accreditation from a CVBC practice inspector. If a clinic fails to comply with corrections required for a Certificate of Safety to be issued, then the CVBC Practice Inspection Committee can revoke practice accreditation, effectively causing temporary clinic closure, and can report the violations to WorkSafeBC. Legally, WorkSafeBC can take a range of actions against clinics, from letters of warning, to criminal charges and suing for workers' compensation payouts.

Interestingly, however, Scott Broddy, of Supertech X-ray Services & Consulting and a BCCDC Listed Radiation Protection Surveyor and Shielding Consultant, advises that in some regards WorkSafeBC is actually quite limited in its ability to address radiation safety issues. If a surveyor notifies WorkSafeBC of a serious deficiency and a survey documenting the problem is submitted, WorkSafeBC may then decide to perform its own inspection of the facility. Nonetheless, WorkSafeBC may only work with and take action upon information gathered at the time of its walkthrough of the facility. And because WorkSafeBC does not investigate the validity of radiation survey findings, clinics can choose to discard the first radiation safety report and hire another surveyor to repeat the task, in hopes that the second surveyor will miss the deficiencies noted during the first survey. Therefore, unless the initial radiation survey documenting the deficiencies is handed to a WorkSafeBC inspector while a walkthrough is being performed, WorkSafeBC will not question the accuracy of the second

survey report and will not pursue an investigation of the reported deficiencies from the first one.

Broddy reports that radiation safety deficiencies are frequently seen in veterinary practice. He believes that confusion about safety standards is often the problem, and that confusion exists “largely due to the intertwined sources of information... Generally, the standards are unintentionally (or intentionally) adapted by organizations having their own viewpoint when restated in their publications. This makes the standards open to reasonable differences of interpretation, emphasis, and application during radiation protection surveys, WorkSafeBC inspection walkthroughs, and CVBC practice inspections.”

Additionally, as previously alluded to, another contributing factor is that there have been many changes to radiation safety regulation in BC over the years. Dr. John Brocklebank, Deputy Registrar of the CVBC, describes how veterinary clinic radiation safety in the province used to be controlled by RPS. Up until 1997, the government did the legwork, but in 1997 it was decided that the various regulatory bodies of professions utilizing ionizing radiation should be in charge of conducting radiation safety inspections. So in 2001, the BC Veterinary Medical Association, as the CVBC was then known, took on that responsibility and in 2005 produced a new set

Next, an X-ray machine was bought through a laboratory company; a CSA-approved device was requested. When the machine arrived in Canada, it turned out that it was not CSA-labelled. At the time there was no on-site CSA certification service available, and so the device was shipped to Toronto to receive its certification. CSA labelling comes at a cost of approximately \$1200 to \$1500, and this practice also ended up having multiple radiation surveys performed. Surveys generally cost about \$350 to \$600. So while CSA labelling is not mentioned in the CVBC standards, it is an important pitfall to avoid when investing in new X-ray equipment.

Aside from equipment purchase and installation, when it comes to what other problems arise most commonly during radiation surveys, Broddy advises that the number one deficiency seen in veterinary clinics is inadequate safety record keeping. All radiation protection surveys and personal dosimetry records must be kept in a readily available log in clinic libraries for 10 years. Additionally, since the transition to digital imaging has facilitated the ability to take repeat X-rays when images are unsatisfactory, it is important to note the total number of exposures taken when completing manual logs, not just the number of final images saved in the study. Intra-oral X-rays should be manually logged just as body X-rays are. “Accurately maintained exposure logs are key to helping the surveyor determine radiation exposure to workers and general public alike.”

Other common deficiencies seen in practice include improper use of personal dosimetry badges, failure to post radiation exposure control plans next to X-ray machines in main treatment areas (e.g., dental X-ray equipment), maintaining staff radiation safety knowledge with refresher courses, keeping records of images taken annually to assess the efficacy of personal protective equipment (PPE), keeping PPE properly labelled, and not performing radiation surveys when changes are made to radiation equipment.

There is a multitude of standards to be met when it comes to purchasing, installing, and maintaining safe X-ray machines, as well as regulations pertaining to safe usage and ongoing maintenance. When in doubt, research thoroughly the requirements of both the CVBC and WorkSafeBC, and also consider perusing the Health Canada Safety Codes directly. It behooves us all to protect ourselves, and the public, from unnecessary exposure to ionizing radiation, and there are many consultants available to help provide guidance with regard to radiation safety in the veterinary profession. ¹WCV

For a list of radiation surveyors and shielding assessment officers, visit www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/EH/RPS/ListofRPSsurveyorsinternet.pdf.

“DUE TO THE RISKS OF CHRONIC RADIATION EXPOSURE, THE AS LOW AS REASONABLY POSSIBLE (ALARA) PRINCIPLE IS APPLIED TO RADIATION EXPOSURE IN VETERINARY MEDICINE”

of Bylaws that included radiation standards and regulations. With these new Bylaws came the requirement that clinics have Certificates of Safety issued by radiation protection surveyors, as well as the Radiation Shielding Assessment compliance document from RPS. Veterinary facilities in BC were given one year by the CVBC to obtain their Certificates of Safety, and meet the standards set forth by the new Bylaws. The great majority of clinics within the province complied with the new standards, but there were a couple of clinics that still had not completed the process between 18 to 24 months later, and those clinics went through the investigational and disciplinary process and were reported to WorkSafeBC.

Dr. Brocklebank advises that there was, and still exists, confusion and frustration about why the CVBC must regulate radiation safety standards in the industry when clinics must already be registered with WorkSafeBC and are obligated to follow WorkSafeBC guidelines that are derived from the exact same Federal Safety Code and RPS standards. He points out that many solo veterinary practitioners do not need to register with WorkSafeBC because they have no employees; therefore, WorkSafeBC has no jurisdiction over those practices. Since the CVBC’s mandate is to protect the public, it then follows that the CVBC must regulate the radiation safety of all veterinary facilities in the province in order to capture the single veterinarian practices to which WorkSafeBC regulations do not apply.

Another confounding issue for veterinarians, particularly when initially purchasing X-ray equipment, can be that WorkSafeBC also requires that X-ray equipment is approved and labelled by the Canadian Standards Association, or CSA Group, which is accredited by the Standards Council of Canada. One veterinarian’s story of equipment purchase entailed a three-month process to get an X-ray machine delivered, certified, and up and running. The equipment was purchased from a company in the Lower Mainland, and the machine was shipped from Chicago to Vancouver. A consultant from the company came in to perform field certification and found that the machine was not CSA-approved and therefore could not be installed. The machine was returned to Chicago and was not purchased.

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EMERGING LEADERS PROGRAM

HORACE YEUNG, DVM

I was honoured and privileged to be chosen as one of the participants of the 2016 CVMA Emerging Leaders Program (ELP). This program truly transformed my professional life as well as my personal life, and the knowledge that I gained from it helped strengthen my confidence in my career choice as a veterinarian.

Traditionally, veterinary medicine education focuses on teaching students about different disease processes, diagnostics, and how to provide appropriate treatments when indicated. However, communication skills and self-awareness are seldom mentioned, although they are crucial in a veterinarian's daily life. I remember Dr. Etienne Coté, my mentor at the Atlantic Veterinary College, saying, "Disease processes will always repeat themselves, but people will never." At that time, as a naive fourth-year veterinary student, I did not quite understand the knowledge he was trying to pass on. All my attention was on surviving my rotations and passing the North American Veterinary Licensing Exam. Now, after being a general practitioner for seven years, I realize that we can all become more proficient when it comes to caring for our patients. But maintaining constructive relationships with clients and veterinary team members often remains a challenge, especially under stressful circumstances. This can lead to compassion fatigue and resentment towards our profession.

Before attending the ELP this summer at the CVMA convention in Niagara Falls, I was full of curiosity about this program. What was I going to learn? Who was I going to meet? How would I use the knowledge

that I learn? In the first half of the program, Dr. Rick DeBowes, our facilitator, asked us to write down our core values. We discussed the importance of these values and how we could follow them in our daily and professional lives. In the second half, we focused on communication and team work. For one exercise we worked in pairs, with one partner wearing a blindfold. While I was wearing the blindfold, my partner was holding my hand and providing verbal instructions to lead me throughout the convention centre. We then stopped holding hands, and I was able to navigate through the busy convention centre, use escalators, go through narrow hallways, and even take a drink from a water fountain with ease. My only guide was my partner's gentle, clear, and direct instructions.

After the ELP, I am now a better leader of myself because I am living my core values every day, and I have been able to become a more effective communicator. The skills I learned have significantly improved my professional life and personal life. I sincerely believe we should incorporate a program like the ELP into our veterinary curricula, as it would be extremely beneficial for future veterinarians and is truly something that should be taught in school.



TWO VIEWS

JESSICA ROBERTSON, DVM

How do you want to be in the world? As a veterinarian, as a boss, as a manager, as a team member, as a counsellor to your clients, as part of a family, as a person in line at the grocery store.... What are your core values? This was one of the questions posed to the attendees of the 2016 Emerging Leader's Program during the CVMA conference in Niagara Falls, Ontario.

Dr. Rick DeBowes facilitated our learning experiences and led the group through a number of interesting exercises to introduce us to new ideas. At times, I found myself questioning what I take for granted and looking at things from a different point of view. Dr. DeBowes spoke of how the culture in a practice, business, or organization is so much more important than the facility or the business strategy. "Ethical, moral, core value behaviour can be monetized, it pays off." The sessions did not focus primarily on financial leadership in veterinary practice because, while that is important, it is not why most of us chose this profession. Instead, we were presented with ideas and tools useful for leading colleagues, clients, and the profession as a whole towards medical, social, and financial sustainability.

Core values are often discussed in the context of businesses and organizations. While I had never really considered my personal core values, I am sure it is not a coincidence that some of my most enjoyable work and volunteer experiences have been with establishments that possess a mission in line with my own.

We did not all have to come up with personal core values on the spot, or share them with the group, but we were encouraged to think about this question and answer it for ourselves. We were prompted to come up with three or four words to help guide us through our typically busy, always interesting, and sometimes difficult days. So, my core values, at least for now, are truth, kindness, compassion, and acceptance. Having a few touchstone concepts to remind me of what's important in all of my interactions, both professionally and personally, has helped me to subtly change the way I relate to people. If I come at life with these things in mind, it doesn't mean life is always going to be easy, or that my case outcomes are always going to be what I want, or that I'm never going to make a mistake. But I am sure that trying to align my actions with my core values will help me counsel clients, guide my team members, and more effectively lead by example.

One other gem that was presented—hard to remember when I'm in the thick of things, but vital to effective communication and leadership—is to stop, wait, and, listen for long enough to allow people to speak up. So, thank you, for allowing me to speak up. [WCV](#)

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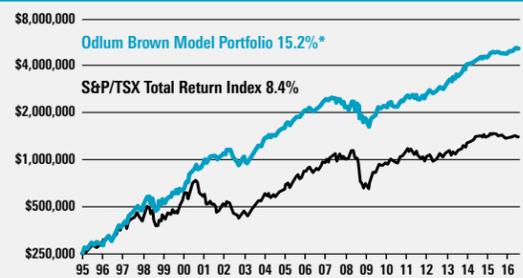


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INDUSTRY NEWS

→ In August this year, Dr. Douglas Freeman, DVM, PhD, Diplomate (ACT), started a one-year term as president of the Association of American Veterinary Medical Colleges (AAVMC). He is Dean of the Western College of Veterinary Medicine (WCVM) at the University of Saskatchewan and is the first dean of a Canadian veterinary college to serve as president of the AAVMC.



"It's a great organization that serves academic veterinary medicine very well, and I am honoured to take on this role with the AAVMC," he said. "I look forward to continuing our work to better serve the profession and veterinary medical education, as the association marks its 50th year—especially since the WCVM was one of AAVMC's founding members."

As Dean of the WCVM, Freeman has worked extensively to build collaborations across health science disciplines, colleges, and departments. On top of his efforts to promote One Health, he has participated in the development of a number of key partnerships across campus including the University of Saskatchewan One Health Leadership Experience, the One Health Initiative, the Global Institute for Food Security, the Sylvia Fedoruk Canadian Centre for Nuclear Innovation, and the new Livestock and Forage Centre of Excellence. For more information, visit www.aavmc.org/PressRelease/?id=361.

→ The CVMA Practice Diagnostic Report is the quintessential tool that can help veterinarians measure and manage their practice. It provides benchmarks on clients per veterinarians, revenue per client, client visits per year and, for practices that provide consistent client data for two consecutive years, client retention. For more information, visit www.canadianveterinarians.net/documents/practice-diagnostic-report-article.

→ Julie Stafford, a veterinarian in Alaska, USA, has been named by the World Small Animal Veterinary Association and Hill's Pet Nutrition as the 2016 'Next Generation' Veterinary Award winner. For more information, visit www.wsava.org.

→ SORCO Raptor Rehab Centre offers assistance for injured or orphaned raptors. For more information, visit www.sorco.org.

→ CommuniVET helps the Canadian Veterinary Community stay informed. For more information, visit www.CommuniVET.com.

→ Bayer has announced that Health Canada has approved Advantage and K9 Advantix for control of lice in dogs. For more information, visit www.bayer.com. [WCV](http://www.wcv.com)

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