

Best friends

THE PET MAGAZINE OF THE ONTARIO VETERINARY COLLEGE



a shift in focus

**How OVC's Ophthalmology Service saved
Boo's eye from a complex corneal ulcer**

UNIVERSITY
of GUELPH

IMPROVE LIFE.



Photo credit: Dean Palmer Photography.

FROM THE DEAN, ONTARIO VETERINARY COLLEGE

I am proud to celebrate with our Best Friends readers achievements thus far in 2022. Earlier this year, the Ontario Veterinary College was ranked first in Canada and fifth worldwide in new global university rankings for veterinary science. Thank you to our supporters for playing an important role in our world ranking success. Donations to OVC Pet Trust directly feed into the successes we celebrate as a veterinary college.

Vital funding from OVC Pet Trust fuels research and innovation. I wholeheartedly believe that OVC Pet Trust is a game changer for how we improve life for pets.

The Ontario Veterinary College is a research-intensive college that is part of one of Canada's top comprehensive universities. The benefits of OVC Pet Trust are especially evident with our early career researchers and young faculty who may not have other sustainable ways to fund their work – that is, until they have substantial experience under their belts to then apply to other major funding agencies who require proof of prior research success. OVC Pet Trust helps, in many cases, kickstart our scientists' research programs and projects before they may be able to gain external government funding.

I am proud of the commitment we collectively share – both our supporters and our researchers – to improve and advance companion animal health and well-being. The power of generosity is truly astounding and inspiring.

And while we celebrate, we recognize the pandemic continues to impact our lives in many ways.

As we pivot to adapt to an ever-changing virtual and hybrid world, we continue to be faced with well-being and mental health outcomes for members of our collective communities. We seek to find much needed solutions to address the veterinary shortage and foresee what the next generation of veterinarians will encounter – and how to best prepare them to be equipped with the skills to handle those challenges.

Your support of OVC Pet Trust not only helps us maintain a spot on the list of top veterinary schools in the world but pushes us to explore more and better ways to improve life for our companion animals and the people who love them so dearly. Thank you for choosing to give back in this meaningful way.

Dr. Jeff Wichtel
Dean and Professor
Ontario Veterinary College
University of Guelph

As part of the Ontario Veterinary College (OVC) at the University of Guelph, OVC Pet Trust is Canada's first charitable fund dedicated to advancing pet health and well-being. We do this by raising funds to support innovative discoveries, healthcare and education that improves the prevention, diagnosis and treatment of diseases of companion animals. Since 1986, more than \$73.5 million has been raised to improve life for pets and the people who love them. In 2022, OVC ranked first in Canada and fifth in the world for veterinary science by Quacquarelli Symonds' World University Rankings.

ABOUT OVC PET TRUST

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Contents.



TICK PREVENTION MADE LOCAL: PROTECTING PETS FROM PREVENTABLE TICK-BORNE ILLNESSES

6



A PLACE OF REST AND RECOVERY: HOW OVC BECAME THE CANADIAN LEADER IN INTENSIVE CARE SERVICES FOR COMPANION ANIMALS

10



SEEING THE SIGNS ANY DOG CAN BITE: OVC RESEARCHER EXPLAINS HOW TO SPOT AND PREVENT AGGRESSIVE ENCOUNTERS

19



ON THE FOREFRONT OF VETERINARY MEDICINE: THE COMPLEX RELATIONSHIP BETWEEN VETERINARIAN MENTAL HEALTH AND CLIENT SATISFACTION

22

IN THIS ISSUE:

- 2 FROM THE DEAN OF THE ONTARIO VETERINARY COLLEGE
- 4 FROM THE DESK OF OUR DIRECTOR
- 5 OVC MEWS: UPDATES FROM THE ONTARIO VETERINARY COLLEGE
- 6 TICK PREVENTION MADE LOCAL: PROTECTING PETS FROM PREVENTABLE TICK-BORNE ILLNESSES
- 8 YOUR PET, YOUR VET AND YOU: HOW TO GET THE MOST OUT OF YOUR RELATIONSHIP WITH YOUR VETERINARIAN
- 10 A PLACE OF REST AND RECOVERY: HOW OVC BECAME THE CANADIAN LEADER IN INTENSIVE CARE SERVICES FOR COMPANION ANIMALS
- 14 THE FUTURE OF EMERGENCY AND CRITICAL CARE
- 16 A SHIFT IN FOCUS: HOW OVC'S OPHTHALMOLOGY SERVICE SAVED BOO'S EYE FROM A COMPLEX CORNEAL ULCER
- 19 SEEING THE SIGNS — ANY DOG CAN BITE: OVC RESEARCHER EXPLAINS HOW TO SPOT AND PREVENT AGGRESSIVE ENCOUNTERS
- 20 FOUNDER OF OVC PET TRUST RECOGNIZED FOR OUTSTANDING VOLUNTARY AND PHILANTHROPIC EFFORTS: ROGER WARREN RECEIVES INAUGURAL OVC LEGACY MEDAL
- 22 ON THE FOREFRONT OF VETERINARY MEDICINE: THE COMPLEX RELATIONSHIP BETWEEN VETERINARIAN MENTAL HEALTH AND CLIENT SATISFACTION
- 24 SAYING GOODBYE: THE STORY OF GUS
- 26 GETTING TO KNOW... DR. ADRONIE VERBRUGGHE
- 28 YOUR GIFTS AT WORK
- 30 HOW SMILING BLUE SKIES IMPROVES RESEARCH
- 31 PETS IN MEMORY: BEAR

BACK COVER
#PETTRUSTPALS

On cover: OVC ophthalmology patient Boo. Photo credit: Spencer McMillan, spencer.mcm.com.



FROM THE DESK OF OUR DIRECTOR

This issue of Best Friends is jam-packed with practical and useful tips for pet owners. If you're a pet owner like me, I encourage you to check out page 22 to read more about the work of Dr. Andria Jones-Bitton and the complex relationship between veterinarian mental health and client satisfaction. The research begs the question: how can pet owners be good clients? How can we best support our veterinarians? Knowing your hospital's protocols, being aware of Dr. Google and maintaining two-way, open communication are all key.

With tick season in full force, I invite you to read more about the work of Dr. Katie Clow, also known fondly as The Tick Queen, and some very practical tips for pet owners. You found a tick – now what? Many of us have found ourselves in this predicament after spending time outdoors with our dogs; I did last summer with my dog Juno. On page 6, Dr. Clow provides some helpful words of guidance to help owners deal with this unsettling situation – and contribute back to science at the same time.

Have you ever wondered what it means to be a good "dog neighbour"? Learn more about the work of Dr. Lee Niel on page 18 and embark on some new information to help understand animal behaviour, fear and aggression.

The importance of remembering to be kind has been top of mind for me as we enter our third year of living through and coping with the COVID-19 pandemic. Sometimes you never know what a fellow colleague, friend or family member may be dealing with, including the members of your pet's veterinary care team. The next time you're bringing your pet to a routine veterinary appointment, I invite you to take a moment and thank a veterinary team member. A small act of kindness can go a long way and is guaranteed to make a difference in the lives of the people who dedicate their lives to caring for our animals.

Thank you – as always – for your support of OVC Pet Trust.

Kim Robinson
Director, OVC Pet Trust
Ontario Veterinary College
University of Guelph

OVC MEWS

UPDATES FROM THE ONTARIO VETERINARY COLLEGE



Photo credit: Ontario Veterinary College.

OVC PLACES FIFTH WORLDWIDE, FIRST IN CANADA FOR VETERINARY SCIENCE IN NEW 2022 WORLD UNIVERSITY

The Ontario Veterinary College (OVC) has placed fifth in the world and first in Canada based on new 2022 rankings by the Quacquarelli Symonds (QS). University performance is evaluated through the six key metrics of academic reputation, employer reputation, faculty / student ratio, citations per faculty, international faculty ratio and international student ratio. OVC held onto its fifth-place ranking from 2021 and has consistently placed in the top 10 since QS first included veterinary science in their rankings in 2015.



Photo credit: Scott McQuarrie, scottmcquarrie.com.

OVC PET TRUST LAUNCHES NEW BEHIND-THE-SCENES VIDEO SHOWCASING THE WORK OF OVC

Our pets bring us laughter, comfort and joy. Our companion animals deserve the best life, and when they get sick, they need us. In November 2021 OVC Pet Trust debuted a video giving viewers a glimpse behind the scenes of the Ontario Veterinary College. The video showcases how OVC Pet Trust supporters help improve life for pets and the people who love them through healthcare, research and education. Join us and watch the video online: uoguelph.com/petswelove. View photos of the pets featured in our video in #PetTrustPals on the back cover of this issue of Best Friends.

FIRST-IN-CANADA ONE HEALTH DEGREE COMING TO U OF G

As the world navigates through the COVID-19 pandemic, the One Health initiative has become more important to learn than ever and has sparked interest in many students to gain knowledge about origins of the disease and the affects it has on the human-animal-environment interface. The University of Guelph is set to launch the first-of-its-kind Bachelor of One Health (BOH) degree in the Fall of 2022. One Health recognizes the connection between the three integrated pillars of animal, human and environmental health and aims to deliver optimal health outcomes for all species. As the first four-year undergraduate program dedicated to One Health in Canada, students will be given the opportunity to seek solutions to interdisciplinary health problems and emerging diseases. Students will be given insight on zoonotic disease, translational medicine, public health and the human-animal bond through this degree on a local and global scale.

CANNABIS POISONING IS ON THE RISE IN PETS, OVC STUDY FINDS

A new study from the University of Guelph's Ontario Veterinary College shows an increase in reports of toxicosis in dogs since cannabis was legalized. Prior to legalization in 2018, Canada had one of the highest rates of cannabis use in the world, notes the study's lead author, Dr. Jibril Khokhar, a professor in OVC's Department of Biomedical Sciences. The uptick since legalization is not necessarily the result of humans increasing their use of cannabis, he added, but could reflect more reporting to veterinarians when animals are exposed. The research team found dogs were the animal most often ingesting cannabis, but cases were also reported in cats, iguanas, ferrets, horses and cockatoos, based on clinical signs, history of cannabis exposure and urine tests. Reported effects included urinary incontinence, disorientation, abnormal or uncoordinated movements, lethargy, increased sensitivity of the senses and slowed heart rate. The study found edibles were the most common cause of cannabis-induced toxicosis, with animals often ingesting cannabis while unattended. The study has received extensive media coverage in several news outlets, including CNN, NBC News, Popular Science and the Wall Street Journal.

VETERINARY CLINICAL TRIALS AT THE ONTARIO VETERINARY COLLEGE

Did you know? Veterinary clinical trials are research studies involving client-owned animals with the ultimate goal of advancing animal and human health care. These studies may try to identify the most effective therapies and practices for a given condition or increase our understanding of a disease process.

Current clinical trials recruiting dogs and cats are underway in many areas of health and disease at OVC including cardiology, internal medicine, diagnostic imaging, neurology, surgery and cancer.

Learn more at ovcclinicaltrials.uoguelph.ca.



Photo credit: Scott McQuarrie, scottmcquarrie.com.

\$8.36 MILLION OVC PET TRUST PROJECT FUNDS THE CREATION OF NEW CRITICAL CARE AND SPECIALTY SERVICES SPACES AT OVC, SLATED TO OPEN IN 2022

The OVC Health Sciences Centre, which serves as the medical training ground for future veterinarians and veterinary specialists, has seen more than 21,000 companion animal patient visits over the past year alone. Many of these cases arrive in critical condition, with 60 per cent of pets needing complex, critical or specialty care. The \$8.36-million expansion will create a new Intensive Care Unit (ICU), including a dedicated space for veterinary emergency services and will expand the ICU by 50 per cent. The renovation will allow for flexible areas to adapt to patient care needs and will incorporate leading-edge design elements, such as zoned lighting for improved patient rest. Increased privacy in the ICU will allow pet owners to visit animals unable to move for end-of-life care. Through these upgrades, OVC will also gain two specialty suites for its neurology and ophthalmology services; each specialty suite will offer two exam rooms, as well as dedicated space for the care teams and student learning.



Photo credit: Jane Dawkins.

VETERINARY ANATOMY COMES TO LIFE THROUGH VIRTUAL REALITY

Student veterinarians at the Ontario Veterinary College (OVC) will begin using a virtual reality (VR) simulation tool this semester to help learn about dog and cow anatomy. The technology – believed to be the first use of VR for teaching anatomy at a Canadian veterinary college – allows students to move around virtually inside an animal's body for a close-up look at organs and tissues. Besides helping to teach anatomy alongside the college's veterinary anatomy labs, VR tools can help students review material and reduce teaching dependency on preserved specimens, says Dr. Pavneesh Madan, a professor in OVC's Department of Biomedical Sciences. "Such tools have been shown to bring an element of gamification, which students love as they are used to such technology in their daily lives," he says.

TICK PREVENTION MADE LOCAL

Protecting pets from preventable tick-borne illnesses



The characteristic bullseye rash is a distinct symptom in people who get bit by a tick carrying the bacteria that causes Lyme disease. Although Lyme disease symptoms are apparent in humans soon after infection, clinical signs can take much longer to show up in dogs. Preventing tick bites is the best way to protect the quality of life of pets.

Prevention starts with understanding local risk. Ticks like to live in different areas depending on the type of tick and the weather. To better understand these patterns of local tick risk, a team of researchers at the University of Guelph's Ontario Veterinary College (OVC) started collecting ticks from veterinarians across Canada. The local data generated can be used to provide veterinarians and pet owners with information to more effectively limit tick bites in pets. Researchers collected over 4,500 ticks from 94 Canadian veterinary clinics. The results showed that the time of year when ticks are most active and the prevalence of tick-borne pathogens changes between provinces depending on the tick type and the climate.

"While regional data on ticks is available, there is variation within the regions," says Dr. Katie Clow, OVC professor leading the study. "Providing people with local data on tick populations will allow for more accurate, tailored prevention methods for pet owners."

Researchers found clear seasonal patterns of when ticks were more active. In Ontario, ticks were more active during spring and fall, while in Saskatchewan, ticks are the most active in spring and summer. Although the warmer months show the most tick activity, ticks were collected from pets during every month of the year.

"People sometimes believe that during winter their pets won't get bit by a tick, but it's not uncommon - especially in Southern Ontario," says Clow. "With climate change, we have warmer periods during winter which increases tick activity."

The impact of globalized pet adoption

Ticks live in many regions all around the world. International

rescue animals can sometimes carry hitchhiking ticks into Canada and their new homes. "Tick checks aren't required for rescue dogs coming into the country or before meeting their adoptive family," says Clow.

One type of tick imported to Canada via international adoption is the brown dog tick. "When rescuing an animal from another country, pet owners can take precautions to prevent ticks from getting into the home or from spreading new tick species within Canada," says Clow. "Before a rescue animal goes into the house, it is advised that pet owners complete a simple tick check and organize a primary care visit with a veterinarian on the way home from the shelter."

How can pet owners protect their pets from ticks?

Cats and dogs can both be affected by ticks, depending on the diseases they carry. Cats do not appear to be susceptible to Lyme disease. Dogs, on the other hand, are susceptible to concerning - and sometimes severe - clinical signs of Lyme disease. Unlike Lyme disease in humans, the clinical signs of Lyme disease in dogs, like shifting lameness, can take three to five months to develop.

The risk to a pet depends on the time spent outside, areas of play and the local tick information. Being aware of the risk in the area is the first step. Talk to a veterinarian to learn about the local risk of tick bites. Clow says that the most impactful step in tick bite prevention is to perform regular, thorough tick checks after spending time outside and accompany this with tick medication.

Tick checks are also valuable to the people living with the pet as ticks don't just bite animals; they can wander off a pet and bite humans too.

Following the tick prevention recommendations from local veterinarians helps pet owners to ensure they and their pets are safe. To learn more about tick prevention and pets, visit PetsAndTicks.com. 🐾

How to check for TICKS

Start at the pet's head and gently comb your fingers through the pet's fur, feeling for bumps and watching for small black or brown ticks. Ticks may be wandering through the pet's fur or they could be embedded in the skin resembling a dark skin tag or raised mole.

Check for ticks in the following areas:

- Head
- Neck
- Groin
- Under and on the legs
- Behind and in the ears
- Between toes
- Around the tail

You found a tick NOW WHAT?

- 1 Start by putting on gloves. Now, if possible, have someone help hold the pet in place.
- 2 Clear the fur away from the tick and use a pair of tweezers or commercial tick remover to get as close to the pet's skin as possible and gently secure the tick where the skin and tick are touching. Keeping the tweezers secured on the tick, pull straight out gently, trying not to leave any part of the tick in the pet. Do not pick at the pet's skin to make sure the whole tick came out; this can increase the chance of infection.
- 3 Save the tick in a plastic bag or jar. Then clean the area with saline solution or a gentle dog-safe antiseptic like chlorhexidine.
- 4 Remove the gloves and wash the tweezers.
- 5 Report the tick found to eTick.ca.
- 6 Complete a thorough tick check on yourself and your cat or dog to see if there are any more ticks. Pay extra attention to the pet's head, neck and between their toes.



Photo credit: iStock.com/chendongshan.

YOUR PET, YOUR VET AND YOU

How to get the most out of your relationship with your veterinarian

How well you and your veterinarian communicate with each other has a huge impact on how you feel about the care your pet receives. That's because the better your rapport, the more confidence you'll have in decisions about treatment or care.

A growing body of research from the Ontario Veterinary College (OVC) aims to understand what makes for a successful veterinary-client relationship. For postdoctoral researcher Natasha Janke, who recently completed her PhD in Epidemiology at OVC, good relationships begin with successful information exchange at the clinic or at virtual appointments.

"A lot of information gets exchanged during veterinary visits, and it's important we understand what works well, and what contributes to less ideal interactions," says Janke.

Pet owners are the keepers of important information about their personal lifestyle, home environment and any changes they may have noticed in their pets. Is there a smoker in the house? Has there been a change in who lives there? These details may not always be top-of-mind for pet owners, but they are important factors that may influence a pet's behaviour or health.

"Pet owners who come prepared to share information about their pet, lifestyle, and home environment can contribute to the veterinarian-client relationship that many pet owners are looking for," says Janke.

DECISIONS, DECISIONS

Through surveys and focus groups, Janke studied how information is shared in veterinary appointments from beginning to end.

"Clients expressed a strong expectation to work in partnership with their veterinarian, and to combine their knowledge of their pet with the medical knowledge that the veterinarian has, so they could decide together how to best manage their pets' health," says Janke.

But before a client can become part of the decision-making partnership, participants in Janke's client focus groups expressed wanting veterinarians to develop an understanding of the client's information needs. Veterinary clinics typically have a variety of tools, including visual aids and other resources, allowing for a tailored approach to client education.

UNDERSTAND YOUR OPTIONS

There is a growing recognition among veterinarians that clients prefer to be offered options when making decisions, rather than a single path forward.

Janke says the pet owners she consulted in her study reinforced this idea. Participating pet owners perceived their veterinarians to have financial motivations when a single recommendation was made. For example, if weight loss is a desired outcome for a pet, pet owners indicated that speaking in general terms about the benefits of different nutritional options is better received than recommending a single brand. Pet owners can foster a shared approach to decision-making by asking "What options are available?".

WHAT IF YOU GOOGLED?

If you've been searching for pet health information online, is it appropriate to discuss it with your veterinarian at your appointment? Absolutely, says

Nanette Lai, a PhD student in Epidemiology at OVC who studied how online searches may impact a client's relationship with their veterinarian.

"Veterinarians shouldn't feel surprised that clients are searching online, and clients should feel comfortable sharing what they've read, and asking what their veterinarian thinks about what owners have found," says Lai. "Your veterinarian can help you understand what information is credible, and when necessary, they can direct you to trustworthy online sources."

Lai says in many cases, pet owners have already consulted online resources before making an appointment, to help them decide if a visit was warranted.

"For example, a pet owner might start with a search such as 'is cat vomiting normal,'" Lai says. "They will probably find results that suggest the owner consider the frequency, period of time, and other factors that would indicate if the situation is more or less urgent."

Lai says her research shows pet owners relied on information from search engines, social media and even breed-specific online forums. In general pet owners suggested they were supplementing information, but they expressed a preference to get information directly from their veterinarian. She notes some pet owners may choose not to disclose their online searches because they felt it may be perceived that they were second-guessing their veterinarian.

"Our study showed that searching for pet health information online doesn't displace veterinarians' guidance," says Lai. "Most people reported the veterinarian-owner relationship was stronger when online searches were openly discussed."

WHAT IF YOU HAVE A LOT OF QUESTIONS?

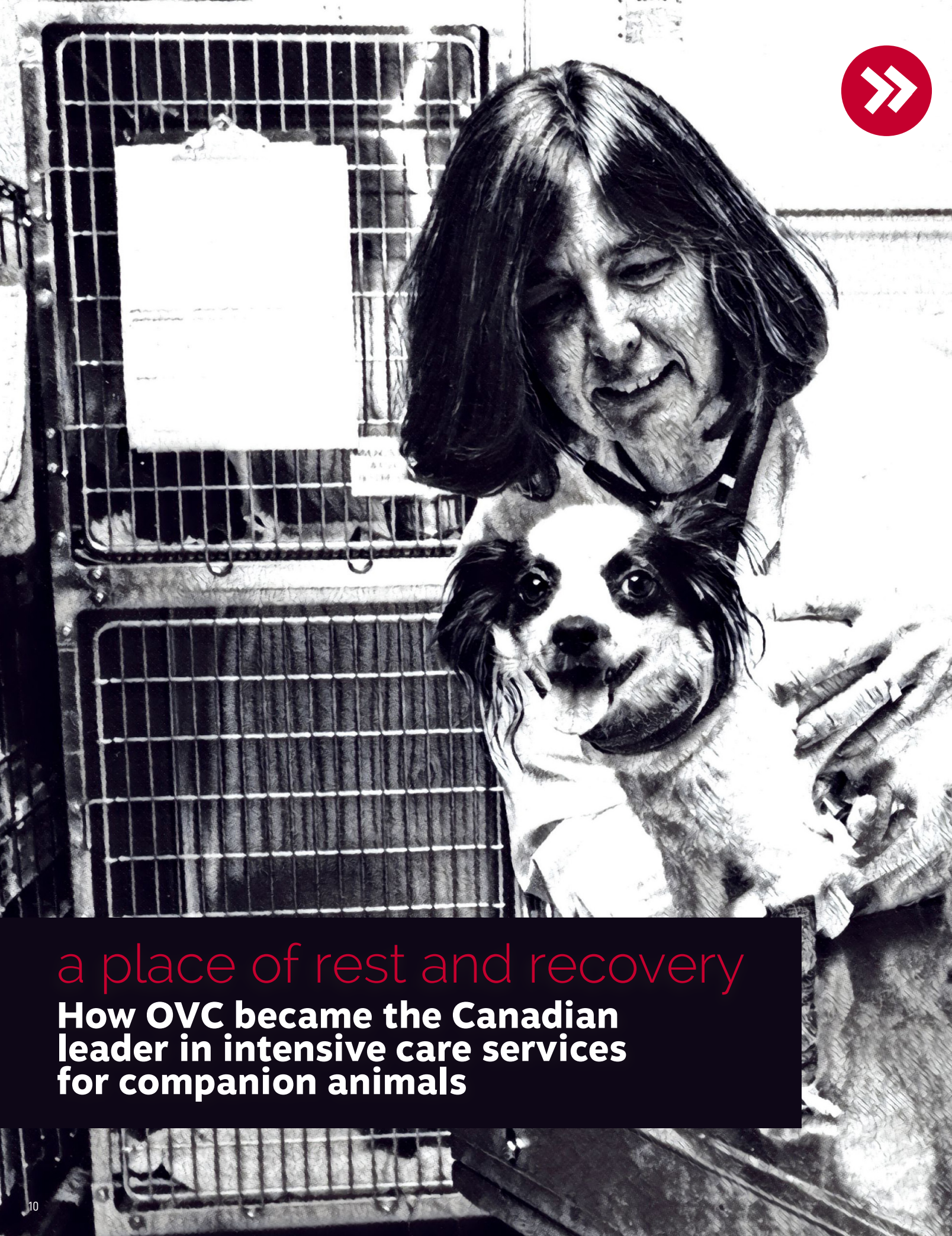
Access to veterinary care is harder to come by since the COVID-19 pandemic. So how do pet owners get information they need without monopolizing their veterinarian's time?

"If you need additional information or wonder if an appointment is warranted, contacting your regular clinic through their website or phone is a great first step," says Janke. She notes that many clinics post trusted resources on their websites, and most will provide links by client request.

To make the most of your appointment time, prepare the same way you would for your own medical appointment – and find out the best way to follow up if you have more questions after you leave.

"Some pet owners want only basic information, and others need more detail before they feel comfortable with making decisions about their pet's care," says Janke. "If you need your veterinarian to take a different approach with you, it's best to tell them." ❄️

Natasha Janke completed her research with Dr. Jason Coe, professor and the VCA Canada Chair in Relationship-Centred Veterinary Medicine. Nanette Lai is a PhD student in Dr. Deep Khosa's Lab. Khosa is an associate professor and academic coordinator of the Hill's Pet Nutrition Primary Healthcare Centre.



a place of rest and recovery

How OVC became the Canadian leader in intensive care services for companion animals

Nobody wants to be in the hospital, and that includes our pets. But it's a comfort for other family members to know a loved one is where they need to be, and that they're receiving the best care possible. That's an assurance the staff and medical teams at the Ontario Veterinary College (OVC) provide to clients and patients in their care.

Today, an estimated 50 per cent of OVC patients spend some time in OVC's Intensive Care Unit (ICU), which houses inbound emergency cases, critically ill patients, and those in need of round-the-clock supervision or quiet healing time. What many people don't realize is that the concept of an ICU for companion animals is a relatively new idea. OVC's ICU was the first unit of its kind in Canada and one of only a handful across North America.

5 MILLION PEOPLE AND COUNTING

For Dr. Wayne McDonell, the need for an ICU emerged out of a growing number of complex cases that veterinarians in neighbouring communities were referring to OVC in the mid 1980s. McDonell was managing OVC's Small Animal Hospital at the time, and he says as the capabilities and offerings of primary care veterinarians advanced, only the most challenging referrals were finding their way back to OVC.

McDonell recalls cases that required consultation from multiple specialities, such as an older dog undergoing back surgery, or animals needing treatment for a condition that might be further complicated by heart failure or kidney failure.

"Even back then OVC had the largest number of specialties and the biggest faculty, and our expertise in solving complex cases was well-established," McDonell says. "OVC has 5 million people residing around it, and there are many practitioners who send their patients for advanced care here."

It was time to centralize the patients that needed a higher level of care in a single ward. But first, they needed the vision.

WHAT WOULD AN ANIMAL ICU LOOK LIKE?

The idea of intensive care facilities for animals was gaining some traction for the world's leading veterinary schools, but it seemed there were different ideas about what they might look like. McDonell had the opportunity to tour a number of facilities, and there was inconsistency in what an ICU could look like. Some were little more

than a sign on a door, others were lacking in staff. "I swore that if we were going to set one up in Guelph, we would either develop a fully functioning unit with a dedicated space or we would not do it all," he says.

He worked with colleagues to acquire essential equipment. He advocated to hire 24-hour care coverage.

"It was clear that you can't run an intensive care facility and have everyone leave at five o'clock," he says. "We needed 24-hour staffing, and faculty that could be on-call overnight. There were so many concepts that were new to everyone at the time."

Soon McDonell had established a rotation of students within the Doctor of Veterinary Medicine (DVM) program to help manage the ICU, and he needed a staff member to supervise them. That duty fell to Dr. Karol Mathews, a veterinary surgeon who had recently completed her post-doctoral work on kidney transplants. Mathews was a logical choice for the role due to the nature of her recent work; her patients required round-the-clock care. The job started as a temporary position in 1988.

MODELED ON HUMAN MEDICINE

Mathews managed the ICU and its rotation, but any attempts to improve her knowledge of emergency veterinary medicine or improve OVC's ICU were met with one giant hurdle: the field was new, and there was no one to teach her. "There was nowhere in Canada to train, so I picked how I would train myself," Mathews says. "I was immersed in what I was doing, and I recognized what I needed to learn more about."

Mathews set her sights on human medicine for specialty training. She applied for, and was granted, an observation period at The Hospital for Sick Children (SickKids) in Toronto, where she was able to learn techniques, processes and protocols that could be applied to companion animals back home. For more practical knowledge in veterinary emergency and critical care, Mathews spent two weeks at a specialty clinic in the United States.

After these 'learning sessions', a serendipitous event occurred. While advising on care for a rabbit included in a surgical trial at nearby Hamilton General Hospital, she met the hospital's intensivist (human term for criticalist), Dr. Clive Davis, a pet owner, who became a mentor

advising her of learning opportunities. Dr. Davis included Mathews in the critical care classes with his residents, patient rounds and was available by phone 24/7 for troubleshooting and assisting her with managing the complex ICU patients. “Dr. Davis’ mentorship was the path to my success in board certification,” says Mathews.

A FACULTY OF ONE

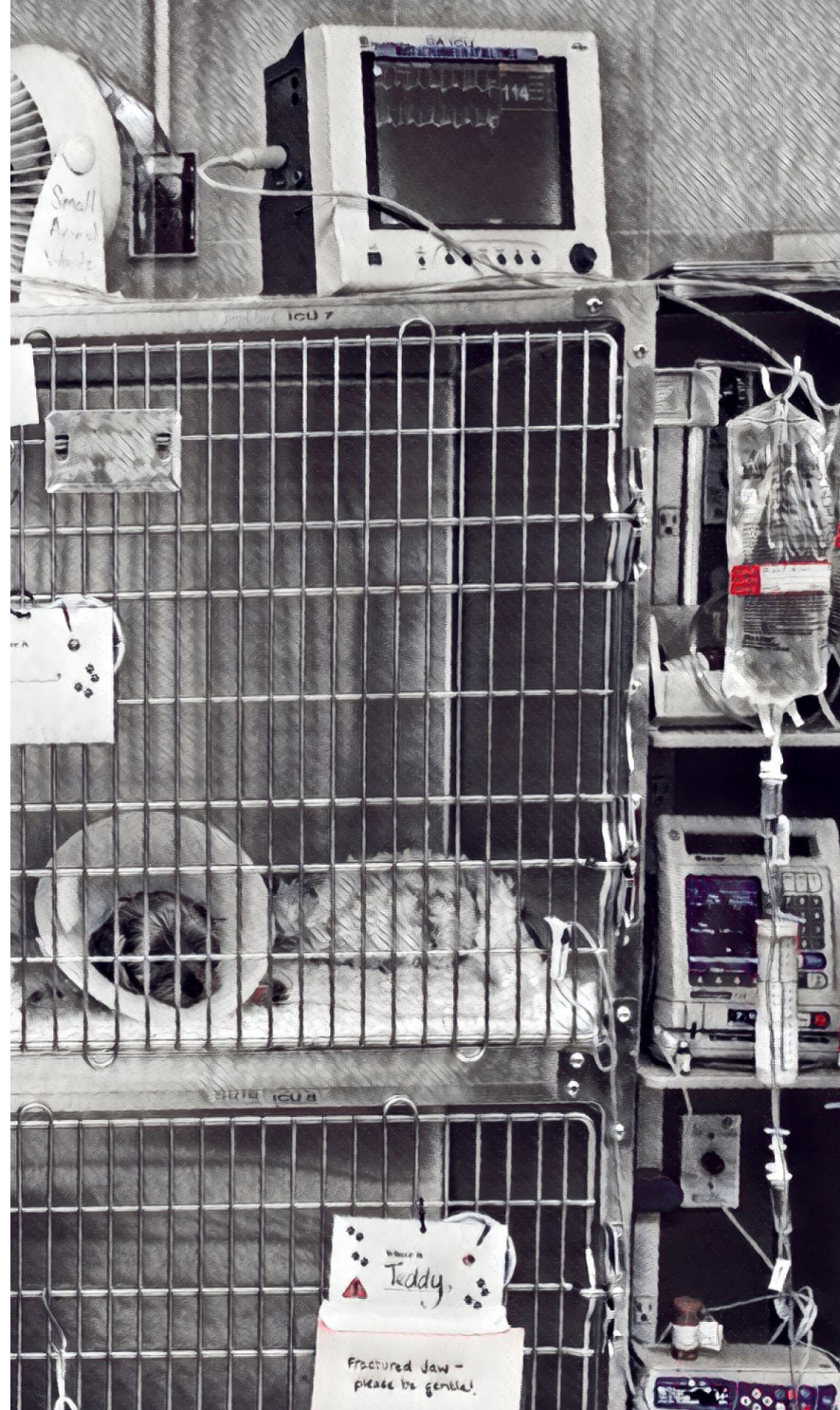
By 1993, Mathews became the first board-certified emergency and critical care medicine (E&CCM) specialist in the veterinary profession in Canada. With those credentials, she developed a graduate residency program at OVC to share the knowledge and experience she had gained to increase the number of E&CCM specialists, and ultimately manage critically ill pets across Canada. During this period, visiting veterinarians from around the world spent time in OVC’s ICU to expand their knowledge for practice in their own country.

But, while Mathews had focused on teaching others, she remained a faculty of one. There was no published ‘point-of-care problem and management’ resource for OVC DVM students, emergency interns or technicians working in the ICU, other than Mathews’ personal typed notes.

“I received many 2 a.m. phone calls from interns and residents from other services who were working rotations in the emergency room and ICU, and there were a lot of basics to cover,” says Mathews. “With each call, I was answering many of the same questions about managing the patient’s blood pressure, fluid requirements, pain management or the acid-base and electrolyte status, so I prepared notes on how to approach and manage these commonly-experienced problems. With these notes available, they were able to treat the patient appropriately, and then phone me if they needed further help.”

Today, Mathews’ notes form the basis of the quintessential textbook she authored, *The Veterinary Emergency + Critical Care Manual*, which is now in its third edition and used by veterinarians around the world. What’s more, the eight students that graduated from her residency have gone on to build key veterinary emergency and critical care programs across Canada, making significant contributions to improving the lives of companion animals and the people who love them.

Photo credit: Scott McQuarrie, scottmcquarrie.com.



Understanding veterinary critical care

What happens in the ICU?

Many pet owners with loved ones in the ICU may wonder — what do veterinary critical care specialists do?

The specialty of veterinary emergency and critical care medicine (E&CCM) focuses on the immediate management of a severely ill or injured animal and encompasses all organ systems and associated functions.

Some of the core therapies the ICU conducts include: mechanical positive pressure ventilation/respiratory therapy, transfusion medicine, pain management, CPR, cardiac disorders, sepsis and antimicrobial use, trauma management, managing kidney function and dialysis, acute plant and chemical toxicities and many other emergent problems.

Laboratory point-of-care testing and diagnostic imaging, such as ultrasound, are frequently required for evaluation of the emergent and critically ill patient. The veterinary criticalist has the expertise to prioritize attention to medical and surgical issues requiring immediate intervention.

“We work with colleagues in specialty areas such as surgery, internal medicine, cardiology, neurology, oncology and ophthalmology to address the problem the patient was referred for,” says Mathews. Based on the primary problem the patient has, they may remain under the care of the criticalist or referred to a colleague of another specialty to manage a specific surgical or medical problem in their area of focus.

While being managed for this primary problem, the patients remain in the ICU where the criticalist and the ICU technicians care for them. Together they measure and assess the patient’s physiological and other parameters required, including vital signs, acid-base, electrolyte, blood status, cardiovascular, respiratory, kidney, neurological, gastrointestinal and nutritional

status, and to monitor the general progress of the primary problem the patient has.

In addition, the ICU manages the basic needs such as IV fluids, pain management and nutrition, and ensures comfort and administration of medications. Because the ICU team is available 24/7, it enables other specialties to narrow in on their areas of focus.

“Working in a veterinary hospital is akin to working in a pediatric hospital, which requires an atmosphere full of care and love. Animals are similar to children. They need the level of affection they would receive at home, as they are sensitive to fear,” says Mathews. “When pets are afraid it can affect physiologic parameters, such as increasing heart rate, affect their nutritional status if they won’t eat and affect their diagnosis as sometimes it is not clear if these signs are coming from the disease itself or from the fear of being away from their home.”

The ICU team ensures the level of comfort and affection the patient needs to avoid stress. The work can be intense and emotionally demanding.

“In the early days of building the ICU, I was very grateful to have my veterinary technicians beside me as we learned about the specialty and built the service together,” says Mathews. “After I became a certified specialist in our field, the technicians followed with acquiring theirs, with the designation of VTS (ECC), or Veterinary Technician Specialty Emergency and Critical Care certification. Their support was invaluable then, as it still remains today.”

Ultimately, collaboration, partnerships and an integrated approach are at the heart of OVC’s success in building a model for critical care. “Working together with other specialties, we are truly optimizing patient care,” says Mathews. “Clients can feel confident about that level of care; their loved one is where they need to be at that moment.”

“Working in a veterinary hospital is akin to working in a pediatric hospital, which requires an atmosphere full of care and love. Animals are similar to children. They need the level of affection they would receive at home, as they are sensitive to fear,” says Mathews.

For further information on Emergency & Critical Care Medicine refer to Karol Mathews, *Emergency and Critical Care Medicine: An Essential Component of All Specialties and Practices* Front. Vet. Sci., 11 October 2017 Free access <https://uoguel.ph/eccm>.

THE FUTURE OF *emergency & critical care*

A new and improved Intensive Care Unit (ICU) is slated to open within the OVC Companion Animal Hospital in 2022, supported by OVC Pet Trust's \$8.36-million capital project, Building a Brighter Future for Pets. Renovations will construct a new ICU, as well as specialty service suites for neurology and ophthalmology within the OVC Health Sciences Centre.

OVC dean Dr. Jeff Wichtel says the expansion and creation of new spaces for critical care at OVC is urgent and essential to continue to help the sickest of the sick, bring the medicine of tomorrow to our patient's bedside, and allow OVC to keep pace with the modernization of health care.

"Our facilities offer more than just medicine; our veterinary teams are the guardians of our most critical patients," says Dean Wichtel. "Improvements to OVC's critical care and specialty units will enable our team to focus on delivering best-in-class care for our patients; all while educating, training and inspiring the next generation of veterinary professionals."

ICU RENOVATIONS WILL:

- Dedicate space (1857 square feet) for veterinary emergency services, which previously coexisted within the ICU itself.
- Expand the ICU to a larger, newly renovated space (2231 square feet), increasing capacity by 50 per cent.
- Create a flexible space to adapt to patient care needs, accommodating various configurations of dog and cat kennels to minimize stress.
- Provide a dedicated workspace for the medical team with clear sightlines to patients.
- Offer two separate bays for the most critical patients, each with monitoring capabilities.
- Improve design by including zoned lighting for a more restful patient experience that is less disruptive to animals' circadian rhythms.
- Provide increased privacy within the ICU to allow pet owners the opportunity to visit companions that cannot be moved for end-of-life care.

MEET PATIENT MAESON

Maeson, a one-year-old male Domestic Short-haired cat, arrived at OVC needing emergency care after his owners suspected that he had eaten some lilies. Many lily plant species are extremely toxic for cats and can result in life-threatening kidney failure within 24 to 72 hours. Maeson was hospitalized for three days in OVC's ICU with intensive supportive care for his kidney function and his specific toxicity. OVC's Emergency and Critical Care team monitored his condition round the clock and continuously assessed his well-being. Thankfully, Maeson was one of the lucky ones and was discharged from hospital. He returned home to his family in Guelph where he is doing well, his owner Holly says.



In photo: OVC ICU patient Maeson. Photo credit: Scott McQuarrie, scottmcquarrie.com.



In photo: OVC ICU patient Diesel. Photo credit: Scott McQuarrie, scottmcquarrie.com.

MEET PATIENT DIESEL

Diesel, an eight-year-old German Shepherd, was admitted to OVC's ICU after experiencing progressive lethargy, a loss of appetite, regurgitation and vomiting. Diesel was hospitalized for a total of six days while multiple diagnostic tests and treatments were performed, including bloodwork, radiographs (X-rays) and ultrasound. Surgery was performed to remove a foreign body from his small intestine. Unfortunately, Diesel developed several complications associated with the underlying foreign body and the vomiting it caused. He developed moderate pancreatitis, the inflammation of the pancreas, a vital organ that regulates food digestion and hormone production. He was also diagnosed with severe aspiration pneumonia, which occurs when gastrointestinal content has been inhaled into the lungs, causing lung injury

and inflammation and consequently difficulty breathing and low blood oxygen levels. During his recovery Diesel received supportive care while hospitalized that included IV fluid therapy, medications for his pain and placement of a nasogastric (NG) tube (pictured in photo) as a tool to allow Diesel to receive nutritional support during the worst stages of his illness. Diesel also received supplemental oxygen therapy during the worst stages of his pneumonia. Diesel continues to receive care from OVC's internal medicine service as an outpatient to treat his pancreatitis and ongoing health concerns. "I know how frightening it is to rush your pet to OVC and pray someone can help. I thank everyone at OVC for continuing to care for my Diesel and for being available when we need it the most," says his owner Kourtney. 🐾



In photos: OVC ophthalmology patient Boo with Dr. Chantale Pinard. Photo credit: Spencer McMillan, spencermcm.com.

a shift in focus

How OVC's Ophthalmology Service saved Boo's eye from a complex corneal ulcer

Amanda Mansz affectionately describes her 11-year-old pug Boulez (pronounced Boo-les), whom she lovingly calls 'Boo', as a determined, sweet and feisty dog. Boo found his forever home with Amanda in 2012 when he was 11 months old. In August 2021, Amanda noticed a deep crater in Boo's eye. She took him to their family veterinarian who immediately recommended taking him to the Ophthalmology Service at the OVC Health Sciences Centre (HSC) as soon as possible.

In hindsight, Amanda says she knew that Boo was on the verge of disaster. After being referred to OVC Amanda and her family were faced with a big decision.

Boo was diagnosed with a complex corneal ulcer, a serious lesion of the cornea, the clear outer part of the eye. He was also diagnosed with keratomalacia, which means that the cornea had begun to disintegrate and "melt" due to infection. Boo was examined by OVC ophthalmologist Dr. Chantale Pinard and her team, and Amanda learned that she had a few options to consider to help her dog: she could make the decision for Boo to lose his left eye completely or opt to treat it medically and/or surgically.

Surgery meant that Boo would have to go through a procedure called a corneal graft, an intricate and involved procedure that would be performed by Dr. Pinard in an operating room.

Even through her lens as a trained veterinarian, Amanda had never experienced anything like what she was about to go through with her beloved Boo.

Amanda is a trained veterinarian (OVC 2008) with advanced graduate training through a residency and Doctor of Veterinary Science program (DVSc) in anatomic pathology. She has worked at the Animal Health Laboratory at the University of Guelph since 2018. Her job includes day cases, which involves analyzing biopsies and samples from small and large animals. Amanda also conducts post-mortem autopsies, and her caseload includes dogs, cats, horses, exotic animals and livestock (pigs, cows, goats and sheep).

Dr. Pinard says that corneal ulcers are one of the leading eye diseases in dogs. Dogs with prominent eyes such as pugs, shih tzus and Boston terriers are at higher risk than dogs that have a longer snout (nose) – such as retrievers, spaniels and shepherds.

"Dr. Pinard and the team advised me that there was a chance that medication only would have solved the infection and Boo could have healed without surgery; but there was also an equal chance that the cornea would have ruptured due to its fragility during healing," Amanda shares. Boo's vision would have been compromised and the eye would have undoubtedly been a source of pain for the pug. He was immediately hospitalized in OVC's intensive care unit (ICU) for rigorous medical therapy to prepare for surgery.

Surgery would not only increase the odds that Boo could keep his eye, but also shorten the medical therapy to two to three weeks; with all of the risks, medical therapy without pursuing surgery can still take several weeks to months and the outcomes are not guaranteed.

In the ICU, Boo was placed on several medical interventions to stabilize his eye, treat his infection and manage his pain – all with the ultimate goal of maximizing surgical success.

"If Boulez's infection was still active at the time of surgery, the sutures used may not have held and the graft would be more likely to fail," explains Dr. Pinard. "This aggressive medical therapy was only possible

due to the presence of the ICU as most owners usually do not have the capacity to administer drops at such a frequency for 24 hours," she adds, acknowledging the importance of integrated care at a tertiary hospital such as the OVC HSC.

Boo had surgery with Dr. Pinard a day later.

Dr. Pinard surgically constructed a graft for Boo's eye.

The graft involved taking a piece of adjacent pink tissue around the eye (called conjunctiva) and manipulating it to cover the corneal lesion.

Precision is key: under a microscope, the sutures that Dr. Pinard used to build



the graft were thinner than a single strand of hair. The risk of complications during surgery was high and the margins were very narrow, with no room for error. Boo responded to medical and surgical therapy and was fortunately able to keep his left eye.

“Even though I have medical knowledge and training as a veterinarian, it was a whole different world for me to go through this experience as a pet owner whose dog needed urgent help,” Amanda says. “I didn’t know this surgery would even be an option for Boo.”

Boo came home two days after his surgery with an e-collar (cone) and strict instructions for rest as he recovered, which Amanda says was challenging with two other dogs and a young child at home, but necessary to prevent further eye trauma. Boo shares his home with Amanda’s husband and the couple’s two-year-old child as well as two other dogs: Cousteau, a 12-year-old pug mixed breed, also a rescue; and Bizet, a French Bulldog, rescued about five years ago.

“OVC went above and beyond caring for Boo – the treatment he received was world class and the TLC he received was absolutely amazing,” Amanda says. “It was a nerve-wracking experience for our family to go through – especially with Boo being a pug, being under anesthesia has a higher risk – but I knew he was in the best possible place.”

Two weeks post-op Boo returned to OVC for a recheck appointment and Amanda and her family received good news: Boo’s left cornea was stable.

“I am so grateful to Dr. Chantale Pinard – she walked me through the options for Boo, let me make my own decision and was there to support us no matter which route we chose. It was hard; but the time and care to explain all options, the risks associated with all choices and the compassion to know that I could ask questions if I needed to was so reassuring and comforting,” Amanda reflects. “The state of our [veterinary] profession is tough – veterinarians and specialists are under a great deal of pressure and are busier than ever right now,” she adds.

“Dr. Pinard saved Boo’s eye. Our family will be forever grateful.”

Dr. Pinard advocates that owners pay careful attention to their dogs’ eyes, especially if they notice issues or something out of the ordinary. She says, “If squinting or excessive blinking does not resolve within one to two hours and is accompanied by tearing, redness of the eye and a prolapsed (or protruding) third eyelid, prompt veterinary care should be sought out as the eyes and their associated tissues are fragile and may not forgive easily. Owners of dogs with prominent eyes, especially pugs and shih tzus, should be attentive to these signs and seek re-evaluation if the clinical signs do not improve within 24 to 72 hours. If the owner can see a visible crater or indentation in the cornea, seek immediate veterinary care.” 🐾

SEEING THE SIGNS: ANY DOG CAN BITE

OVC researcher explains how to spot and prevent aggressive encounters

Photo credit: istockphoto.com/alexel1m.

First encounters with unfamiliar people and situations can sometimes be intimidating and overwhelming – for both people and for dogs. This uncertainty is normal and healthy when initially exploring something new, but when it results in excessive fear in dogs it can sometimes lead to aggression and result in serious injuries to people and other animals.

To better understand factors that contribute to dog bites, Dr. Lee Niel from the Ontario Veterinary College’s (OVC) Department of Population Medicine studies behaviours in dogs from birth to adulthood. Niel and her team are conducting studies to provide a deeper understanding of the

development, identification and potential prevention of fear, aggression and biting in dogs. Chances of fear, aggression and biting are generally

reduced by ensuring early introductions to a range of people, animals, and environments (termed ‘socialization’), using reward-based training approaches, and noticing when a dog needs to leave a situation.

“Teaching dogs to feel safe in new situations can reduce the chance of biting,” says Niel. “Pet owners can reduce fear and aggression in their dogs by properly socializing their pets early in life, by understanding and respecting the dog’s limits, and by making new experiences positive by pairing them with good things like treats.”

Fear and aggression prevention is a lifelong process

Early socialization teaches dogs which people and places are safe, and requires regular exposure to new people, animals, places and sounds. With the COVID-19 pandemic, there are

fewer face-to-face interactions for people; this means fewer new interactions for dogs and puppies.

“Puppies adopted during the pandemic might not have experienced everything they normally would have been exposed to,” says Niel. “Fewer new experiences at two to four months old could lead to increased fear when they are older, putting them at a higher risk of biting.”

Selecting a reputable breeder that is familiar with early puppy needs can support good behaviour later in life, says Niel. Asking about experiences the breeder has provided for the puppy, such as exposure to different people, animals and sounds, is a great way to ensure the puppy has a strong start and is familiar with various stimuli. After adoption, socialization can continue to help normalize and maintain calmness during new experiences.

Pet owners can enroll in puppy classes to enhance opportunities for new experiences and mitigate fear and aggression development.

“Many people think that puppy classes are about obedience training, but they’re mostly focused on making puppies more comfortable in new situations,” says Niel. “Classes can help owners identify situations that make their dog fearful and prevent reactivity when meeting new people or dogs.”

Introducing a dog to new experiences at two to four months is ideal. “Puppies start learning about their environment when they are only a few weeks old,” says Niel. “Dogs can start learning to become comfortable with new experiences at any age, although it may take more time and understanding with older dogs.”

Desensitization and counterconditioning can help dogs of any age build confidence. The

gradual introduction to a situation or interaction that causes discomfort desensitizes the dog to the situation, and counterconditioning which includes pairing gradual exposure with treats over multiple sessions can slowly turn a stressful situation into a positive one.

Gradual exposure is important to keep the experience as positive as possible and prevent the dog from escalating into a fear or aggression response. Niel emphasizes that fear and aggression in dogs are related to the environment they are in and are not breed-specific. The assumption that different breeds are more friendly than others may create a false sense of security.

“Although older dogs take more time to get used to new things, this exposure is incredibly important to improve interactions with other pets and people, as well as to reduce both owner and dog stress during outings,” says Niel.

Watching for the signs of a dog bite

“Even a friendly dog can bite if put in a stressful situation,” says Niel.

Signs of fear are similar in both younger and older dogs, and can include pulled back ears, tucked tail, cowering posture, lip licking, yawning or panting. Changing or leaving the situation can prevent the escalation of fear into aggressive behaviours like growling, lunging or biting.

“Changes happen fast but dogs will generally show signs that they are uncomfortable before the bite happens,” says Niel. “Pet owners can watch for the signs of fear in their dogs and take action to make their pet feel safe and prevent biting.” 🐾

How to be a good dog neighbour

Being a good dog neighbour means that the handler and the dog are confident and relaxed during everyday situations.

🐾 Be aware of triggers that make your dog fearful and be respectful of other dogs’ triggers.

🐾 Watch your dog for signs of fear before escalation to aggression.

🐾 Use reward-based training to reduce the chances of aggression development in your dog.

🐾 Short daily training sessions with your dog can help keep them out of a stressful situation using commands and guidance.

🐾 Remember, although your dog may be calm and confident during new introductions, not all dogs are comfortable meeting new dogs. In this situation, maintain your distance.

🐾 If your dog is reactive when seeing people or dogs, has trouble with recall or is easily distracted, classes with a qualified professional might help to improve these behaviours.



In photo: Roger Warren at the inaugural OVC Legacy Medal ceremony (left). Mary and Roger Warren on their wedding day (right).



Founder of OVC Pet Trust recognized for outstanding voluntary & philanthropic efforts

ROGER WARREN RECEIVES INAUGURAL OVC LEGACY MEDAL

What began with a telephone call in 1985 from the dean of the Ontario Veterinary College (OVC) to a client of the OVC Companion Animal Hospital, investment manager Roger Warren, has grown into a deep and fulfilling partnership between the college and the philanthropist spanning more than three decades. In September 2021, OVC celebrated Roger and his late wife Mary's contributions to the college by naming them the inaugural recipients of the newly established OVC Legacy Medal.

The OVC Legacy Medal recognizes outstanding voluntary and philanthropic efforts that have contributed to OVC's progress in pursuit of its mission to improve life by creating healthier futures for animals, people and the environment. In presenting Roger with this prestigious award, and honouring Mary posthumously, the college commemorated the Warrens' 35-year legacy of support for OVC Pet Trust to advance veterinary learning, pet healthcare and innovation in companion animal medicine.

Roger is known by his peers and the broader community as a leader, philanthropist, businessperson and visionary. Within OVC, he is known as a founding member of the OVC Pet Trust board and, later, a board chair and now, an honorary member and trusted advisor. He helped build OVC Pet Trust from the ground up and has undoubtedly influenced its growth and success.

Those who knew and loved Mary Warren describe her as a life-long animal lover with a generous heart. Over the years, she and Roger expressed their gratitude to OVC for the care provided to their own family pets who have encountered medical problems. Roger says this is a significant source of inspiration for him to stay involved with OVC Pet Trust. He adds that his motivation to give back is based on the family values he grew up with – a personal desire and a sense of responsibility to give back to the community.

Roger's vision for a pet memorial program, which would allow veterinarians and pet owners to

commemorate the companion animals who bring so much joy into our lives, became the foundation for OVC Pet Trust in the 1980s. With the support of collaborators Dr. Ole Nielson (OVC Dean 1985 – 1995), Dr. Alan Meek (OVC Dean 1995 – 2005) and Wayne McDonnell (Medical Director of the Veterinary Teaching Hospital, now known as the OVC Health Sciences Centre), he provided the necessary guidance to make it the first charitable fund dedicated to the health and well-being of companion animals in Canada when it was officially established in 1986.

During an interview with OVC Pet Trust in 2015, Roger said, "I'm not a medical person; I'm a financial person. My contribution was largely putting together the corporate structure for OVC Pet Trust. Originally, I agreed to join the board for one year, and I'm still here. I am a great believer that when one has had success in life that one should give back. OVC Pet Trust has been a worthy cause for me to give to and get involved with," he said. Mary and Roger, through their education and research-focused charitable endeavour The Rathlyn Foundation, have been extremely generous donors to the Ontario Veterinary College. Their support includes contributions to OVC Pet Trust, the creation of student bursaries and support for capital projects. Most profoundly, they have influenced the nature of OVC's research and graduate programs by together creating nine endowed funds for Doctor of Veterinary Science (DVSc) students – advanced clinical training for veterinarians who are pursuing a specialized area of veterinary medicine to become board certified specialists.

"By combining their passion for animal health, veterinary research and innovation with student support, Mary and Roger have had a tremendous influence on OVC's research output potential and growth," says Dr. Jeff Wichtel, OVC Dean. "As valued champions, donors and volunteers, they have had an extraordinary and enduring impact on the Ontario Veterinary College and, in a fundamental way, have helped shape its future. For that, we will be forever grateful." 🐾



Photo credit: Ashleigh Martyn (left), Photo supplied by Roger Warren (right).

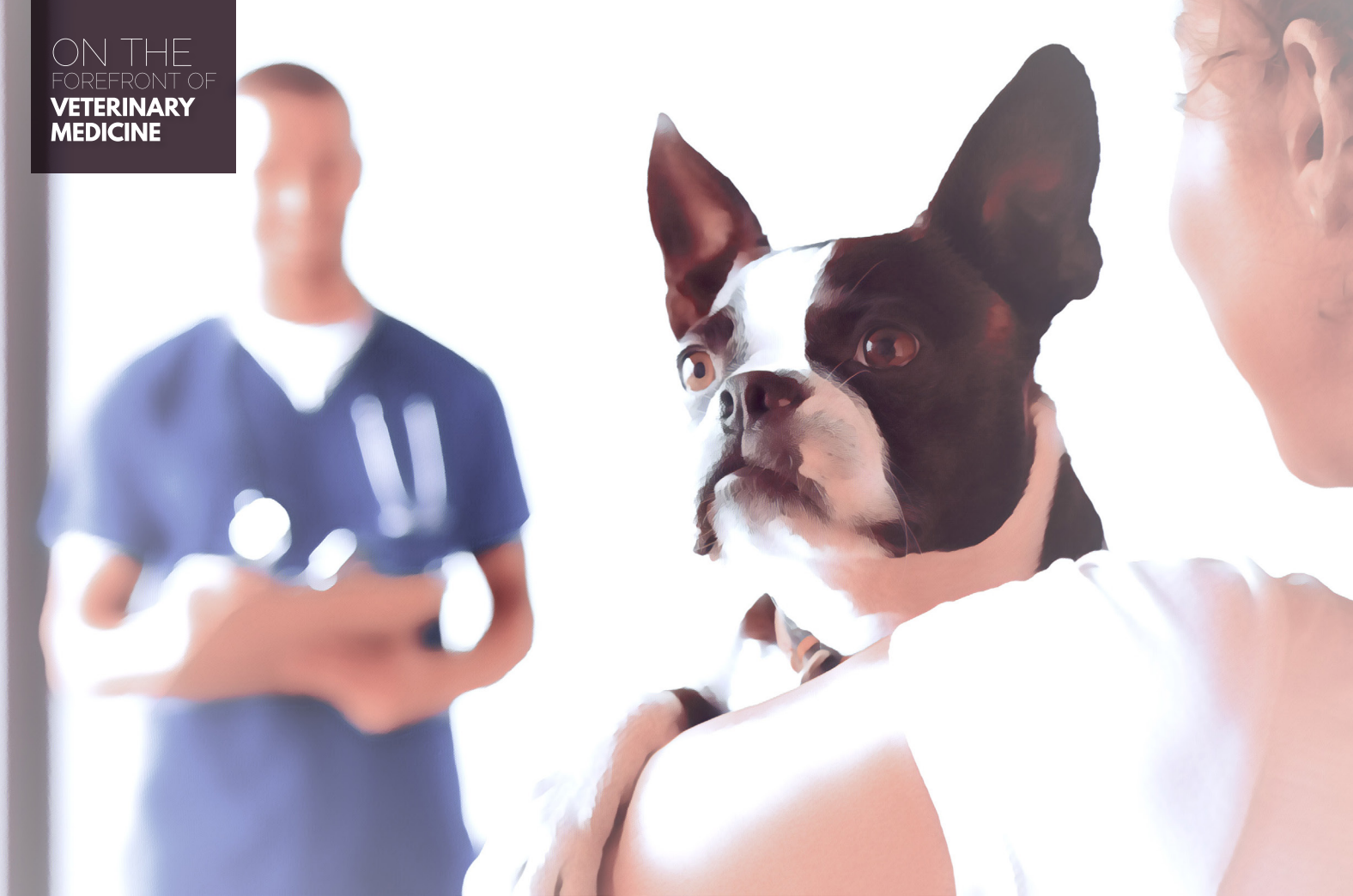


Photo credit: istockphoto.com/tidofranz.

THE COMPLEX RELATIONSHIP BETWEEN VETERINARIAN MENTAL HEALTH AND CLIENT SATISFACTION

FIRST-OF-ITS-KIND RESEARCH REVEALS IMPACT OF BURNOUT AND COMPASSION FATIGUE ON PROVISION OF CARE

Pet ownership in Canada is at an all-time high, thanks to so-called "pandemic puppies", "COVID kittens" and other animals finding their forever homes. Now, as families incorporate new companion animals into their households, many are encountering an unexpected challenge – higher demand and longer wait times for veterinary care.

Dr. Andria Jones-Bitton, director of well-being programming for the Ontario Veterinary College (OVC) and OVC researcher with a focus on the epidemiology of mental health in veterinarians, veterinary students and agricultural producers, says many veterinarians are seeing high demand for their services at a time when clinics are also adjusting to new and changing public health protections.

"Veterinary hospitals have seen more pets, and a decrease in the number of people that can be present in clinics who've transitioned to offer curbside medicine for their patients. That, in combination with other factors, has put a real demand on veterinarians that we haven't seen before," says Jones-Bitton. "Increased veterinary demand has been compounded by oth-

er stressors resulting from the COVID-19 pandemic: veterinarian and staff shortages, illness resulting from COVID, lack of child care, clients taking frustrations out on staff, and burnout."

Jones-Bitton and then-PhD candidate Dr. Jennifer Perret conducted research, believed to be the first of its kind, that examined the relationship between the mental health of veterinarians and the resulting client satisfaction. What her research team found was that the relationship was incredibly complex.

"We found that higher client satisfaction was associated with poor veterinarian mental health states, and lower client satisfaction was associated with mental health states more indicative of wellness. We suspect the higher levels of anxiety, emotional exhaustion and depersonalization amongst veterinarians with high client satisfaction may be explained by emotional labour – the effort expended to manage one's feelings while fulfilling the requirements and societal expectations of the job," Jones-Bitton says. "Similarly, among human physicians, empathy has a well-documented association with patient satisfaction and is also hypothesized

to increase the risk of burnout and empathic distress (also known as compassion fatigue)."

Jones-Bitton's research raises the question: how can pet owners best support their veterinarian? What does it mean to be a good client?

KNOW YOUR HOSPITAL'S PROTOCOLS

To limit the spread of COVID-19 among clinic staff and the broader community, hospitals have adopted additional cleaning protocols, capacity restrictions and PPE policies into their existing operating procedures. It's all part of continuing to provide the best, safest care possible, but at a slower pace.

"Everyone is doing their best, but some days it seems like there are ever-changing protocols, and that can feel overwhelming," says Jones-Bitton. She notes paying attention to timelines and respectfully adhering to clinic requests goes a long way in ensuring appointments run smoothly for everyone.

COMMIT TO YOUR PET

Most families want only the best for their pet, always – and so does your veterinarian. Sometimes, though, a pet's medical needs or behaviours change, and lead to difficult situations to navigate.

"Unfortunately, sometimes veterinarians encounter situations we call 'moral distress' because they are asked to do something that is against their morals or what they believe is right," says Jones-Bitton. "Of course, the overwhelming majority of clients understand that having a companion animal is a lifelong commitment. Nevertheless, veterinarians experience moral distress when they know there is something that they can do to help an animal, but there are barriers in the way for doing so: for example, a client's inability or unwillingness to pay, as well as different value systems," Jones-Bitton adds.

BEWARE OF DR. GOOGLE

While it's natural for pet owners to turn to internet searches when we have concerns about our pet's health, not all websites are credible, and most clients agree that it doesn't replace a veterinarian's expertise.

Recent OVC research led by Dr. Deep Khosa with PhD candidate Nanette Lai explored how online searches may impact a client's relationship with their veterinarian and revealed that in many

cases clients have already consulted online resources before making an appointment at their veterinarian – in most cases, to help them decide if a visit was in fact warranted. The study also showed that pet owners expressed a preference to get information directly from their veterinarian.

"If you aren't sure what online resources may or may not be credible sources of information, the best option is to ask your veterinarian directly. If possible, also ask them to make recommendations for reliable information sources that they would want you to read," advises Khosa. Read more on page 8.

BE REAL ABOUT COSTS

For many clients, the most stressful aspect of veterinary care is the bill. And especially if a client doesn't have pet insurance, everything comes at a cost.

"It's hard for many people to put a veterinary bill into perspective, because in Canada we aren't used to paying for our own healthcare or seeing an itemized bill," says Jones-Bitton. "Keeping a veterinary clinic running comes at a high cost. The equipment, skilled teams and the facilities are essential to giving the very best care possible."

Pet insurance, when it's a viable option, can help ensure the best care is delivered to patients without cost being as big of a barrier, Jones-Bitton adds.

COMMUNICATION IS KEY

Between pandemic challenges and higher workloads everyone is experiencing, sometimes corralling pets through traffic to the clinic can feel more stressful than usual, Jones-Bitton says. Particularly if a client has a concern relating to their pet's appointment or care, they are entitled to their feelings. But regardless of what kind of day they've had, it's essential that communication between members of the veterinary team and clients is respectful.

"Strong relationships are built on trust, and respectfully communicating concerns is essential to strengthening your relationship with your veterinarian," says Jones-Bitton. "At the end of the day, we are all human, and we all want the best possible outcomes for our animals." 🐾

Learn more about Dr. Andria Jones-Bitton's research on her website: ajbresearch.com.

HOW EVIDENCE-BASED TOOLS ARE HELPING TO ADDRESS THE PROBLEM

Veterinary medicine is an incredibly rewarding occupation. But by nature of the job, there are some stressors that are inherent to the veterinary profession that can have a negative impact on a veterinarian's mental health. A growing body of research is looking at factors such as resilience, perceived stress, anxiety, depression, burnout and empathic distress (compassion fatigue) among veterinarians.

"Veterinarians see a lot of sickness, and sometimes despite best efforts, veterinarians don't always see the outcomes they want," says Jones-Bitton. "At times, when veterinarians connect with clients on grief and distress, it can be harmful to a veterinarian's own emotional state and mental health. It is important to recognize that and manage veterinary mental health accordingly."

Jones-Bitton works with colleagues to understand the risk factors associated with poor veterinarian mental health. She has also been instrumental in providing the field with evidence-based tools to address the problem.

Jones-Bitton has a new study underway with co-investigator Dr. Caroline Ritter at the Atlantic Veterinary College, and PhD students Tipsarp Kittisiam and Emily Morabito. "We have a new study to investigate early career veterinarians' mental health from time of graduation through their first two years of practice. The results will help us develop training and resources to support veterinarians through this crucial transition period."

Jones-Bitton has also led the development of a new curriculum to enhance resilience and wellbeing for student veterinarians at OVC. She notes that instructors are also teaching students about compassion, and how they can demonstrate compassion for others.

"It's important that current veterinarians – and our students – appreciate that veterinary medicine is an incredibly rewarding profession, but it's also burdened with stresses and challenges. Many positive psychology tools and well-being strategies can help," says Jones-Bitton. "With that awareness, we can set them up for success in serving their patients and clients."

The Story of Gus

"Gus taught me the importance of getting involved, of giving what we can."

Karen Hurlbut

It's February 2022, and outside Karen Hurlbut's home in Port Elgin, Ontario, it's a scene from a holiday greeting card. Trees are thickly coated with snow that has yet to drop away, and the air is still. It's the kind of winter day Gus, Karen's red golden retriever, would have loved best – and playing in the snow would have made an excellent story for his newsletter.

"Golden retrievers are such happy, social creatures, and Gus had so much to offer everyone," says Karen. She brought Gus home as a puppy at a critical point in her life, as she was struggling with the transition to retirement. Karen has never been one to sit around at home, and didn't believe her dogs should either.

In his early years, Gus was always enrolled in one class or another. She knew a patient at Freeport, a campus of Kitchener-based Grand River Hospital, sometimes she brought him to visit. When Gus was five, she got him certified as a St. John Ambulance therapy dog.

"I've always loved the elderly, and I knew how much we could offer, but when we first started volunteering, I felt some anxiety," says Karen. "Gus gave me self-esteem and confidence. I could do almost anything when he was there."

At Freeport, Gus happily went where he was needed – playing balloon badminton one minute and climbing onto a bed where he could be stroked the next.

"I remember one patient who used to slide himself out of his wheelchair so he could sit on the floor with Gus," says Karen. "He couldn't speak clearly, and he was very proud when he taught Gus to hold something on his nose and balance it there. Gus made him feel understood."

Gus was good at his job as a therapy dog. He brought comfort to many people. Then the COVID-19 pandemic struck, and visiting hours were over.

"I knew people would miss us terribly, so I started sending newsletters from Gus to Freeport every Tuesday and Thursday, the days we would have visited," Karen says.

And, while much of the world came to a standstill, Karen says it wasn't an option at her house. If they were going to send newsletters, she and the dogs needed to have something to write about.

"We didn't have time to dwell on the pandemic because we had to keep busy doing things and taking pictures to go with our stories," she says. "We never wrote about anything that was happening in the world, as far as politics or COVID, and we all appreciated having some good news in such a hard time."

The newsletters – 113 in all – contained updates from Gus along with photos, trivia and puzzles. The

staff at Freeport printed copies for the residents, and new contacts began to appear on the email distribution list, for individuals living as far away as Vancouver Island and Newfoundland.

While it was Karen who typed the words, she says Gus was the real inspiration behind them, and his personality shone through. She says his brother Ty tried to write them a couple of times, but his heart wasn't in it. Gus was the writer in the family.

"I couldn't have done it alone. Gus was my muse," she says.

Two days before Gus passed away in November 2021, he had an upset stomach, and Karen decided she would make an appointment at her veterinary clinic. The morning the clinic opened, she took the dogs for a short walk and let Gus choose the route. He guided them down a small hill, toward the beach. They took some pictures. But on the way home, Gus had a seizure. He died on his way to the clinic.

"It was unexpected, and strange," Karen says. "Within half an hour of being at the beach, I was at home, and I no longer had my dog."

She shared one final story about Gus with her email distribution list, and even during a most difficult time, Karen made the effort to highlight the positive: "Feet were wet and leashes were tight as Gus tried to drag me into the surf as he always does. We took some pictures too as the sky was beautiful with just a little bit of blue peeking through! About 15 min from when the photo on the left was taken, Gus had a seizure. I crouched next to his body and called my neighbour who came quickly, helped me lift limp Gus into his van. On route to the vet, Gus took his last two deep struggling breaths and passed."

Today, Karen and Ty are still adjusting to life without Gus. While pandemic restrictions remain in place, she says they've returned to old-fashioned letter writing, and video chatting with friends. When it is safe, she hopes to return to Freeport. She has also scouted out new opportunities to visit with the elderly in their new community.

"I don't know if we're doing a good enough job of honouring Gus right now, but in time we will," Karen says. "In the newsletter every week, we were trying to find something happy to write about. Gus taught everyone to find the joy in life. I have to keep doing that. It's how we'll honour Gus."

When she and Ty go for walks, they stop to say hi to everyone, and they chat. They wave at people in windows. They look for moments of joy, even simple ones, like snowflakes hitting the window.

"Gus taught me the importance of getting involved, of giving what we can," Karen says. "We have things to share, love and joy – and it all comes right back to us." ❄️

Dealing with and preparing for the loss of a pet can be difficult to navigate. Visit pettrust.ca/petlossresources to access FREE guides created by OVC Pet Trust in collaboration with The Ohio State University Veterinary Medical Center to support those in need.



GETTING TO KNOW...

Dr. Adronie Verbrughe

Associate Professor and Royal Canin Veterinary Diets
Endowed Chair in Canine and Feline Clinical Nutrition
Department of Clinical Studies
Ontario Veterinary College
University of Guelph

Why did you pursue a career in veterinary medicine? Why nutrition?

Becoming a veterinarian was a childhood dream. I always had a love for animals. While in vet school, my grandfather was diagnosed with type II diabetes mellitus. I became fascinated with the impact of nutrition on health and disease. It interested me even more when I realized that this also applies to animals. Whether it is nutrition to support specific life stages, to maintain a long healthy life or to treat disease. This sparked my interest to pursue a career in veterinary nutrition. I was especially intrigued by the resemblance between feline diabetes and human type II diabetes mellitus. The role of carbohydrates in feline nutrition and health was the focus of my PhD at Ghent University in Belgium. After this I completed a postdoctoral fellowship and became a European Veterinary Specialist in Veterinary and Comparative Nutrition (Diplomate ECVCN). Companion animal nutrition has truly become a passion.

What would you want pet owners to know about companion animal nutrition?

Being a veterinarian, I find it utmost important to improve the nutritional knowledge and skills of veterinary healthcare teams through research, education, and clinical service, so that they are better equipped to provide nutritional support to their patients and communicate with clients. Though it is also my mission to bring science-based nutrition knowledge to anyone who has a passion for pets, whether they are pet owners, breeders, trainers, pet store

clerks, pet food industry, or regulatory bodies. We all have the same goal – improve life of pets. It is important that all of us work together to achieve this goal through good nutrition and feeding management, at the individual level for the pets that we live and work with every day, but also at the population level.

The most important advice that I can give to pet owners is to regularly check in with your pet's family veterinarian. They can assess your pet's body weight, body condition and muscle condition and teach you how to monitor your pet at home. If your pet is overweight or obese, an individually tailored weight loss plan will be needed under the supervision of your veterinary team. Hopefully, it doesn't come to that! Pet obesity can be prevented with careful monitoring of the pet's weight and body condition but also with good nutrition and feeding management. Feed a diet, commercial or homemade, that is complete and balanced and intended for your dog or cat's life stage. For homemade diets, don't just search the internet for dog or cat food recipes, these are more than often not providing balanced amounts of all essential nutrients. Talk to your family veterinarian or seek advice from a veterinary nutritionist. Cut down on human food, snacks and treats, these quickly lead to extra calories and no more than 10% of daily calories should come from unbalanced food items. Again, talk to your veterinarian if you need help with determining your pet's nutritional needs and energy requirement. Feeding management is important as well. Consider using interactive feeders and food puzzles or play pet-food-hide-and-go-seek. Having them work for their food engages our pets both physically and mentally. You can also consider changing up their meal schedule or even intermittent fasting. Aside from nutrition, don't forget the importance of exercise. Walk that extra block. Remember, the World Health Organization recommends people to move 30 minutes per day. No need to sweat, just move. It is good for you as well.

What research projects are you currently working on? What do you hope to ultimately achieve? What impact does OVC Pet Trust funding have on your research program?

Unsurprising, my research also focuses on pet obesity. One project, funded by OVC Pet Trust, that I like to highlight was conducted by Dr. Caitlin Grant, my former Doctor of Veterinary Science student and now assistant professor and Nestle Purina Professor in Companion Animal Nutrition. Essential amino acid and vitamin intake was investigated when cats were theoretically fed nine commercial cat diets including veterinary weight loss, over-the-counter adult maintenance and over-the-counter light or low-calorie diets at six different energy restriction levels. Intake of each nutrient was compared to the nutrient recommendations for adult cats according to the National Research Council (NRC). Theoretical intake of all essential nutrients was greater with veterinary diets compared to both types of over-the-counter diets. For all diet types though, theoretical choline intake fell below recommendations. Overall, it is well-accepted that dietary energy must be restricted to achieve weight loss, but in doing so, intake of essential nutrients may also be restricted. Veterinary weight loss diets are purposefully formulated



so that essential nutrients are enhanced while calories are reduced. A misconception may be that restricting an over-the-counter low-calorie diet is better than an over-the-counter adult maintenance diet. However, neither diet types is formulated for energy restriction during weight loss. Simply feeding less of an over-the-counter diet is putting the pet at risk for nutrient deficiencies. While more work is needed to determine the nutrient needs of obese cats, results of our research support the recommendation that only veterinary weight loss diets should be recommended for cats undergoing dietary restriction to promote weight loss. Though our research also called for further improvement of choline delivery. Choline plays a key role in fat metabolism. Studies in many species, including cats, have shown that inadequate intake of choline results in accumulation of fat in the liver. This poses a big risk for obese cats who are already at risk for developing feline hepatic lipidosis. Ongoing research in my lab focuses on the role of choline in prevention and treatment of feline obesity.

Ultimately, my hope is that my research contributes to the veterinary standard of care for weight management in dogs and cats. There are still a lot of unknowns about best practices for the treatment and prevention of

pet obesity. Veterinary professionals and pet owners have mixed success with weight management in their patients and pets. Development and investigation of new nutritional and feeding management strategies that allow safe and successful weight loss for obese pets undergoing energy restriction is the major focus of my research program.

How do you help OVC HSC patients and their owners?

As a veterinary nutritionist, I also provide clinical service in the OVC HSC Clinical Nutrition Service. Our clinical team consists of two faculty, one registered veterinary technician with a veterinary technician speciality in nutrition and two Doctor of Veterinary Science students, who are also residents of the European College of Veterinary and Comparative Nutrition. OVC is currently the only institution in Canada offering advanced training and specialization in veterinary nutrition. The clinical nutrition team works closely with other clinical services at the OVC Companion Animal Hospital to assess the nutritional needs of patients, as well as develop appropriate diet plans for patients during hospitalization and/or recovery at home. We help clients with: optimal commercial diet and dietary supplement selec-

tion for specific medical conditions; nutrition support for critically-ill patients, including tube feeding and parenteral nutrition (i.e. intravenous nutrition); evaluation and formulation of homemade diets; customized weight loss plans and nutrition programs for different life stages, reproduction and performance. At this time we are only available for OVC HSC patients and clients, but certainly have aspirations to grow and expand the Clinical Nutrition Service when the time is right.

Do you own any animals yourself?

My cat, Chanel, my trusted companion, who supported me through my PhD and residency and followed me and my husband to Canada when my professional career brought us here, passed away 3 years ago. It is hard losing a pet with whom you shared a life, a bond, a connection.

During the pandemic we became new pet parents. Having two energetic little boys, I wasn't sure how that would go, so we decided to first foster one of the OVC Blood Donor kitties. That's how Starr came to live with us. Of course, we got hooked and adopted him last year. He certainly has a special personality, and our boys adore him. 🐾

YOUR GIFTS AT WORK

Each year, OVC Pet Trust invests \$500,000 in new projects and equipment to advance health and well-being for pets.

Photo credit: istockphoto.com/dardespert.

DOG HEALTH

Medicines to Support Minimally Invasive Gut Analysis in Dogs **Dr. Alice Defarges**

Video capsule endoscopy (VCE) is a diagnostic device that is swallowed by humans or dogs and allows them to return home to resume normal activities. With 15 to 20 hours of battery, the VCE can often capture photos of the entire gut but sometimes medications are needed to move things along. Metoclopramide and erythromycin move the VCE through the gut faster in humans. It is unclear if similar effects happen in dogs despite regular use of the medicines. This research will determine which medication is more effective in increasing transit time through the gut providing evidence-based practice in veterinary medicine.

Improving Accessibility and Limiting Waste by Changing Storage Practices **Dr. Michelle Oblak**

Near-infrared fluorescence (NIRF) imaging uses fluorescent dyes, like indocyanine green (ICG), and wavelengths of light to make the invisible visible. ICG is commonly used in humans and is gaining interest in veterinary medicine. Despite the potential benefits of ICG, after opening the bottle, the producer recommends use within 6 hours. This results in high waste and increased cost to use this approach. Oblak's research will look at potential storage methods to increase ICG's shelf life, making the treatment more cost-effective and accessible.

Understanding the Long-Term Effects on Dogs After Non-Invasive Esophagus Surgery **Dr. Ameet Singh**

Difficulty swallowing and eating in dogs is commonly caused by vascular ring anomalies (VRA) which develop in the mother's womb. Early surgical treatment is recommended to help the dog eat and prevent long-term effects on the esophagus. Little is known in veterinary literature about minimally-invasive options to treat VRA in the long term. Researchers will follow dogs receiving this procedure to monitor the long-term effects on health.

The Risk of Tick Bite and Tick-borne Pathogen Exposure **Dr. Katie Clow**

Tick populations across Canada have been increasing over the past decade. The increased presence of ticks poses an increased risk of tick bites and exposure to tick-borne pathogens that can cause disease in companion animals and humans. Ongoing monitoring of ticks found on companion animals can help us understand these risks. Clow's research will provide local tick risk information to Canadian veterinarians and allow for the design of locally targeted tick prevention practices.

MicroRNA Expression in Dogs May Aid in Lymphoma Treatment Efficacy **Dr. Darren Wood**

Lymphoma is a common cancer in dogs. While remission is high, dogs often become resistant to treatment and cancer relapses. There are no signs showing which patients will respond well to therapy and for how long. Analyzing the expression of microRNA, small molecules that regulate the body, researchers will identify patterns in expression to refine lymphoma diagnosis and investigate relationships between microRNA levels and patient survival in hopes of improving treatment efficiency.

CAT HEALTH

Tests for Blood Clot Treatment in Cats

Dr. Anthony Abrams-Ogg

Thromboembolism, a blood clot that cuts off blood flow to an organ, also impacts the health of cats. Some blood clots can be painful and fatal to cats. Treatment with the blood-thinner clopidogrel is effective but some cats are resistant to clopidogrel. Blood tests can determine if the medicine will work, but tests are not widely accessible. The research will aid in generating national access to clopidogrel blood tests by validating results run on common veterinary clinic machines. Researchers will also determine methods to ship samples without affecting test accuracy.

Understanding the Impact of Age on Heart Disease in Cats

Dr. Sonja Fonfara and Dr. Jeff Caswell

Little is known about the impact of a cat's age and genes on hypertrophic cardiomyopathy (HCM). HCM is a type of heart disease that can cause clot formation, heart failure and

even death of the cat. This research aims to identify genes and pathways that change in the heart with age and HCM. This will add to the limited knowledge of the heart and HCM development which may guide the creation of new diagnostics and therapies.

Novel Blood Markers to Identify Heart Disease in Cats

Dr. Sonja Fonfara and Dr. Shari Raheb

Hypertrophic cardiomyopathy (HCM) is the most common heart disease in cats and can progress to heart failure and spontaneous death. Limited detection of HCM in general practice is caused by the need for specialists and referrals for ultrasound tests. This research seeks to test recently identified factors related to HCM that may become a blood test marker for HCM and heart failure in cats.

Cannabis for Cats: Determining Dosage and Safety

Dr. Ron Johnson and Dr. Jibran Khokhar

Medical marijuana is available for people in Canada, but there are no veterinary-approved medications with cannabis, Δ -9 tetrahydrocannabinol (THC) or cannabidiol (CBD). There is limited research on cannabis derivatives in cats and there is no information on how the drug is absorbed or eliminated by cats. This research will use cannabis derivative medication that is delivered by the mucosal route in the mouth of cats to identify appropriate and safe doses for future clinical research.

AVIAN & EXOTIC HEALTH

Determining Effective Dosing to Increase Rabbit CPR Success

Dr. Andrea Sanchez

Anticholinergics like glycopyrrolate are used to regulate heart rates during anesthesia. Rabbits are administered glycopyrrolate to aid in heart regulation but experience low cardiopulmonary resuscitation (CPR) success. This research will analyze the effects of glycopyrrolate on rabbits and help guide specific treatment for rabbits to reduce rabbit mortality and improve CPR outcomes. 🐰



SIX DEGREES OF SEPARATION



In photo: Suzi Beber and Tom Wright's Golden Retriever BB King. Photo credit: Suzi Beber.

Suzi Beber founded The Smiling Blue Skies® Cancer Fund in 2001, after losing her Golden Retriever, Blues, to lymphoma. To honour his memory, and in gratitude for the care he received at OVC, Smiling Blue Skies has raised more than \$2.1 million to support OVC Pet Trust's quest to find more and better ways to deal with canine cancer.

How Smiling Blue Skies Improves Research

Many types of cancer are naturally occurring in dogs and cats as well as people. In recent years, researchers have built considerable momentum through comparative oncology by analyzing how some cancers and treatments behave across species. The findings have the potential to offer massive benefits to veterinary and human medicine alike through opportunities for further clinical research.

Two key features that make the Institute for Comparative Cancer Investigation (ICCI) so successful — the tumour bank and clinical trials coordination — are managed by staff members that are supported by funds donated to Smiling Blue Skies.

ATTRACTING THE BEST

Dr. Jeff Wichtel, dean of the Ontario Veterinary College (OVC), says projects and staff funded by Smiling Blue Skies are key features that attract world class cancer researchers to the college. The funding has given rise to cutting-edge techniques such as immunotherapy vaccines and new measurement tools for molecules such as microRNA that may help provide early detection of some cancers, or better predict how a pet will react to treatment options.

"To attract the best people, we need to show there are mechanisms to fund and support their research," says Wichtel. "We have been able to do that, thanks to OVC Pet Trust and Smiling Blue Skies." Dr. Geoff Wood, co-director of ICCI, studied tumour biology at the University of Toronto after graduating with a Doctor of Veterinary Medicine (DVM) degree from

OVC. He says it was the opportunity to compare cancers in animals and humans that drew him back to Guelph. "One of the main attractions for me at the time was OVC's Mona Campbell Centre for Animal Cancer," Wood says. "On the human side, there is a very different process for sample acquisition, and the idea of the tumour bank was a big part of the reason I decided to come to Guelph."

Wood's team has done several studies across species to identify the differences and commonalities in tumours. He notes hemangiosarcoma — an aggressive cancer that affects blood vessels — are common in dogs and cats but relatively rare in people. His lab has been doing sequencing to compare hemangiosarcoma in animals to their human counterparts.

In one study, he was able to source all animal tumours he required from the ICCI's tumour bank, while the human samples were sourced from six different sites.

UNDERSTANDING CANCER BEHAVIOUR

Dr. Tony Mutsaers, veterinary medical oncologist at OVC, says the tumour bank is also an excellent resource for graduate students, who use samples to produce small clinical trials as part of their program. Students can access more than 8000 samples of blood or tissue from approximately 90 types of cancer. Those smaller studies have the potential to contribute at a larger level. "Even in the most prevalent cancers, we're learning a lot about the biology," says Mutsaers. "We have cloned the genome

in the dog, we're coming up with a pile of markers for disease, and there is a large amount of investigational work that is going on in structured clinical trials." With that knowledge, Mutsaers notes researchers are closer to understanding how an individual pet's cancer behaves and predicting how the cancer might respond to treatment. That's thanks largely to another notable change over the last decade: the growing number of researchers - and type of expertise - represented at OVC.

"What is unique about OVC is that we have researchers in clinical and nonclinical departments that are approaching cancers from a variety of different research perspectives," says Mutsaers. "Here, we are able to come together, collaborate and share our findings to collectively learn and advance research in cancer."

INTERNATIONAL CREDIBILITY

OVC's interdisciplinary approach and ongoing support from Smiling Blue Skies builds opportunities. The college was the first Canadian veterinary member of the National Institutes of Health (NIH) Comparative Oncology Clinical Trials Consortium, which links industry, government, and academia for the purpose of veterinary oncology clinical trials.

"Thanks to Smiling Blue Skies and OVC Pet Trust we have infrastructure and expertise in place to not only evaluate potential solutions at OVC, but to bring in these larger consortiums to produce a clinical trial that will be large enough to know for sure if something has an impact or not," says Mutsaers. 🐾

Honour a Best Friend and Give Back to Pet Health

Did you know that you can support OVC Pet Trust through our Pet Memorial Program?

Each year we send more than 45,000 memorial letters to pet owners who have lost a pet. Gifts made in honour or in memory of a beloved pet support advancements in companion animal health at the Ontario Veterinary College.

Thank you to everyone who chooses to give back to improving and advancing companion animal health and well-being in this meaningful way.

Visit our website to learn how to make a gift at www.pettrust.ca/donate

Share Your In Memory Story

Pets leave paw prints on our hearts. Have you recently lost a beloved companion whose memory has been honoured with a gift to OVC Pet Trust?

Connect with us on social media or contact us via email to share your story.

Email: ovcpet@uoguelph.ca
facebook.com/ovcpet
twitter.com/ovcpettrust
Instagram: @ontvetcollege

PETS IN MEMORY

"What we have once enjoyed, we can never lose. All that we love deeply becomes a part of us." — Helen Keller



Remembering Bear

Dear OVC Pet Trust,

I met Bear on a sunny day in late winter of 2012. He and his sister Daisy had been surrendered to Golden Rescue and I was going to foster the siblings until we could find a suitable home for them. Sadly, when they came into the rescue program, Daisy was diagnosed with end-stage kidney failure and was given a very short time to live. I agreed to provide palliative care for Daisy with the intention that once Daisy crossed the rainbow bridge, we would find Bear a loving, forever home. Daisy and Bear had other plans. Daisy was a beautiful Golden with red curls in contrast to Bear who was such a handsome white boy. Daisy was the very definition of "feisty" and Bear, in contrast, was extremely chill and laid back. Daisy fought hard against her disease and exceeded all of the experts' expectations in living another eight months after she came to me. And by then of course, I was in love with Bear and he wasn't going to go anywhere. He had found his forever home.

Given Bear's sweet, calm nature it seemed a good idea to enroll him in the St. John's Ambulance Therapy Dog program. He passed with flying colours and his favourite 'job' was to go to the local university at exam time and help the kids alleviate their anxiety and homesickness. He would also come to my place of work for our mental health awareness days. I could barely get in the door before he would be surrounded by his adoring subjects, telling him how handsome he was and giving him lots of love and belly rubs.

During his lifetime, Bear brought immense joy and peace to many. He had a gift for knowing who in the room needed him most and he would simply sit on their feet until they started to pat him.

Not a day goes by that I don't think of him and miss him. There will never be another Bear. I believe he was an angel on earth. I have had many dogs in my lifetime, and I have lost many

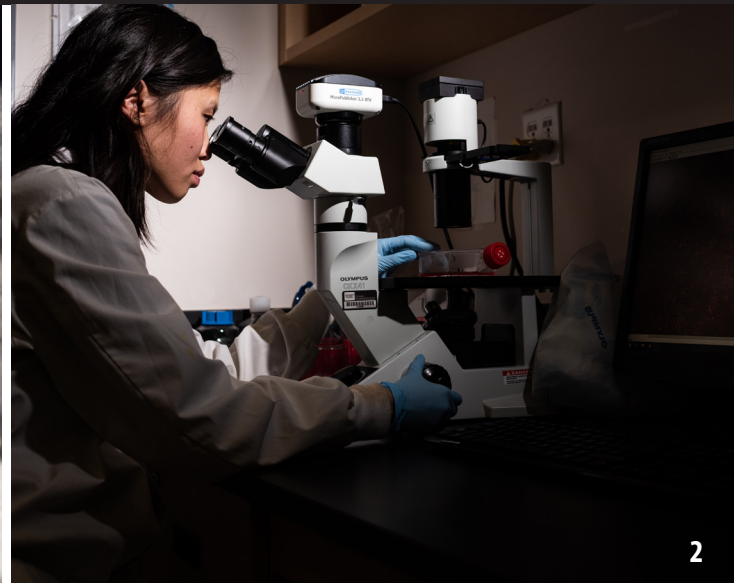
dogs. When the end comes, I take great comfort in knowing that there is nothing I would have done differently during the course of their lives. I want every day to be their best day. When Bear was diagnosed with cancer, I wanted him to get the best care possible which is why I brought him to OVC. Both he and I were treated with such kindness and compassion. Dr. Rebecca Farmer and Bear's oncology team treated him as if he was their own dog. And, at the end, when there was nothing more that could be done for him, I was at peace with the decision to let him go and join his sister Daisy.

I hope in some small way, Bear's story will inspire others to support OVC so that our animals can continue to receive the world class care that they deserve.

Kind regards,
Jane
London, Ontario

#PETTRUSTPALS

#PetTrustPals celebrates amazing supporters of OVC Pet Trust from across Canada! To share your photos use the #PetTrustPals on Facebook (facebook.com/ovcpet) and Twitter (@ovcpettrust) or email: ovcpet@uoguelph.ca.



GO BEHIND THE SCENES AT THE ONTARIO VETERINARY COLLEGE

OVC Pet Trust debuted a new video in November 2021 to give viewers a glimpse behind the scenes of the Ontario Veterinary College and showcase how supporters help improve life for pets and the people who love them through healthcare, research and education.

1. OVC oncology patient Velcro is prepared for radiation therapy at the Mona Campbell Centre for Animal Cancer.
2. PhD candidate Anita Luu, a graduate student in Dr. Alicia Vilorio-Petit's lab, works on her OVC Pet Trust-funded research focused on canine osteosarcoma (bone cancer).
3. OVC neurology patient Dart is examined by Dr. Luis Gaitero and Doctor of Veterinary Medicine (DVM) students on their fourth-year clinical rotation in the OVC Companion Animal Hospital.
4. Cancer patient Lacey awaits her chemotherapy treatment at OVC.

TO SEE MORE, SCAN THE QR CODE BELOW TO WATCH OUR VIDEO.



Or find the video online at uoguel.ph/petswelope.

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OVC Main Building, Dean's Office

OVC PET TRUST

OVC Pet Trust is part of the University of Guelph, a registered charity. You can visit our website to support companion animal health at www.pettrust.ca.

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