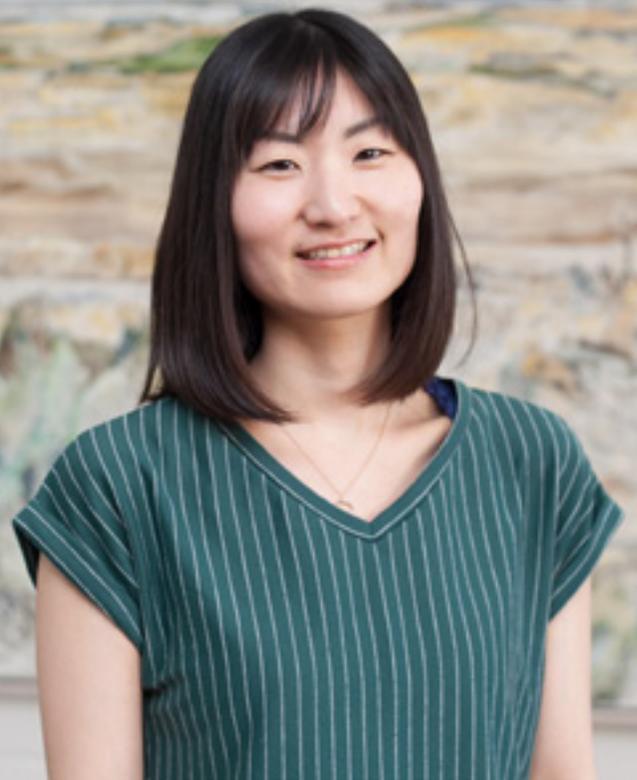


Vet Topics

SUMMER 2020

Top award for Takada

By Katie Brickman-Young



CHRISTINA WEESE

Dr. Kanae Takada, a small animal internal medicine resident and graduate student at the Western College of Veterinary Medicine (WCVN), is the first recipient of the Dr. Michael Powell Award of Excellence.

“I feel honoured. I was surprised [I won] because many other graduate students are doing interesting studies at the WCVN,” says Takada.

In 2019, the WCVN’s Companion Animal Health Fund (CAHF) received a significant legacy gift from the estate of Dr. Michael Powell. In honour of his generosity, the fund named a new graduate award after the beloved Saskatoon veterinarian.

The new award recognizes a WCVN graduate student working in a companion animal-related field who excels in academic and research activities. As the 2020 award recipient, Takada receives more than \$7,700 — the cost of her annual tuition plus an extra \$1,000.

Dr. Tony Carr, Takada’s supervisor, describes her as one of the best residents he’s worked with in his two decades at the WCVN.

“She is incredibly hard working and intelligent and is one of the hardest workers I have supervised,” wrote Carr in his recommendation letter. “Her knowledge is

excellent and her clinical skills are superior and improving day to day.”

Takada came to the WCVN in 2017 for a one-year clinical internship. She stayed on to begin a combined Master of Science-residency program and is studying the long-term impact of parvovirus in dogs that survive the infection.

Parvovirus is highly contagious and is spread from dog to dog by direct or indirect contact with their feces. Vaccines can prevent this infection, but mortality can reach over 90 per cent in untreated cases. Symptoms of parvovirus include gastroenteritis causing vomiting, diarrhea and lethargy.

CAHF tuition awards

Thanks to the Companion Animal Health Fund (CAHF), seven graduate students at the Western College of Veterinary Medicine (WCVM) won't have to dip into their savings to pay annual tuition for this coming year.

Through its tuition award program and the new Dr. Michael Powell Award of Excellence, CAHF is providing close to \$42,000 in financial support for this group of graduate students, who earned the awards based on their academic and research performance.

The CAHF Tuition Award program's aim is to improve pet health care in Western Canada by supporting the training of scientists and clinical specialists in companion animal veterinary science — one of the research fund's key priorities.



Here are the 2020-21 award recipients:

Erica Sims is a Master of Science (MSc) student whose work is supervised by Dr. Tasha Epp (Large Animal Clinical Sciences). Research focus: surveillance systems in companion animal medicine.

Rina Nabeta is a Master of Veterinary Science (MVetSc) student whose work is supervised by Dr. Melissa Meachem (Veterinary Pathology). Research focus: finding a novel plasma biomarker for feline pancreatic carcinoma, an aggressive tumour in cats, that will facilitate earlier diagnosis of the disease.

Chloe Quilliam is a MSc student whose work is supervised by Dr. Lynn Weber (Veterinary Biomedical Sciences). Research focus: the effects of feeding pulse-based, grain-free diets on cardiovascular health, glycemic response and digestibility in dogs.

Luciana Guimaraes Reis is a MSc student whose work is also supervised by Weber. Research focus: whether *Candida utilis* fermentation on different varieties of fava beans in dog foods can improve glycemic control, taurine levels and cardiac health in dogs.

Crystalyn Legg-St. Pierre is a MSc student and anesthesiology resident whose work is supervised by Dr. Barbara Ambros (Small Animal Clinical Sciences). Research focus: evaluating the impact of pre-oxygenation in avian patients.

Siu To (Toad) Koo is a MSc student and small animal internal medicine resident whose work is supervised by Dr. Tony Carr (Small Animal Clinical Sciences). Research focus: investigating the effect of Yunnan Baiyao, a traditional Chinese medicine, in dogs' platelets. 🐾

NEW GRADUATES: WCVM

Class of 2020 member Dr. Alyssa Walthers of Calgary, Alta., and her classmates celebrated their graduation virtually when the University of Saskatchewan was forced to cancel Spring Convocation because of COVID-19 prevention measures. Walthers is now practising at Edson Veterinary Clinic, a mixed animal veterinary clinic in Edson, Alta.

Takada (continued)

“Previous summer students found that even after recovery from this disease, dogs can still have persistent or ongoing GI signs like vomiting or diarrhea,” explains Takada. “So I am looking at those dogs that are still having those ongoing issues. My study is looking at the future effects of parvovirus after recovering from the disease and why they have a higher chance of having digestive issues later on.”

Takada will look at clinicopathological data of recovered dogs to identify characteristics of these parvovirus survivors. While this project continues the work of a previous WCVM study, it also overlaps with Takada's interest in digestive systems in small animals.

“I did a study when I was in vet school that was gastroenterology related, so I had some background and interest in this topic,” says Takada, who hopes to publish her research findings. Receiving the Powell award will help her reach that goal.

“There are a couple of ways that this [award] will assist my career and this study. For example I will need some help with publication fees to get this data published,” Takada says. “Also, it provides the possibility to attend any international conferences to help push us forward to get more insight.”

Takada received her Doctor of Veterinary Medicine (DVM) from Hokkaido University in Japan in 2012, and eventually, she

hopes her specialized training can help her to make a difference in Japan.

“In my home country, we don't have as good of a residency program or clinics for learning and research like in North America.”

Carr is confident that Takada has a bright future ahead of her: “I expect she will make significant contributions to veterinary medicine, will be an excellent and compassionate veterinarian, and potentially be a major force shaping the development of specialty certification in Japan.” 🐾



Dr. Cindy Shmon (at right) during a small animal surgery.

Surgical sage

By Katie Brickman-Young

 CHRISTINA WEESE

Veterinary surgeon Dr. Cindy Shmon hopes to help her students see grey in a world that isn't just black and white.

Shmon is the Western College of Veterinary Medicine (WCVN) 2019 recipient of the Provost's College Award for Outstanding Teaching. The University of Saskatchewan (USask) Gwenna Moss Centre for Teaching and Learning presents this annual award to one professor from each college who demonstrates outstanding teaching.

"It's humbling given all the talented faculty in the college," says Shmon, professor in the WCVN's Department of Small Animal Clinical Sciences. She has also served as department head since 2011. "The fun of teaching is creating opportunities to use what they are learning and supporting them as they develop their skills. The bonus is what I learn watching and the smiles when they see they really can do it."

During Shmon's 32 years of teaching small animal surgery in all four years of the Doctor of Veterinary Medicine (DVM) program, she can see the students' progress throughout their studies and help build confidence in their skills. Her teaching style is working with each student to see the bigger picture in their learning.

"Surgery is a technical skill. When a lot of people start in surgery, it is new and they aren't used to using instruments and they feel awkward and unco-ordinated," says Shmon. "They are worried about a lot of

little things and sometimes miss the big picture, so I try to make sure they grasp that first while also guiding them through those little steps until they put it all together."

Shmon uses the lectures and surgical labs to break down the content into important principles the students can learn and remember when they get to the clinics.

"You are trying to help them learn the material and develop better tools to learn ... I think that is the challenge of teaching," she says. "Everybody's learning style is different, so I try to find what works for each individual student."

The DVM curriculum is structured so students learn new skills in surgical studies throughout the four-year program. Shmon explains that in first year, it's learning about the instruments and basic suturing patterns. In second year, students learn how to use the instruments and perform procedures that build on those specific skills.

The progression continues in third year, where students work with live tissue and see their result on live animals. By fourth year, students are involved in clinical cases and working through surgical problems on their clinical rotations.

In lectures, Shmon's uses a more discussion-based style than formal lecture, something she feels resonates with her students.

"I have them read the material before they come to class, then we apply it in

class," she says. "We have more of a discussion as we work through the cases so they can explain what they are thinking and address any questions."

Shmon has received other teaching awards and recognition for her work with residents — including the 2020 WCVN Graduate Supervisor award from the Graduate Students' Association at the college.

Seeing students become more skilled and confident in surgical procedures is what Shmon enjoys most about her job.

"To a certain extent, this award is a little bit of validation that I am doing something right," she says. "It motivates me to keep exploring different things to help students learn." 



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Bruce's happy before and after

By Katie Brickman-Young



"These are the kinds of cases that make all the time and effort more than worth it."



Bruce's conditioning score is now an ideal four out of nine

Dennis Fehr brought his dog Bruce to the Western College of Veterinary Medicine (WCV) Veterinary Medical Centre (VMC) in December 2018 because of a clunking noise in his pet's hip.

"We took him into the VMC and the surgeon said he needed a full hip replacement," says Fehr.

At two and a half years old, Bruce weighed 43.7 kilograms (96 pounds) with a body condition score of eight out of nine, meaning he had a much higher body fat percentage. The malamute-cross dog had very little muscle over his thigh and rear end, which meant recovery from surgery would be difficult and might fail. Bruce was also on pain medication and was lame on his left hind leg.

WCV small animal surgeon Dr. Adrien Aertsens decided Bruce needed to lose some weight first. That's when the Fehr family met Dr. Tammy Owens and registered veterinary technologist Kristi Harms of the VMC's clinical nutrition service.

"At that time, the goal was to have him lose enough weight that he would be a better surgical candidate," says Owens, a board-certified small animal clinical nutritionist. "I estimated he had a body fat percentage of 40 per cent and my goal was to get him back to his ideal body condition."

Step one was to start tracking everything Bruce ate and his daily exercise.

"We sat down with them, and they made up a plan for Bruce around nutrition and diet," says Fehr. "We started walking him 10 minutes a walk and then up to 15 minutes and then slowly up to 20 minutes per walk a day, three times a day."

Part of creating a plan was getting a better understanding of Bruce's food intake and then changing those behaviours, so he could lose the body fat and get stronger.

"This was our fault. We were all giving Bruce treats and not telling the other person what and when we were giving him treats," says Fehr. "We were the problem, not Bruce. He wasn't making the poor food choices — we were."

Over the next eight months, the Fehr family worked with Bruce to balance the number of calories coming in and how many calories were being burned without restricting the nutrients and protein he needed to build muscle.

"It can be detrimental when calories and nutrient intake are restricted. That can have negative effects on metabolism and can create nutrient deficiencies," explains Owens. "We want to use high fibre, low calorie, nutrient-dense food with plenty of protein so Bruce isn't feeling hungry."

In Bruce's final check-in on Feb. 25, 2020, he was 36 kg (79 lb.) for a total weight loss of 6.1 kg (13.5 lb.) of body weight.

"He lost at least 20 per cent body fat," says Owens. "His weight didn't change as much as expected, because while he was losing body fat, he was gaining muscle."

His body conditioning score is now an ideal four out of nine.

"These are the kinds of cases that make all the time and effort more than worth it," says Owens.

Best of all, the VMC's surgical team determined that because of Bruce's muscle gain, he didn't need the hip replacement after all.

Hearing that Bruce wouldn't have "to go through all that pain was like a thousand Christmases," says Fehr, who walks about 10 kilometres with Bruce and Karm, their second dog.

"We are a household where our lives revolve around our dogs," says Fehr. "We love them, and they are a part of our family." 🐾

CAHF 2020-21 projects

Eight research teams at the Western College of Veterinary Medicine (WCV) have received \$117,429 in funding to conduct vital companion animal health research.

What do EphA proteins tell us about a common eye tumour?

Drs. Stephanie Osinchuck, Behzad Toozi, Lynne Sandmeyer and Leila Bedos, and Evelyn Harris, WCV

How do nesfatin-1 levels differ in healthy dogs and cats compared to obese or diabetic pets?

Drs. Suraj Unniappan, Elisabeth Snead and Melissa Meachem, WCV

Can we treat canine osteosarcoma by targeting EphA2 proteins?

Drs. Behzad Toosi, Valerie MacDonald, Jerome Gagnon and Jessica Sharpe, WCV

How do different anesthetic drugs affect peri-anesthetic cardiac arrhythmias in cats?

Drs. Shannon Beazley and Tanya Duke, WCV

Should we use Yunnan Baiyao as a hemostatic drug for dogs?

Drs. Tony Carr, Kevin Cosford and Siu To Koo, WCV

Is PET-CT effective for staging mast cell tumours in dogs?

Drs. Jerome Gagnon, Valerie MacDonald-Dickinson, Ryan Dickinson, Monique Mayer and Alison Williams, WCV

Can a preservative help to extend neutrophil function in blood samples?

Drs. Ryan Dickinson, Nicole Fernandez and Khawaja Ashfaque Ahmed, WCV

Do specific genetic factors contribute to canine dilated cardiomyopathy?

Drs. Elemir Simko, Oksana Moshynska and Jennifer Loewen, WCV

Visit cahfpets.ca (click "Research") to read 2020-21 research summaries.

More health news at:

cahfpets.ca

Gift a ‘last act of kindness’



For more than 36 years, small animal veterinarians across the country have paid tribute to beloved pets and people through a special program offered by the WCVM's Companion Animal Health Fund (CAHF).

The pet memorial program allows veterinary clinics to make a gift supporting pet health research in memory of a deceased patient. Some practitioners and clinics also use the program to honour clients or friends and colleagues who have passed away.

Today, about 60 veterinary practices regularly donate to the CAHF through the program.

Each time the WCVM receives a donation form listing one or more memorial gifts from a veterinarian or clinic, office personnel send each owner a letter acknowledging the donation in honour of their pet. If the gift is in memory of a client or colleague, the person's family also receives a note.

The pet memorial program was created in 1984 after Dr. Jim Randall (WCVM '76) suggested the idea. The Regina veterinarian, who served on the fund's advisory board for many years, became one of the program's most dedicated users.

"Perhaps it helps me cope with the fact that pets and people die, I'm not sure. But I know it helps me give meaning to their lives, and at the same time, I'm supporting research that benefits all companion animals," said Randall, who described the CAHF memorial program's significance in a 2002 *Vet Topics* interview.

What does the fund's memorial program signify to others?

A western Canadian veterinarian and pet owner — both longtime CAHF supporters — share their viewpoints.

A veterinarian's perspective

"Town Centre Veterinary Hospital donates \$10 to the CAHF memorial program for each of our patients that passes away. It has been a very rewarding hospital policy — a win-win-win if you will — for the veterinary community, for our specific clients, and for our specific hospital.

The veterinary community benefits from the work that CAHF does in research, in supporting upcoming veterinary scientists, and in purchasing new and innovative equipment for the WCVM, just to name a few. Our clients benefit from the feeling of goodwill and the knowledge that something positive will come from the passing of their four-legged family members. Our hospital benefits from the ongoing goodwill and gratitude those clients feel toward us for making a donation in the name of their beloved pet.

After years of receiving calls and letters from clients thanking us for the donation and telling us about the lovely letter they received from CAHF informing them of the donation, I decided to send a donation for one of my own pets. I wanted to see what was in this letter.

After a few weeks, I received the letter from CAHF letting me know that Town Centre Veterinary Hospital had made a

donation in my pet's memory. It was a lovely letter. It did not disclose the amount of the donation. It mentioned some of the ways in which the money was used in the fund and gave appreciation for the donation. I began to see why my clients were so moved by our last act of kindness for their pets."

Dr. Pam Goble (WCVM '89)
Edmonton, Alta.

A pet owner's perspective

"We had a Scottish highland terrier named Saunci and she was the light of our life. In 1989, when we had to send her to pet-heaven, our veterinary office made a donation in her name. I received a letter from the Western College of Veterinary Medicine — a place I didn't know existed — on behalf of my vet. My vet explained that because they were so fond of Saunci they wanted to honour her, and the clinic had made a donation to the Companion Animal Health Fund to do just that.

I thought it was such a nice thing to do, so I wanted to contribute — and we do so every year. This is how I was brought up — we look after one another. The fund needs support, and we are happy to help. I feel like the fund really does make a difference."

George Vandergugten and Arthur Lyons
Coquitlam, B.C. 🐾

RESEARCH IN PRINT

A roundup of WCVM-related companion animal research articles that have been recently published in peer-reviewed journals.

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McDermott FM, Maloney S, McMillan C, Snead E. “The prevalence of blood groups in domestic cats in the Saskatoon and Calgary areas of Saskatchewan and Alberta, Canada.” *Frontiers in Veterinary Science*. April 2020. 7:160. doi:10.3389/fvets.2020.00160.

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Pierce KN, Lee S, Pacheco R, Sadar MJ. “Hyperglycemic hyperosmolar syndrome in a domestic ferret (*Mustela putorius furo*) following a partial pancreatectomy.” *Journal of Exotic Pet Medicine*. July 2020. doi: 10.1053/j.jepm.2020.02.017.

Bits & Bites

ESSENTIAL ANIMAL CARE: As the global coronavirus pandemic continues to evolve, the way people perform normal, everyday tasks has changed everywhere — including veterinary teaching hospitals like the WCVM Veterinary Medical Centre (VMC). The hospital shifted to only caring for emergencies, urgent cases and cases already under treatment in mid-March. That change also included removing all fourth-year veterinary students from clinical rotations.

The hospital moved to a shift schedule where veterinarians, registered veterinary technologists, animal attendants and other

staff worked together on six teams that rotated through eight-hour shifts around the clock.

The VMC staff continue to follow stringent admission and discharge protocols to minimize contact with clients, and no clients are allowed in the building.

Clinical teams are also using additional personal protective equipment (PPE) and following recommendations from public health officials as well as from other North American veterinary teaching hospitals.

“We are super proud of the staff and clinicians. Not only have they been able to adapt, but many of them have gone

above and beyond with ‘think outside the box’ ideas and solutions to help with this evolving situation,” says Nadine Schueller, director of clinical care at the VMC. “They show their love and care for their patients, not only because it is their job as an essential service, but because they understand their patients need them.”

The VMC plans to resume its clinical and referral services this summer with some modifications to protect people’s health. Visit vmc.usask.ca for the latest updates about the hospital’s services.



HONOUR THEIR LIVES WITH THE GIFT OF PET HEALTH

Pay tribute the lives of your patients, clients and loved ones by making a donation to the Companion Animal Health Fund through its memorial program. Each time you give to the CAHF, we will send a letter to the client or loved one's family acknowledging your gift to the pet health fund.

"Town Centre Veterinary Hospital donates to the CAHF memorial program for each of our patients that passes away. It has been a very rewarding hospital policy — a win-win-win if you will — for the veterinary community, for our specific clients, and for our specific hospital."

Dr. Pam Goble (WCVM '89)
CAHF donor

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