profiles

Fall/Winter 2018 \\ College of Veterinary Medicine

Public and private support is critical

A comprehensive college

Life is a series of choices—some are made for you while others are choices you make either consciously or unconsciously. For many readers of this magazine, you made the decision to attend veterinary school in Minnesota and continue supporting your college after earning your degree. As you can see on page 14, hundreds of students are seeing the wisdom of your choice.

By choosing the University of Minnesota College of Veterinary Medicine, you selected a school that prides itself on offering a comprehensive suite of programs. This orientation makes sense because we are a vibrant part of one of the nation's largest, most comprehensive research universities. And we operate in a leading agricultural state in a major metropolitan area that is home to the state's government agencies. Providing veterinary students with outstanding options is our strength and our necessity.

In this issue we highlight students—past, present, and future—who are benefitting from our breadth of programs. From the student who turned toward research in her quest for answers, to our highly skilled staff who help students explore important support areas like rehabilitation medicine, to students who successfully integrate the worlds of veterinary medicine and public health, to a high school student spending the summer in one of our cancer research labs, these pages are filled with examples of people having great choices available within one school.

The fact that our breadth is a strength is a testament to our partnerships. We work closely with the five other colleges that comprise the University's Academic Health Center. Our work in food animal medicine is done as part of a team with great programs in agriculture and extension. We consider numerous state and federal agencies, associations and funders key allies in our drive to sustain our excellence.

Providing veterinary students with outstanding options is our strength and our necessity.

But most important are you, our alumni and donors. Many of you volunteer to mentor and teach our students or host them on externships. Some of you help us select the best students for our programs. You contribute to scholarship funds that help us recruit students and lower the debt our students take on. Thank you for being part of the team.

If you want to get involved, contact Bill Venne, director of alumni relations at venne025@umn.edu and 612-625-8480.

Trevor Ames, DVM, MS, DACVM

profiles

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DEAN
Trevor Ames

ADVANCEMENT DIRECTOR
Martin Moen

EDITOR
Carolyn Bernhardt

CONTRIBUTING WRITERS
Jenna Allerson
Greg Breining
Frank Jossi
Jennie Kim
Martin Moen
Paige Polinsky
Rebecca Sabelko
Kaitlin Sullivan

DESIGN
Hairun Li
Nathan Pasch

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CVM Communications
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IN EVERY ISSUE

Plans for regional veterinary program nearing completion

Leaders from the University of Minnesota College of Veterinary Medicine (CVM) and South Dakota State University (SDSU) are wrapping up a plan to launch a regional veterinary program designed to increase the number of graduates interested in rural mixed and food animal practice. Approvals by regents for both schools are still needed along with start-up funding for new faculty and facilities at SDSU.

The program would enroll approximately 20 veterinary students annually. The seats would be earmarked for students from South Dakota and surrounding states. Their first two years of instruction would be at SDSU in Brookings and feature classes taught by both SDSU and CVM faculty. Students would spend their final two years in St. Paul, including their final year of clinical rotations, which are held on campus and at locations throughout the region.

The goal is to produce more veterinarians interested in mixed or food animal practice in rural areas. The Dakotas and western Minnesota have experienced a chronic shortage of this type of veterinarian for years. To create space for the SDSU students, the CVM would limit the number of students it accepts from Caribbean schools who complete their final year of clinical training at United States schools. While there are many well-qualified students from these institutions, the majority are interested in companion animal medicine in urban settings.

"This is about serving our state's needs for veterinary care," says Trevor Ames, DVM, MS, DACVIM, dean and professor at the CVM. "Our western neighbors feel the shortage of veterinary care even more acutely. This is a good partnership for our schools."

"SDSU is excited to pursue this opportunity with the University of Minnesota College of Veterinary Medicine," said Dennis Hedge, provost and vice president of academic affairs at SDSU. "The synergies that exist between our two land-grant universities allow for the opportunity to combine resources that will ensure we are supporting economic development, the animal agriculture industry, and its continued growth in South Dakota and the region."

The earliest that students might enroll at SDSU is the fall of 2021. If approved, the regional veterinary program would be the fourth of its kind in the United States.

Photo by Martin Moen

Veterinary and Biomedical Sciences hosts event at Bell Museum

An August 21 event at the new Bell Museum featured lively discussion among alumni, industry partners, several U of M regents, and other stakeholders with faculty from the Department of Veterinary and Biomedical Sciences. The event strengthened relationships that may lead to new partnerships and growth for the department.

Another record-setting year of fundraising

The College of Veterinary Medicine (CVM) had more donors than any other college at the University of Minnesota in fiscal year 2018, which ended June 30. A total of 4,558 donors made 9,252 gifts—both of which are College records. The College's donor community contributed $10,719,917 in the past year, the CVM's second-highest yearly fundraising total. Of that total, over $6 million were planned gifts—meaning donors are investing in the future of the College.

With these latest gifts, the CVM has now raised $55 million since 2012. That's 79% of the CVM's 10-year goal to raise $70 million. The College has three years to raise the remainder. This is part of the University's $4 billion campaign, *Driven.*

Prioritizing veterinary education

Seventeen faculty members from across the College of Veterinary Medicine (CVM) are participating in the first cohort of the new CVM Instructor Development Program—a new addition for the 2018–19 academic year. The overarching goal is to provide resources and education in best practices for the didactic and clinical instruction of DVM students, undergraduates, and graduate students.

Participating faculty will have the opportunity to supplement their established expertise with effective teaching tools to pass on their knowledge base. "This program will help enrich the College's culture to be one that makes teaching a primary function," says Peggy Root, '87 DVM, '95 PhD, assistant dean of education and creator of the program.

Participating faculty

Veterinary Clinical Services
Brian Husbands, DVM, DACVIM
Chad Lothamer, DVM
Daniel Heinrich, DVM
Rosalind Chow, VMD, DACVECC
Stephanie Goldschmidt, BVM&S

Veterinary Population Medicine
Alex Bianco, '11 DVM, MS
Christina Foutz, '11 DVM, '11 DACVIM
Emily Barrell, DVM, MSc, DACVIM
Erin Royster, DVM, '14 MS
Ferenc Toth, DVM, PhD, DACVS
Jaclyn Dykstra, DVM, '15 PhD
Perle Boyer, DVM, MSpVM, MPH, DACVP
Whitney Knauer, VMD, '17 PhD

Veterinary and Biomedical Sciences
Aaron Rendahl, '08 PhD
Erin Burton, DVM, MS, DACVP
Sinisa Vidovic, MS, PhD

Potbellied and popular

BY CAROLYN BERNHARDT

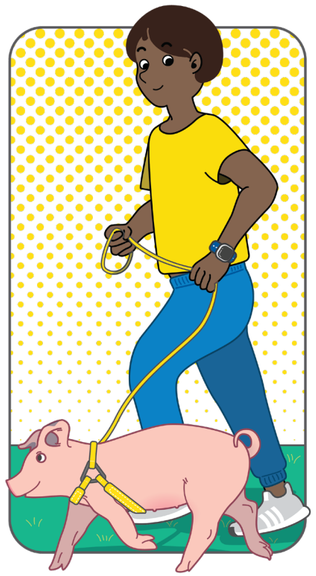


Illustration by Hairun Li

When a client has one pig, they often accumulate more, according to Emily Barrell, DVM, MSc, DACVIM. "You can't just have one!" she says.

Barrell did a mixed animal residency at Cornell University. There, she first began seeing porcine patients—and fell in love with them. In January, she joined the University of Minnesota College of Veterinary Medicine (CVM) faculty. With the rise in pet hog and potbellied pig cases at the CVM's Large Animal Hospital, Barrell has had many opportunities to continue treating her favorite patients. "Their owners are really invested in their care," she says.

But why have these porcine pets become so sought-after? "They are roughly as smart as a three-year-old toddler—you can teach them even more than a dog, in some cases," says Barrell. Owners can housebreak and leash train their pigs. The squiggly tailed pals can even learn tricks.

With the rising demand for these pets, it's increasingly important for owners to understand the necessity of routine care. Contrary to popular belief, pigs need a nutritious and strict diet to stay fit. They have difficulty losing excess weight, and obesity can cause foot or joint disease and breathing problems. Teeth cleaning, nail care, and vaccines are also vital.

Healthy pet pigs and hogs can live up to 20 years. And according to Barrell, their owners are grateful for quality care. These clients are frequently turned away by veterinarians who don't work on pet pigs often enough to know how to help. "I always tell students that if you are up front with your clients and you tell them you are willing to at least try, you have likely earned a client for life."

For Barrell and the veterinarians at the Large Animal Hospital, there is much excitement for the future of continuing to treat pigs and hogs. "They are not dogs—there are a lot of things they need in order to thrive, and I am looking forward to working with clients and referral vets."

Bosko the brave

BY REBECCA SABELKO

Photo courtesy of Naomi Austin

Bosko goes for a car ride.

One frigid February afternoon, Naomi Austin and her dog, Petey, headed out for a walk along the railroad tracks. What began as an average trek soon took a turn when Austin saw that a dog was following them. The pit bull's fur was disheveled and sparse. Its gait was wobbly and lizardlike. Fearing a possible confrontation, Austin and Petey pressed home, but the unfamiliar dog followed them to their door. Austin realized she needed to help. After treating his numerous physical ailments, she adopted the stray and named him Bosko. But it wasn't long before she noticed fear was controlling her new companion's life. She turned to Dana Emerson, BS, VT, KPA-CTP, a training specialist at the Veterinary Medical Center (VMC), for help.

Many dogs suffer from fears that impair their quality of life, but behavioral therapy—an emerging field in veterinary medicine that addresses the common psychological issues many pets face—can provide relief. Emerson emphasizes the need for space, which can be challenging in many veterinary clinic settings. Many pets cannot handle walking through a lobby filled with patients or performing nose work, a practice that encourages dogs to sniff out hidden rewards, in a small exam room. Despite these challenges, the behavioral staff at the VMC works creatively to help dogs become confident and loving.

When Emerson first met Bosko, she worked around his anxiety by scheduling private early-morning sessions and finding large work areas to accommodate his need for space. She used nose work and other novel therapies to help grow Bosko's confidence. He continues to make strides toward living more comfortably with the help of Emerson's care.

"Bosko is a great dog, and we enjoy having him in our household," says Austin. "But, because of unknowable events in his puppyhood, he is profoundly damaged, and he simply could not have survived without the University's help."

A race for health

BY GREG BREINING

On February 25, an 18-year-old thoroughbred mare was trailered into the University of Minnesota's Piper Equine Hospital for severe acute colic. A common and potentially deadly source of such gastrointestinal pain is a twisted colon, which often requires surgery to correct. This emergency case was particularly risky, since the mare was roughly a month away from giving birth.

"Severe colic from a twisted colon is a life-threatening emergency, and in this case, there was also a very real risk to the foal" says Lauren Hughes, DVM, a large animal internal medicine resident who worked on the case with Bridget Nottle, DVM, and Elizabeth Coppelman, DVM, of the equine surgery service.

To add urgency to the case: The thoroughbred was a racehorse broodmare carrying a valuable foal with a desired racing future someday.

The initial exam was complicated by the 100-pound fetus the mare was carrying. Based on the examination and tests performed, Nottle and Coppelman determined the baby was still alive and decided the mare would need emergency surgery to treat her life-threatening colic condition.

That evening, the mare was taken to surgery, where it became clear that her colon was twisted and displaced. A twisted colon not only blocks food and gas from passing but can also cut off circulation and starve tissues of blood and oxygen. The surgery team untwisted the colon and correctly placed the abdominal organs back into position.

The mare recovered from surgery and was given antibiotics, anti-inflammatories, IV fluids, and gastroprotectants. While in recovery, she showed signs of an acute kidney injury, which could have been correlated to the severity of her colic. "That forced her medical team to be more aggressive with IV fluids, additional medications, monitoring, and nutritional support," says Hughes.

Photos courtesy of Jeff J. Maday, Canterbury Park

The thoroughbred mare races at Canterbury Park in Shakopee, Minn., with jockey Leandro D. Goncalves.

Now the onetime racehorse was in a race of a different kind—healing fast enough to give birth. "Mares need to use their abdominal muscles to deliver a foal," says Hughes. Twenty-five days after she was admitted, the mare went into labor. "She foaled in the middle of the night," says Hughes. "From the time he reached the ground, she was nickering and taking good care of him."

Hughes says the dedication of the mare's owners and doctors, and the hospital staff working as a team, made the treatment a great success story. "We got a healthy, happy mare out of it ... and a healthy, happy colt."

A shining success

BY JENNA ALLERSON

When Sara Bender, owner of Foggy Bottom Farms in Isanti, Minn., had a distressed alpaca, she decided to bring her pet to the University of Minnesota. "When we got home from a show in Iowa, she wasn't eating," says Bender. "We knew we would get the fastest results at the U of M."

Illustration by Hairun Li

Morning Sunrise was quickly treated at the Large Animal Hospital by Anna Firshman, BVSc, '05 PhD, DACVIM, DACVSMR, the U's go-to camelid specialist. "Generally, camelids are very stoic and are not good at showing signs of illness," says Firshman. "We performed an ultrasound and found that Morning Sunrise had a large amount of fluid in her chest. We took a sample and identified the bacteria in the fluid as alpaca fever."

More often than not, alpacas die from this bacterial infection if they do not receive appropriate care. "She needed her chest drained, fluid therapy, and around-the-clock care for about a week," says Firshman. "She responded very well. She has the right owners who recognized the symptoms and the level of care that was needed."

Firshman worked with Brittany Welch, DVM, and Christie Ward, DVM, PhD, MVSc, DACVIM, to provide Morning Sunrise with quality care. She and her team are eager to continue treating camelids in the future, as they make up roughly 20 percent of the Large Animal Hospital's patients.

Meanwhile, Bender couldn't be happier with the care Morning Sunrise received. "She made a perfect recovery, and she's actually pregnant with her first baby," says Bender. "We will continue to utilize the U's services and will recommend them to other camelid owners."

An ambidextrous approach

Better, cheaper canine cardiac care, right here

BY CAROLYN BERNHARDT

Wanda Gordon-Evans, DVM, PhD, is performing groundbreaking surgery with one hand and finding ways to help owners save money with the other. Inspired to both borrow from and improve upon human medicine, Gordon-Evans was recruited from private practice to strengthen the University of Minnesota's canine cardiac care team. Equipped with a research background in biomedical sciences, she aims to broaden the cardiovascular surgery program's strong research and clinical foundations to benefit both pets and owners.

"I have always wanted to push veterinary medicine forward," she says. "I was super happy to come back to academia and be involved in something that has potential to make a big scientific leap." And when it comes to her work—specifically on mitral valve repair and replacement—Gordon-Evans' innovative and resourceful mind-set is making her and her team a springboard for one such leap.

An electric innovation

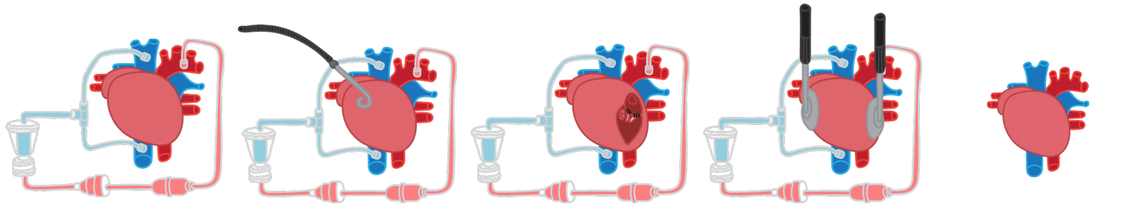
Mitral valve disease is an inevitability for many dogs over nine years old, and it typically results in a heart murmur that can be managed with medication. But for some less lucky canines, it can lead to heart failure. It runs most rampant in Cavalier King Charles spaniels, dachshunds, and Japanese Chins.

Though surgeons who perform canine mitral valve repair or replacement are rare, they usually use a similar method: clamping the patient's aortic valve and submerging the patient's heart in a solution that keeps it from beating. This method—called cross-clamping—has long been considered the gold standard in human medicine, providing the surgeon with a still, bloodless heart on which to operate. But returning a heart and its bodily home back to a stable state after this process is where complications and costs arise.

Cross-clamping often injures the heart because it results in a lack of blood circulating through the vital organ during surgery. The body can also become overly saturated with the fluids used to stop the heart, which means the patient will need a blood transfusion to bring their red blood cell count back to normal. Though these expensive post-op practices are commonplace for humans (and typically covered by insurance), they can ring up a rather high bill in a veterinary hospital. And for dogs, a hospital stay of as long as 12 days is needed to fully recover, which also adds to the bill for owners.

This entire medical endeavor typically adds up to around $20,000 for a dog owner—and that does not include the required travel to Japan, France, or the UK to have the surgery performed, since those are the only countries where it is routinely offered. As such, very few US dog owners are left with feasible options when their little Fido's heart gives out from mitral valve deterioration.

So, Gordon-Evans has retooled the process. Instead of cross-clamping, she uses electric shocks to strategically put her patient's heart into fibrillation—a state that allows her enough stillness to rebuild a damaged mitral valve. Meanwhile, her patient is hooked up to a bypass machine so all organs can continue to be supplied with oxygenated blood. With the heart in fibrillation, Gordon-Evans only has to navigate a minor amount of blood to perform a repair, but the heart is still being oxygenated enough to avoid injury.



Illustrations by Megan Murrell

The surgery team places cannulas to connect the patient to the cardiopulmonary bypass machine, which oxygenates the blood and circulates most of it throughout the body without pumping it into the heart.

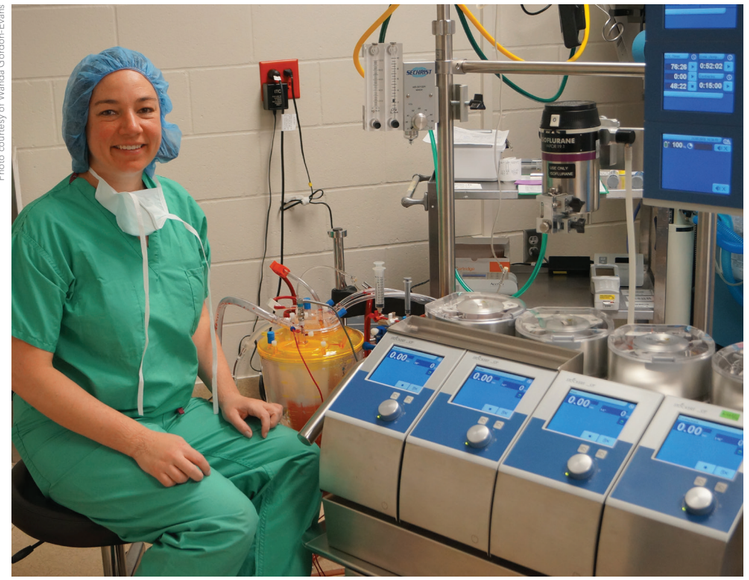
A fibrillating wire delivers electric shocks to the patient's heart. The patient's heart beats faintly and sporadically, delivering some blood to the body. This keeps the heart profused with some oxygenated blood, but not enough to interfere with the procedure.

Gordon-Evans repairs the mitral valve as needed.

The heart is defibrillated with two soup-spoon–shaped paddles. It returns to a normal rhythm.

The cannulas are removed and the patient is taken off bypass.

Photo courtesy of Wanda Gordon-Evans



Gordon-Evans with the cardiopulmonary bypass machine

"Theoretically, if you are perfusing the heart with blood the whole time, there is less damage," says Gordon-Evans, "so we should have less care needed afterward and certainly a faster recovery." She also suspects that the dog's stability following the procedure would call for a much shorter (and thus, cheaper) hospital stay of around three days. According to Gordon-Evans, humans could potentially undergo the same procedure.

Looking to lighten the load

Gordon-Evans' goal is multifaceted: not only is she thinking about the science, but she's also laser-focused on improving the procedure's price tag. She estimates her surgery would cost owners around $8,000, slashing more than half off the current price of a typical canine heart surgery.

Once Gordon-Evans has helped establish the U of M as the go-to place for canine mitral valve surgery in the United States, she has her sights set on expanding into congenital defects and even cats. "Humans and cats both suffer from hypertrophic cardiomyopathy," she says. "Humans can have surgery and get off their meds." Finding a way to apply this process to cats would be an opportunity to extend feline lives as well as to once again better human medicine's approach.

Everyone—including dogs, cats, pet owners, and future human patients—will feel the reverberations of Gordon-Evans and her team's work as their visionary advancement in cardiac surgery takes shape in the months and years to come.

But as always, Gordon-Evans remains steadfast in prioritizing affordability: "If we can make cardiac surgery more economical for owners, then it can be a turning point for heart disease."

THE NEXT STEP?

Making the procedure available to shelter animal patients. A fund previously established by the U of M's Veterinary Medical Center—and supported by the generosity of donors—provides lifesaving, innovative care for homeless animals who otherwise might not receive these services and, upon recovery, make excellent candidates for forever homes. "For the very first cases we do," says Gordon-Evans, "we would ideally provide the surgery at no cost to a humane society or rescue group."

Starting with ownerless dogs has worked for Gordon-Evans in the past. She and her team recently treated a rescue dog whose blood was not circulating to his lungs. "We connected the aorta to the pulmonary artery so that more blood goes to the lungs," she says. "He is doing fabulously; he just got adopted."

If you are interested in supporting Gordon-Evans' critical work, please contact **Lauren Craft, development officer** for the Veterinary Medical Center and Veterinary Clinical Services, at **lcraft@umn.edu**. To provide for the care of other rescue animals, visit **give.umn.edu/vetmed** and donate to the VMC Shelter and Rescue Animal Fund.

Zooming out

Exploring the full landscape of veterinary medicine

BY PAIGE POLINSKY

The field of veterinary medicine is constantly evolving. Yet, the image it evokes remains static: white-coated doctors wielding stethoscopes and treating pets at the local clinic. This association, while it represents crucial parts to the whole, is a drastic minimization of the professional range found within the animal health world. According to the American Veterinary Medical Association (AVMA), companion animal vets at private clinics account for around 60% of the field. In the remaining 40%, veterinary medicine contains unexpected roles and applications that, through shaping animal health, actively mold the world around us—the environment, the economy, and human health.

A JOURNEY THROUGH THE GENES

"I never thought that I'd be doing research," says Elaine Norton, DVM, MS, PhD student in the University of Minnesota's Comparative and Molecular Biosciences program. While practicing large animal internal medicine, however, Norton ran into unanswerable questions. Frustrated by these unknowns, she focused her master's degree on genetics. Norton now works at the University of Minnesota College of Veterinary Medicine's (CVM) Equine Genetics and Genomics Laboratory, where she studies equine metabolic syndrome, a devastating disease similar to human type 2 diabetes.

Photo courtesy of Elaine Norton

Elaine Norton

"Gene hunters" like Norton analyze DNA to determine whether parts of a disease are environmental or genetic. Their findings help identify high-risk individuals. "We can make environmental changes," explains Norton, "and manage them appropriately before they start to have clinical signs."

Despite its thrilling nickname, gene hunting is an exercise in patience. Moving from a research proposal to an actionable plan takes time. Tackling acquired data is its own challenge. When handling complex diseases, researchers must sift through hundreds of potential gene variations. Parsing out a single gene from this sea of big data can be a major step in unlocking the cause of a disease.

Research and training grants have been crucial in fueling these discoveries. The USDA and Morris Animal Foundation fund Norton's sampling trips and genotyping. The National Institutes of Health T32, offered through the U, supported her salary and covered tuition costs for three years. Fellowships like the EQUUS Foundation Research Fellowship offer additional financial support.

Research into the animal genome is uniquely translational, carrying implications beyond veterinary medicine. Norton and her colleagues, for instance, have discovered that shortness and insulin resistance in ponies are both caused by one gene—the same gene that controls height in humans. "So it brings everything back together," says Norton, "where, yes, we're doing something with horses, but there's also this other benefit that you can see—this larger goal that our research can potentially help human patients."

OCEANS OF OPPORTUNITY

Photo courtesy of Jessica Fox

Jessica Fox performs surgery on a fish.

Oceans make up 90 percent of all habitable space on Earth. These abundant marine ecosystems are crucial to global health, and threats like pollution and commercial overexploitation render aquatic medicine increasingly important. In particular, the field has a pressing need for passionate veterinary professionals. "When it comes to fish, for whatever reason, veterinarians kind of panic," says aquatics expert Jessica Fox, '15 DVM.

Currently, most veterinary colleges lack comprehensive aquatic medicine programs. The University of Minnesota College of Veterinary Medicine (CVM) offers students specific tracks—Large Animal, Small Animal, and Mixed Animal. Still, aquatically inclined students require a certain resourcefulness, first establishing a more generalized foundation of knowledge—in Fox's case, through the CVM's Mixed Animal track—then supplementing with aquatic electives, labs, internships, and graduate work.

Beyond companion animal care, aquatic medicine extends to improving the global food supply. Says Fox, "Initiatives to create self-sustaining aquaculture are more relevant than ever." And the industry is booming. "It is the fastest-growing animal production system in the world right now," says Alex Primus, '13 DVM, PhD.

Primus, an assistant professor in the CVM's Department of Veterinary Population Medicine, studies infectious disease management in aquatics. Organizer of the 2018 UMN Aquaponics Symposium, Primus emphasizes the importance of fish health in aquaponic systems. He says veterinarians will play a prime role in developing the tools needed to achieve maximum aquacultural sustainability. Minnesota is not yet a key aquaculture producer—harsh winters and lack of ocean access pose local industry challenges. "It just hasn't been a major focus here," says Primus. But the future is promising. Recirculating aquaculture systems, which don't require ocean views or balmy winters, are a growing trend. As the industry's technology advances, aquatic veterinarians will be key players in helping Minnesota impact aquaculture on a scale more befitting the Land of 10,000 Lakes.

A CHANCE TO LEARN

For a cat standing chest-deep in water, Nick doesn't seem too perturbed. Kim Colvard, CVT, CCRP, carefully guides his legs along an underwater treadmill. Colvard is a specialist in the Small Animal Rehab department at the CVM's Veterinary Medical Center (VMC). In her decade of experience there, she describes Nick's case as "particularly unique."

Rehab is rarely considered a viable option for small animals. Felines, especially, are often overlooked as candidates. But small animal rehabilitators like Colvard are working to change this.

In May, Nick arrived at the VMC for a much needed hernia repair. While the surgery went well, Nick's lungs did not respond in the way they should have, depriving his brain of oxygen for a period of time. The procedure saved his life, but this left Nick severely crippled. Nick's surgeon recommended him to Colvard and her team. Colvard decided to use teaching funds to cover the cost of the cat's care and give students the opportunity to learn more about a rare case like Nick's.

"He came in blind, deaf, and entirely unable to walk," says Channing Bancroft, a fourth year DVM student, who completed a rehab rotation in May. Bancroft fostered Nick during his treatment, providing at-home care between sessions.

Colvard's team developed specialized exercises based on Nick's progress. Though his feline independence tested their problem-solving skills, Colvard says flexibility is key for any rehab case: "It's all about thinking on your toes." Her team often leveraged Nick's natural curiosity to keep him engaged, transforming humdrum obstacle courses into intriguing tunnels.

After 10 days of treatment, Nick was walking independently. "It was really one of the most amazing opportunities that I've had in my veterinary career so far," says Bancroft. "I don't know of any other veterinary clinic out there who is doing this kind of rehabilitation on cats." Today, Nick navigates his environment with confidence.

Nick's case highlights the powerful yet underutilized potential of feline rehabilitation, as well as the importance of teaching funds, which are crucial in exposing students to a wide range of cases. Colvard believes it will encourage students to explore different modalities when treating future patients of their own.

Photo by Channing Bancroft

Kim Colvard gently guides Nick's legs as he re-learns to walk on the underwater treadmill.

LOCAL ROOTS, GLOBAL OUTREACH

"We want to be the Silicon Valley of livestock health and agriculture production," says Andres Perez, DVM, PhD, professor in the Department of Veterinary Population Medicine and director of the College's Center for Animal Health and Food Safety (CAHFS). CAHFS was designed to operate within Minnesota and the US but eventually expanded to work more globally. Perez, through his roles as Endowed Chair of Global Animal Health and Food Safety and director of CAHFS, has been continuing to broaden the Center's focus.

Today, CAHFS works with 20 partner countries to improve veterinary public health worldwide. Minnesota's agriculture-based economy makes it a valuable consultant—CAHFS is one of five centers designated by the World Organization for Animal Health to build capacity for veterinary services around the globe. Effective epidemiology has become increasingly vital as many developing countries shape their economies around agriculture.

While government funding and private donations have helped CAHFS increase its outreach opportunities, international research is largely financed by client countries. The approach reflects a broader goal of sustainability—one that most aid-based strategies lack. Long-term solutions, Perez says, must rely on education and capacity building. "Rather than giving them some fish, we are trying to help these countries learn how to fish."

The Center's largest international grant is from Chile, where CAHFS helped launch an aquatic epidemiology project in March. The project aims to help salmon farms manage Salmonid Rickettsial Septicaemia (SRS), a crippling disease only minimally responsive to current vaccines and which is responsible for most antimicrobial use in Chile's food animal systems. As the second-largest producer of salmon in the world, Chile's economy depends on healthy fish. CAHFS members are developing system models for SRS management that are both efficacious and accessible. One recent workshop, led in part by Alex Primus, collected feedback from local industry members to further improve the system model.

CAHFS is implementing veterinary medicine on a macro scale, impacting trade and global economies. As for becoming an agricultural Silicon Valley? "You cannot do that just within your boundaries," says Perez. "You have to go outside your borders and expand your knowledge base." A practice CAHFS knows quite a bit about.

"It's all just having the confidence that, if you're a veterinarian, you know health."

Jessica Fox offers these words of encouragement to practitioners who may feel thrown off by aquatic patients. But the same message can be applied across the entire spectrum of animal health—whether dissecting diseases at the genetic level, crossing the globe to shape the world economy, or something else entirely. Veterinary medicine is presenting more opportunities for innovation than ever before. Stepping over the clinical threshold and recognizing those opportunities is just the first step in pioneering unexplored territories of the future. ⬢

Get a glimpse

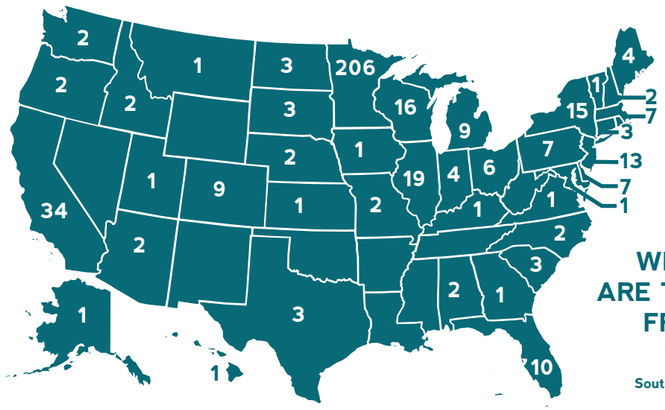
New students arrive on campus
The College of Veterinary Medicine welcomed 105 new Doctor of Veterinary Medicine students and 20 new graduate students to campus this fall. Learn more about who they are, what they are studying, and where they are from in the graphic below.

DVM student snapshot

416 TOTAL DVM STUDENTS

63.76% RESIDENTS
36.23% NON-RESIDENTS

RESIDENCY INCLUDES: MN, ND, & SD



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China 6
South Korea 1

DVM ACADEMIC TRACKS

55% SMALL ANIMAL

17% FOOD ANIMAL

16.5% MIXED

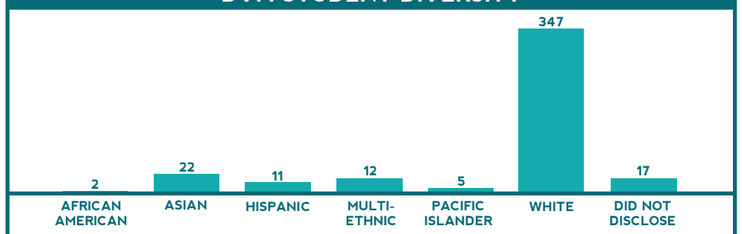
8.5% EQUINE

2% NO TRACK DECLARED

1% RESEARCH & PUBLIC HEALTH

Infographic by Megan Murrell

DVM STUDENT DIVERSITY



GENDER: 84.29% | 14.97% | .72% DECLINED TO STATE

GPA **3.63** IN PREREQUISITE COURSES

= 1 STUDENT

DVM/MPH DUAL DEGREE

With the DVM/MPH dual degree program, students earn their MPH degree in the same four years as their DVM degree. By combining their veterinary studies with a Master of Public Health degree, students earn the credentials to work at the interface of human wellness and animal health—cultivating a better environment for all.

CLASS OF 2019
CLASS OF 2020
CLASS OF 2021
CLASS OF 2022

VetLEAD

To meet the increasing demand for veterinarians and to promote diversity within the veterinary student body, the University of Minnesota has introduced the Veterinary Leadership through Early Admissions for Diversity (VetLEAD) program. VetLEAD creates a pathway into veterinary school for high-ability students at partner institutions.

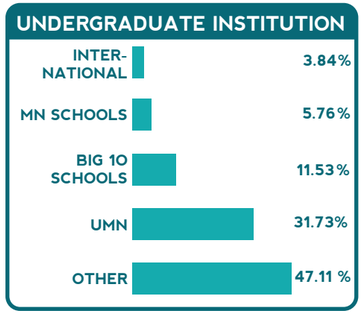
CLASS OF 2019 | CLASS OF 2020

VetFAST

The Veterinary Food Animal Scholars Track (VetFAST) program is designed to meet the high demand for veterinarians who are trained to work in food animal medicine.

CLASS OF 2019
CLASS OF 2020
CLASS OF 2021
CLASS OF 2022

UNDERGRADUATE INSTITUTION



DVM CLASS OF 2022

TOTAL APPLICATIONS: 865

18.5% RESIDENT APPLICATIONS
81.5% NON RESIDENT APPLICATIONS

53 RESIDENTS
52 NON RESIDENTS

Graduate student snapshot

ENROLLMENT

88 TOTAL GRADUATE STUDENTS
The most students enrolled in CVM graduate programs in the last five years

COMPARATIVE & MOLECULAR BIOSCIENCES
VETERINARY MEDICINE

PHD STUDENTS: 36 | 34

MASTERS STUDENTS: 18

GENDER

61 FEMALE
27 MALE

RESIDENCY

53 US RESIDENTS
35 INTERNATIONAL STUDENTS

WHERE OUR INTERNATIONAL STUDENTS ARE FROM

CHILE: 1
ECUADOR: 3
URUGUAY: 1
VENEZUELA: 3
ITALY: 1
EGYPT: 1
AUSTRALIA: 1
SPAIN: 1
SRI LANKA: 2
KENYA: 1
CANADA: 1
THAILAND: 1
CHINA: 7
UK: 2
COLOMBIA: 1
INDIA: 3
BRAZIL: 4
BANGLADESH: 1

Best and brightest

After nearly 20 years, the DVM/MPH program maintains an expansive tradition of excellence

BY CAROLYN BERNHARDT

Since 2002, the University of Minnesota's DVM/MPH dual degree program has given students the opportunity to combine their Doctor of Veterinary Medicine (DVM) studies at the College of Veterinary Medicine (CVM) with the Master of Public Health (MPH) program at the University's School of Public Health (SPH). This dual degree allows students to gain expertise and experience in areas such as community health, epidemiology, zoonotic diseases, food safety, and emergency response. Today, under the direction of professor Larissa Minicucci, DVM, MPH, the program has four official partner universities and enrolls roughly 25 U of M CVM students. In addition, nearly 150 students are enrolled remotely from 19 different universities nationwide. It is by far the largest program of its kind in the US.

But how do students arrive at the crossroads of veterinary medicine and public health? And what do they find there?

Photo courtesy of Sarah Summerbell

Sarah Summerbell

"We find that either our students are already passionate about public health, so they apply and start the MPH at the same time as they start vet school," says Sarah Summerbell, major coordinator for the program and education specialist at the CVM, "Or they get into vet school and they start learning all the different things that a veterinarian can do and they think, 'Whoa, I didn't know this was an option—I'd really like to get some public health training!'"

Igniting interest

One such student was Tatum Odland, now a third year DVM student at the CVM. Odland became interested in serving the public as a veterinarian—ideally working for the United States Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) or Food Safety Inspection Service. Luckily, DVM/MPH students gain the experience and knowledge needed to pursue public service careers.

"It all started in the Production Animal Medicine Club," Odland says. "They hosted a veterinarian who works for USDA. She did a presentation on how vets are involved in disease outbreak investigations. I remember after that, I called my dad and said, 'I think I know what I want to do now!' So I applied to the DVM/MPH program after talking to some people and realizing that you really need an MPH to be competitive in the public service field."

Until that club meeting, Odland never realized public service was a field veterinarians contributed to. But since the US exports more food animals than it imports, public service veterinarians are vital in keeping the economy flowing. "Public service vets help make sure that other countries continue to accept our animals," says Odland, who feels she will be best equipped for a career in public service with a background in public health and tacked an MPH on to her DVM.

The sky's the limit

The program's alumni travel many different career paths. According to Summerbell, roughly one-third become private practitioners. "Some want to practice for a couple of years after graduation because that's what they went to vet school for," she says. "Then we have one-third who go into government. Some graduates go into residency and other training programs." Sometimes alumni interested in more academic specifics, such as epidemiology, pursue PhD's.

Recent program graduates run the professional gamut, including conducting women's mission work in Ethiopia, acting as the state of Michigan's wildlife veterinarian, and serving in the US Army in food safety.

Shannon Mesenhowski, '10 DVM, '11 MPH, is now a program officer for the Livestock and Agriculture Development Team at the Bill & Melinda Gates Foundation. Previously, Mesenhowski completed a one-year fellowship in the Bureau for Food Security at the United States Agency for International Development (USAID), where she worked on Feed the Future, a presidential initiative. The fellowship was made possible by the American Association for the Advancement of Sciences. "The reason I got this fellowship was because I had the DVM/MPH degree," she says. "I knew plenty of highly capable veterinarians previously not accepted, and the degree really gave me a leg up."

After the internship, Mesenhowski joined USAID's Office for Foreign Disaster Assistance as a livestock advisor on droughts, disease outbreaks, and famine. "I spent most of my time in West Africa during the Ebola outbreak serving as a health advisor, which is a role typically held by a human physician or a public health professional," says Mesenhowski. "That was one role I know

Photo by Amanda Stombaugh

Shannon Mesenhowski

I got specifically because of the DVM/MPH after my name."

No matter where they end up, Summerbell says the vast majority of alumni are glad they did the program. Alumni in private practice, for example, sing its praises despite not working in public health directly. "They think about their medical practice differently because they are thinking more about populations and how diseases impact community health, which is different than your standard clinical medical training where you are looking at one animal at a time," says Summerbell.

Front-runners in the field

What sets the U of M's program apart is that it does not require students to commit up front, which frees them to explore their academic and professional interests before applying. "There isn't really another veterinary public health DVM/MPH program out there with the same flexibility we have," Summerbell says.

While other universities may have veterinary public health programs, they are usually administered quite differently than the U's DVM/MPH program. Students from these universities often end up applying to the U instead because of the program's flexibility. They can then complete their coursework remotely.

"We often had the chance to interact with students from across the country, which was really cool," says Mesenhowski. "I have crossed paths with these classmates in different ways over the course of my career, especially as I have relocated—I run into people all the time. The University of Minnesota is really at the forefront of the DVM/MPH because the U's program creates a lot of opportunities for connections and networking."

A requirement specific to the U of M's program is that students must attend one Summer Public Health Institute (PHI) while pursuing their DVM/MPH. PHI is a three-week summer intensive session, hosted by SPH, that offers courses for students and practicing professionals in public health and related fields. Participants can build or expand their professional expertise, learn best practices, embark on field trips, broaden their career options, network with other professionals, or explore new areas of interest. Students remotely enrolled in the DVM/MPH program may have to travel far to attend, but Summerbell says they are always glad they did after mixing and mingling with veterinary educators, professionals in the field, and fellow students.

As long as students apply to the MPH program while they are enrolled in a DVM program, participate in one Summer Public Health Institute, and complete the program's degree requirements in five years, they are awarded their degree. Whether they use it to round out their clinical skills, advance international trade and the food animal industry, or mitigate infectious diseases that cross human, animal, and ecosystem health boundaries, students from all over the country will benefit from this preeminent dual degree program.

Photo courtesy of Tatum Odland

Tatum Odland spent a week in Washington, D.C., this summer for the Smith-Kilborne Program through USDA-APHIS. The program, which is designed to acquaint veterinary students with various foreign animal diseases that could potentially threaten the domestic animal population in the United States, includes both laboratory experiences and classroom presentations on diseases and their implications.

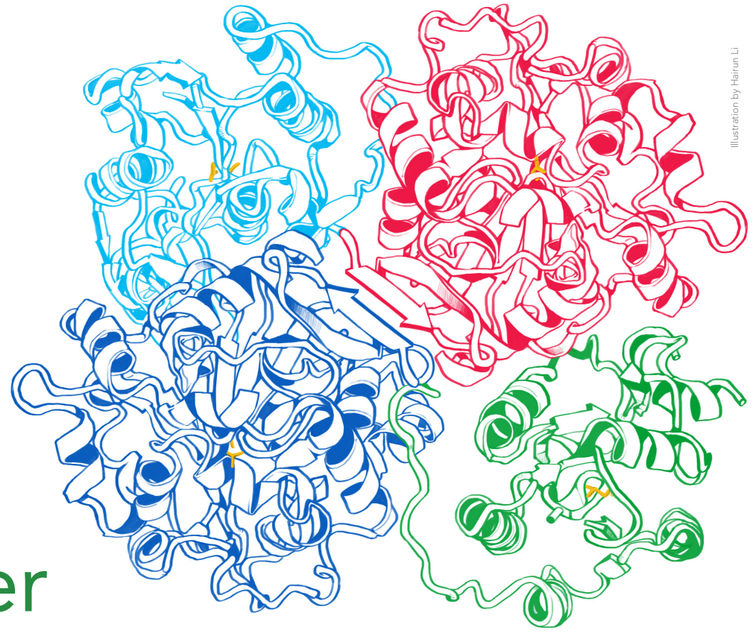


Illustration by Hairun Li

Mammalian soluble epoxide hydrolase (sEH)

The answer in the enzyme

BY CAROLYN BERNHARDT

In the 1980s, researchers at the University of California, Riverside, were looking for a way to control insects and found an enzyme—called JHEH—that, when inhibited, prevents caterpillars from becoming butterflies. This work led to the discovery of an equivalent enzyme in mammals, called soluble epoxide hydrolase or sEH.

After spending a few years at UC Davis, Alonso Guedes, DVM, MS, PhD, associate professor of Anesthesia and Pain Medicine in the Department of Veterinary Clinical Sciences, joined the University of Minnesota, where he is working to further understand how to use sEH to advance pain management in veterinary—and eventually human—medicine.

"We mammals have a similar enzyme," Guedes says. "However, most of us don't undergo metamorphosis," he adds with a smile. "We autoregulate and self-repair. And in mammals, the presence of this enzyme has the opposite effect—it diminishes the body's ability to self-repair. Inhibiting it actually allows our cells to do their work."

Guedes and his team are working to understand how blocking this enzyme can help improve mammal health, starting with horses suffering from laminitis—a severely painful disease in the hoof that makes horses (and other hoofed animals such as sheep, goats, and cattle) unable to walk, develop, or behave normally. Most horses with laminitis do not respond well to current pain medications and treatments, and euthanasia is currently the primary outcome for severe cases.

"A horse's hoof is like a human nail, except they stand on it all day long," says Guedes. "The hoof wall is attached to the bone by a very tough tissue that interconnects like a zipper, which is called the digital laminae. Certain proteins hold the digital laminae together, and when there is inflammation, such as with laminitis, those proteins break down and the hoof's connection to the bone breaks apart."

Guedes and his team want to know if sEH is involved in the breakdown of these important proteins, and they are already seeing evidence confirming this in mice. "It seems like inhibiting the enzyme could potentially protect some of the linking proteins that hold the tissues together in the hoof," he says. They've developed a compound that inhibits the enzyme and allows for more blood flow and delivery of nutrients to a harmed area. But crucial questions remain. Primarily, would inhibiting the enzyme allow the body to repair already-damaged proteins and cells? Secondly, at what rate does inhibiting the enzyme slow the process of deterioration? But most importantly, could we prevent damage and deterioration by intervening early on?

At the University of Minnesota College of Veterinary Medicine's Large Animal Hospital, Guedes has used the experimental compound on a few different equine patients with laminitis as well as arthritis. In many cases, the compound works in conjunction with a pain medication to provide the animal both pain relief and bodily recovery. Results for many of Guedes' patients have been visible within a matter of days.

A similar compound has been tested in human clinical trials and resulted in improved outcomes for patients with neuropathy. And its effect on arthritis in horses could have implications on human arthritis in the future, too. Recently, Guedes and Troy Trumble, DVM, MS, PhD, associate professor in the Department of Veterinary Population Medicine, were awarded two small but critical grants to further their research into this compound's ability to inhibit sEH and alleviate pain and mobility limitations for equine patients with arthritis.

"We want to understand how this enzyme is working and how we can fine tune it to better use it to promote health," says Guedes.

If you are interested in supporting Alonso Guedes' work, please contact **Mindy Means, development officer** at the College of Veterinary Medicine, at **612-626-5482** or **mkmeans@umn.edu.**

Photo by Amanda Stambaugh

Alonso Guedes and Piper Equine Hospital's blood donor horse, Hercules

Target practice

BY KAITLIN SULLIVAN

Third year DVM and PhD student Emily Pope is using veterinary medicine to create a better mouse model for treating human breast cancer. The human implications of her research caught the eye of the Boehringer Ingelheim (BI) Veterinary Scholars Program, a 10-week summer program through the University of Minnesota College of Veterinary Medicine (CVM) that helps students better understand the role research plays in developing new treatment protocols or therapeutics.

Pope has been working on her research for four years, but she spent the 2018 BI Veterinary Scholars Program session analyzing her findings. What she knows for certain is that breast cancer is difficult to study at a genetic level. There is vast variety in the way breast cancer is expressed, which makes targeting individual cancer cells a challenge.

Pope's research identifies novel targets that cancer drugs can latch onto. Identifying these new targets could lead to new uses for existing drugs and aid in the development of new ones. "Treatments would be tailor-made to each cancer. That's the direction we're headed in this field," says Pope.

After veterinary school, Pope hopes to land a residency in small animal surgery and continue to develop targeted and individualized cancer treatment therapies. She's driven to produce research that impacts both human and animal communities.

"The CVM's decision to emphasize One Health—which recognizes that the health of people, animals, and the environment are all connected—has driven a lot of collaboration," says Pope, who is advised by professors from both the University of Minnesota Medical School and the CVM.

Pope is the recipient of the Al Weber DVM/PhD Fellowship and won first place for her poster presentation at the CVM Points of Pride Research Day. She has been the recipient of multiple scholarships through the University.

"When you're so early in your career but you already know what you want to do, to have that value reaffirmed by someone who wants to support you in your goal," she says, "that makes you even more motivated to reach it."

Illustrations by Megan Murrell

First recipient of Dr. Bob Morrison Legacy Fund named

Alyssa Betlach, '18 DVM, is a graduate student in the Veterinary Medicine program and was recently named the first Dr. Bob Morrison Legacy Fund recipient for the 2018–19 school year. Betlach's research focuses on the characterization of Mycoplasma hyopneumoniae within the swine field through the use of molecular diagnostics and epidemiology. Betlach is also a part-time associate veterinarian at the Swine Vet Center in Saint Peter, Minn.

"It was an absolute privilege to have known Dr. Morrison and to have received his mentorship throughout my veterinary education," says Betlach. "I hope to continue Bob's legacy through my collaboration with swine veterinarians, academia, and producers toward the development of science-driven resources for swine health and production advancement."

The College of Veterinary Medicine's new Dr. Bob Morrison Legacy Fund focuses on outreach, integrates research and industry, works with swine practitioners and farmers, and contributes to the success of the swine industry. Contributions to the fund support a broader community of DVM students, graduate students, practitioners, and researchers to lead the industry in knowledge-based solutions for both health and production.

Lopez wins Pijoan Fellowship

Gustavo Lopez, DVM, PhD student, was recently selected as the recipient of the Carlos Pijoan Graduate Student Fellowship in Swine Medicine for the 2018–19 school year. Prior to pursuing his PhD at the University of Minnesota, Lopez spent six years in Russia, working for a large meat production company. There he filled different roles, such as wean-to-finish production manager, head of genetic services, and head of health services. Lopez received his DVM in 2010 from Universidad Central de Venezuela.

The Carlos Pijoan Graduate Student Fellowship in Swine Medicine honors Carlos Pijoan, DVM, PhD, who joined the University of Minnesota College of Veterinary Medicine faculty in 1982. Pijoan created and led the Swine Disease Eradication Center. The fellowship helps train the next generation of specialists in swine health and production to conduct applied research on the transmission, diagnosis, control, and elimination of economically significant diseases of swine.

Fifteen years in Gombe

"Sometimes we focus on the individual animal, sometimes we focus on the group, but most of the time we focus on the interface—where these things intersect with humans and the environment," explains Dominic Travis, DVM, MS, associate professor in the University of Minnesota College of Veterinary Medicine's (CVM) Department of Veterinary Population Medicine. An expert in wildlife epidemiology and veterinary public health, Travis tackles emerging health and natural resource sustainability issues at the interface of wildlife, domestic animals, and humans. He and his colleagues in the department's Ecosystem Health division ask, "What is the ecology of the health among and between the living organisms that make up an ecosystem?"

Travis previously served as a veterinary epidemiologist at Chicago's Lincoln Park Zoo. There, in 2003, he and his colleagues built an ecosystem health program with primatologist and anthropologist Jane Goodall, PhD. The program worked alongside Goodall's long-term behavioral project at Gombe National Park in Tanzania. Now, Travis is continuing his work with the Jane Goodall Institute (JGI) studying infectious disease outbreaks and other illnesses in nonhuman primates.

The U, he says, has provided opportunities to develop new collaborations. "The reason the University of Minnesota is important is that ecosystem health is a giant multidisciplinary team sport and the U just so happens to have expertise in everything."

For 15 years, Travis has collaborated with scientists at the JGI and the University of Minnesota to build a noninvasive infrastructure in Gombe National Park that strategically tracks local chimpanzee health. "Wildlife is not only where diseases hide but also the part modern science knows the least about," says Travis.

The team's observations have helped pinpoint disease early enough to mitigate its impact. Through management changes in basic epidemiological prevention, they have seen fewer outbreaks and a lower mortality rate since the project began.

Photo by Amanda Stombaugh

Dominic Travis

"Gombe is the perfect natural lab to do this work," says Travis, who considers the park an ecosystem health demonstration site. "It's a small park, so every single animal has been individually identified and watched for 50 years."

The project's larger implications have reverberated around the world. Advised by Travis and his Ecosystem Health colleagues, CVM graduate students are conducting research in Gombe. Tiffany Wolfe, DVM, '15 PhD, newly appointed assistant professor in the Department of Veterinary Population Medicine, completed her PhD by tracking tuberculosis among the park's chimpanzees and nonhuman primates. She was coadvised by Travis and Randy Singer, DVM, PhD, professor in the Department of Veterinary and Biomedical Sciences.

"The park is a living laboratory to work out wildlife surveillance methods and to intersect them with humans in and around the park," says Travis, "And since we began doing this, we are not only helping wildlife but we are quickly connecting it to human and ecosystem health." He says a major lesson in having tracked and connected this interface has taught Travis that wildlife health is inseparable from the ecosystem and its individual parts.

Travis' reverence for chimpanzees, Gombe, and human health nourishes his pursuit of better understanding an environment's interconnectedness. "These chimps represent all the issues of the interface. If we can protect our most high-profile population in the world—that represents our knowledge of the evolution of people—that will say something about our commitment to improving ecosystem health."

Modiano mentors Emperor Science Award recipient

BY JENNIE KIM

Photo by Jennie Kim

(From left to right) Jaron Magstadt, Kelly Makielski, and Jaime Modiano

While his peers took a break from textbooks and papers, high school student Jaron Magstadt spent the summer at the University of Minnesota College of Veterinary Medicine (CVM) conducting research with Jaime Modiano, VMD, PhD, Perlman Professor of Oncology and Comparative Medicine in the Department of Veterinary Clinical Sciences, and Kelly Makielski, DVM, a postdoc in the Modiano Lab.

Magstadt is with the Modiano Lab as a recipient of the Emperor Science Award, a prestigious national award for high schoolers with strong interests in cancer research. "I was there five days a week looking for a specific gene in canine osteosarcoma," he says. "This gene can sometimes be lost in dog tumors, and I was looking to see why and when that happens."

For Modiano and Makielski, hosting and mentoring an awardee seemed unlikely. "Thousands of scientists answered the call, so chances were pretty low that we would be selected," Modiano says.

But while the odds of being selected were statistically low, it's clear the Modiano Lab was chosen due to its proven track record of mentoring young scientists. Magstadt had much opportunity for growth this summer. "We both saw Jaron become increasingly confident in the hands-on work," says Makielski.

"He also got better at understanding whether others did experiments or interpreted results correctly," says Modiano.

So, what's next for Magstadt? One thing is clear—his passion for science and oncology is stronger than ever. "Next year, I'll be doing postsecondary enrollment options at the U, and hopefully I'm going to med school in the future," he says. "This experience has really affirmed my passion."

Modiano agrees that the experience has been affirming but in a different way. "This mentorship reinforced my belief that there's hope for the future," he says. "There are smart, young people like Jaron who are committed to making the world a better place. For me, that's gratifying and empowering."

Honoring Janet Veit

BY GREG BREINING

Robert Spencer was at a family funeral when he received the call that Janet Veit, '96 DVM, a veterinarian at his clinic, Hillside Animal Hospital in La Crosse, Wis., for 22 years, had died in a fishing accident in Iceland—an event so stunning it soon made the papers in the Twin Cities and even the Washington Post.

"I was so shocked I couldn't say anything," recalls Spencer.

Veit, 48, and her husband, Brian Schumacher, were fly-fishing by the inlet of a river in a storm-tossed lake near Reykjavik. Schumacher unknowingly stepped off a dropoff and was swept into the lake by the current. Veit plunged in to rescue him. By the time a small boat nearby could be launched, Schumacher had died and Veit could not be revived.

Shaken by the loss of his talented and well-liked colleague, Spencer contemplated a way to honor her. "We should live our life so it means something going forward," he says. So in the days following Veit's death, Spencer helped to establish a perpetual scholarship at the University of Minnesota College of Veterinary Medicine (CVM) in her memory.

Veit's interest in hunting and fishing started when she met Schumacher. Together they fished trout in the karst hills near their La Crescent, Minn., home and traveled far afield to fish and hunt sea ducks. They taught fly-fishing and guided fishing trips. "They put in their time helping others learn how to fish. They were both very giving of their hobby," says Patrice Veit, Janet's sister. "The act of heroism—where one goes into the water after the other—that's just the kind of people they were," she says.

Photo by John Schnack

Janet Veit and her husband, Brian Schumacher

Janet had grown up around animals on a North Dakota farm, but she originally intended to study human medicine. "I don't know what year she switched and decided that she would really rather treat more species than humans," says Patrice.

As a vet, Janet proved a source of advice and inspiration to her niece, Anna Veit, now a fourth year student at the CVM. Though she lived far away near Detroit Lakes, Minn., Anna shadowed her for a week at Hillside Animal Hospital and asked her advice about classes and rotations.

"When we got together with the whole family, she would tell us about her most interesting cases in the past week—so being exposed to that definitely pushed me in this direction," Anna says.

Spencer says Veit was very proud of having gone to the CVM. So he called the University to set up a scholarship with $10,000 of his own. His idea was to dole out $1,000 a year for 10 years. But Bill Venne, chief development officer at the College, told him that a $25,000 gift could provide $1,000 a year in perpetuity. Says Spencer, "Bill seemed to think that raising the rest of that money was not going to be hard."

So Spencer put out the word to friends, family, clients, and local businesses. People called and volunteered donations. A local radio station, where disc jockeys had been veterinary clients, made a donation."The outpouring has been pretty amazing," says Spencer.

Photo by Leigh Webber

Janet Veit

The fund has raised $37,000 to date. "Now it's going to be a permanent memorial, which I think is wonderful," says Spencer. Scholarships from the fund, which is called the Dr. Janet Veit Scholarship fund, will be available to students from Veit's home state of North Dakota or from the La Crosse area. The first recipient will be named later this school year.

Spencer says he hopes the fund will help students, even if in a modest way, get through school with less debt. "I remember how excited Janet was when she had finally paid off all of her student loans. I know that she would be happy if that helped anybody else."

He hopes, too, that the scholarship will help promote the best talent the College has to offer and, in some way, help give additional impact and visibility to a life that was lost. "We wanted to honor Dr. Veit in some kind of meaningful, purposeful way, and I think this scholarship does that."

If you are interested in supporting this fund, please contact **Bill Venne, director of development** at the College of Veterinary Medicine, at **612-625-8480** or **venne025@umn.edu**.

Recent reunions

Photos courtesy of Kris Hayden

The class of 2008 celebrated their 10-year reunion on Al & Alma's boat cruise on Lake Minnetonka on September 1.

The class of 1998 gathered for their class reunion on campus on August 11. Tom Molitor, PhD, spoke to attendees about what has happened here at CVM in the last 20 years. Afterward, classmates enjoyed tours of the Veterinary Medical Center, The Raptor Center, and Leatherdale Equine Center. They also gathered for a picnic in the Livestock Pavilion.

The class of 1968 celebrated their 50-year reunion at Jerry and Carol Sprau's farm in Elkton, Minn., on September 8. Of the 55 graduates, there were 26 in attendance, representing 54% of the living classmates. Through the generosity of the attendees and the graciousness of Jerry and Carol in providing a low-cost venue for the celebration, the group more than covered the expenses incurred and made a contribution of $600 to the Class of 1968 Bob Velure Memorial Scholarship Fund, which now has over $110,000.

The class of 2003 had their 15-year reunion on Al & Alma's boat cruise on Lake Minnetonka on June 16.

News notes

Whether they're advancing veterinary health, providing innovative veterinary care, or improving veterinary medical education, our alumni are making moves and thinking big.

Class of 1963s

Richard Huston, '63 DVM, recently traveled to Samburu, Kenya, to complete a College of Veterinary Medicine mission, where he and three veterinarians from Kenya vaccinated 9,646 sheep, goats, and camels against parasites.

Class of 1977

The American Veterinary Medical Association (AVMA) House of Delegates has elected **John Howe, '77 DVM,** of Grand Rapids, Minn., as the organization's president-elect. Howe will begin his presidential term in July 2019.

Class of 1978

Dennis French, '78 DVM, joined the faculty at the University of Illinois Urbana-Champaign College of Veterinary Medicine in 2009 to lead the Food Animal Medicine and Surgery section.

Class of 1982

The Council on Biologic and Therapeutic Agents within the AVMA recently named **Michael Strobel, '82 DVM, '03 MS,** to the council as a clinical pharmacology representative. Strobel will be one of 12 voting association members elected by the House of Delegates for two three-year terms. The council serves as an informational and advisory resource to government agencies and to other AVMA groups on issues pertaining to veterinary biologics, drugs, and other therapeutic agents.

Photo courtesy of Kris Hayden

Michael Strobel and Goldy

Class of 2006

Ahna Brutlag, '06 DVM, '11 MS, was recently promoted to director of veterinary services and senior veterinary toxicologist at Pet Poison Helpline, a division of SafetyCall International. Brutlag is also an adjunct assistant professor in Pharmacology/Toxicology at the CVM.

Class of 2014

Erika MacKinnon, '14 DVM, is now a veterinary associate at Kenwood Pet Clinic in Minneapolis. MacKinnon particularly enjoys surgery and neonatal care.

Class of 2015

Nicholas Grossapoulos, '15 DVM, recently accepted a position at Zoetis, a global animal health company, in Bloomington, Minn.

CLASS OF 2018

Christopher Deegan, '18 DVM, recently started a new position as a veterinarian at Suidae Health and Production.

Rachel Friese, '18 DVM, started a new position as Veterinarian at Clear Lake Veterinary Clinic PC in South Dakota.

Fernando Leite, '18 PhD, moved to Duluth, Georgia, in May to start his new role as a technical manager at Boehringer Ingelheim Animal Health. He is responsible for the technical oversight of three orally administered vaccines and the diseases they help prevent in swine. Two of the vaccines are to pathogens which were the focus of Leite's PhD.

The forefront of at-home veterinary care

BY CAROLYN BERNHARDT

Sandra Soucheray, '02 DVM, can treat three dogs in just one hour. She has spent the last three years driving across the Twin Cities to take care of dogs and cats at home. Soucheray worked in a clinic for 13 years before launching Dr. Soucheray's At Home Veterinary Care, her own mobile practice. Now, she keeps all her equipment in her van and provides pet care in her clients' homes. She has found that pets respond better to treatment in their natural environment—some don't even have to leave their bed.

"A lot of pets don't like traveling in cars," says Soucheray. And for many pets, hospitals and clinics can be overstimulating. Soucheray and her mobile team often end up offering their services to clients whose pets are long overdue for a vet appointment. Soucheray's mobile service includes vaccinations, evaluations, blood work, treatments for many illnesses, and behavior and nutrition control. Being inside homes often gives Soucheray the opportunity to see how changing an animal's environment can help with managing behavioral issues or illnesses such as osteoarthritis.

The at-home approach also offers clients a more comfortable setting for end-of-life care. This year, Soucheray was one of 62 veterinarians around the world who were the first to be certified in hospice and palliative care by the International Association for Animal Hospice and Palliative Care.

When Soucheray worked in a clinic, she tried to give families as much time and space as they needed during euthanasia procedures, but now she can offer families a more personal experience. Many families opt to have their pet sedated in their favorite place outside while saying goodbyes.

For more information about Soucheray's practice, visit **www.drsoucheray.com.**

Photos courtesy of Sandra Soucheray

In remembrance

Raymond P. Axtman, ’60 DVM, Snohomish, Wash., died June 14 at age 88. After graduating from the CVM, Axtman practiced large animal medicine in St. Charles, Minn. In 1970, he and his wife moved to Monro, Wash., where he had a small animal practice. He is survived by his wife, Barbara; 4 children; and 6 grandchildren.

Rudolf “Tass” Dueland, Jr., DVM, ’70 MS, died September 20 at age 85. Dueland was a Diplomate, regent, and president (’90) of the American College of Veterinary Surgeons, president of the Veterinary Orthopedic Society, and a member of Orthopedic Research Society and other veterinary professional organizations, such as American Veterinary Medical Association, Wisconsin Veterinary Medical Association, and American Animal Hospital Association. His teaching career began at the Western College of Veterinary Medicine, University of Saskatchewan, from 1971 to 1972. He was an associate professor of surgery at the Cornell University College of Veterinary Medicine, from 1972 to 1980. He then joined the University of Wisconsin-Madison School of Veterinary Medicine in 1980 on the development team of the new school and as founding chair and professor in the Department of Surgical Sciences. He was chairman of the department of Surgical Sciences from 1980 to 1986. He held a joint appointment as professor of Orthopedic Surgery in the Medical School at University of Wisconsin-Madison. Tass retired in 1999 as Professor Emeritus, but never stopped contributing to the science of orthopedics, continuing to lecture and write on his research interests. He also received a US patent for his work on measuring hip dysplasia in canines. He is survived by his wife Susan, 4 children; 17 grandchildren; and 5 great-grandchildren.

Guy S. Hohenhaus, ’88 BS, ’90 DVM, Annapolis, Md., died June 25 at age 57. Hohenhaus was the state veterinarian and chief of animal health for the Maryland Department of Agriculture from 2005–14. He previously served as Maryland's state public health veterinarian for the Department of Health and Mental Hygiene and was a past president of the National Assembly of State Animal Health Officials. He was a professor at the Virginia-Maryland Regional College of Veterinary Medicine from 1990–2002 and director of its veterinary epidemiology residency program. He was a Diplomate of the American College of Veterinary Preventive Medicine. During his army service, Hohenhaus designed and implemented food safety, zoonotic disease, and refugee programs in eight countries. He received the Bronze Star in 2004 for his contributions toward rebuilding Afghanistan's veterinary and public health infrastructure. He is survived by his wife, Michelle.

Wilbur A. Leibbrand, ’53 DVM, Hastings, Minn., died July 24 at age 94. Over the course of his career, he worked in private practice in Hastings and Little Falls, Minn., for the USDA, and as a professor at the U of M Waseca. He is survived by his wife, Eleanor, and 4 children.

Donald W. Maas, ’60 DVM, Long Lake, Minn., died June 30 at age 88. He is survived by his wife, Geri; 3 children; 4 grandchildren; and 3 great-grandchildren.

E. Hunt McCauly, ’66 DVM, ’73 MS, Bozeman, Mont., died June 11 at age 84. McCauly was a faculty member in the Department of Large Animal Clinical Sciences at the University of Minnesota. He was also a consultant for the World Bank, where he assessed livestock across 10 states in Mexico and made recommendations on improving animal health services to the government. He is survived by his wife, Sue; 2 children; and 4 grandchildren.

Gordon D. Merry, ’54 DVM, Sun Prairie, Wisc., died September 4 at age 92. Merry practiced veterinary medicine in Sun Prairie for 40 years until 1994. He is the third of six generations of Merry Hereford cattle breeders. Gordon marketed cattle all over the United States and sold a few in Canada, as well as one in Argentina, under the prefix of MGM (Marian and Gordon Merry). He is preceded in death by his wife, Marian, and survived by 4 children, 11 grandchildren, and 7 great-grandchildren.

Harley W. Moon, ’60 DVM, ’65 PhD, Danville, Penn., died October 7 at age 82. After completing his PhD, Moon worked at the Brookhaven National Laboratory and then at the University of Saskatchewan, Saskatoon. In 1968, he joined the National Animal Disease Center (NADC) in Ames, Iowa. In 1995 he became the director of Plum Island Animal Disease Center. He returned to Iowa and was named to the Ramsey Chair in Veterinary Medicine at Iowa State University in 1996. His honors and awards include induction to the United States Department of Agriculture’s Science Hall of Fame in 2000, fellowship in the American Association for the Advancement of Science in 2003, two honorary doctorates, and numerous memberships, fellowships, medals, diplomacies, citations, and awards from the US, Canada, Belgium, Hungary, and Switzerland. He served on expert panels with the World Health Organization, the National Institutes of Health, and the National Academy of Science, among others. He testified to the US Senate about antibiotics in livestock feed and discussed threats to agriculture on the network evening news as chair of the National Research Council's Committee on Agricultural Bioterrorism. Moon was predeceased by his wife, Irene, and survived by 4 children and 4 grandchildren.

Kent M. Rosenblum, ’68 DVM, Alameda, Calif., died September 5 at age 74. Rosenblum worked as a full-time veterinarian at Providence Veterinary Hospital in Alameda through the late 1990s while simultaneously launching and maintaining Rosenblum Cellars, which helped start a new era for California Zinfandel in the 1980s. He later founded Rock Wall Wine Company with his daughter, Shauna, and was considered a pioneer winemaker in the Bay Area. He is survived by his wife, Kathy; 2 children; and 1 grandchild.

Let's get together

The College looks forward to celebrating with those of you having reunions during this school year. Though a few are still in planning stages, the following reunions have been scheduled.

MONDAY, DECEMBER 3

American Association of Equine Practitioners Alumni Reception,
ThirstyBear Brewing Co., San Francisco, Calif.
6 to 8 p.m.

THURSDAY, FEBRUARY 7, 2019

Minnesota Veterinary Medical Association Reception,
Orchestra Hall, Minneapolis, Minn.
5 to 7 p.m.

Do you have questions about your reunion?
Are you interested in getting involved?
Contact **Kris Hayden, alumni relations associate and events coordinator**, at **krhayden@umn.edu** or **612-624-7624**.

Mentoring future veterinarians

Recently, the University of Minnesota College of Veterinary Medicine (CVM) was seeking veterinarians willing to share their time and enthusiasm with first and second year veterinary students. The CVM had an overwhelming amount of students who were looking for a mentor this year. Fifty-four mentors have committed to the program, and nine of the mentors committed have agreed to take on more than one student. The goal of the mentor program is to provide a professional learning experience for students outside the classroom. Mentoring relationships provide opportunities for professional development, networking, and exchanging ideas.

QUESTIONS OR CONCERNS?

If you have any questions or concerns about alumni matters, please contact:

Bill Venne
Director of Development and Alumni Relations
venne025@umn.edu
612-625-8480

Alumni and Friends Society Board

If you’re interested in joining the Alumni and Friends Society (AFS) Board, send your name, email address, and phone number to cvmalumni@umn.edu.

Teresa Hershey, ’98 DVM, president
Lukas Wallerich, ’15 DVM, president-elect
Gary Goldstein, ’84 DVM
Roy Martin, ’89 DVM
Heather Case, ’98 DVM
Karen Shenoy, ’04 DVM
Sue Lowum, ’07 DVM
Abigail Albright, ’08 DVM
Susan Miller, ’08 DVM
Abby Coodin, ’10 DVM
Marta D.T. Powers, ’11 DVM
Roland Lefebvre, ’16 DVM
Andrea Buckalew, class of 2020, student rep.
Jordan Sanford, class of 2020, student rep.
Paige Gardas-Anderson, class of 2021, student rep.
Erika Wehmhoff, class of 2021, student rep.

DONOR SPOTLIGHTS

Giving back

BY GREG BREINING

Arlo Frost, '87 DVM, finds that an enjoyable diversion from veterinary medicine is ... more veterinary medicine.

Frost volunteers with the Student Initiative for Reservation Veterinary Services (SIRVS), a University of Minnesota student-led volunteer organization that provides veterinary services to Native American communities in Minnesota.

"I get to help the local community, but I'm also helping the students get experience they might not otherwise get," says Frost. "It's fun to do that."

Frost graduated from Dartmouth College in Hanover, N.H., and came to Minnesota, where he could pursue a degree in veterinary medicine while his wife, a Smith College graduate with a business degree from Duke University, could explore a range of job options. "When I came out here, I had no intention of staying," he says. "Now I love it."

After graduating in 1987, Frost spent years working for other clinics before "concluding that the only acceptable thing was to have a practice of [his] own." That year, he started Silver Lake Animal Hospital, a small-animal clinic in Oakdale, Minn.

Frost refers many patients requiring 24-hour or specialized care to the University of Minnesota Small Animal Hospital. Says Frost, "I feel that the University is a valuable referral resource, and I feel that the mission of educating the next generation of veterinarians should be supported."

Photo courtesy of Arlo Frost

Arlo Frost

In 2013, Frost was invited to a Student Initiative for Reservation Veterinary Services (SIRVS) event by his son, then a CVM student and president of the student-led volunteer organization. SIRVS conducts clinics (usually lasting anywhere between two days to a week) in several communities, including White Earth Nation, Leech Lake Band of Ojibwe, Mille Lacs Band of Ojibwe, and Lower Sioux Indian Community. After Frost's son graduated, Frost says the incoming president asked him if he would continue attending the clinics.

"People living on the reservation like animals and want to have pets," says Frost. "Their pets tend to be very well cared for—it's just that the owners are not always in a position to pay for a spay or neuter."

Student volunteers work with local partners to schedule clinics, which are usually held in community centers. They also apply for grants and perform limited fundraising to keep the clinics going. Faculty advisor Larissa Minicucci, DVM, MPH, DACVPM, associate professor in the College of Veterinary Medicine, attends most events along with volunteer veterinarians, who help guide students through performing examinations, surgeries, and other clinical tasks.

"I will scrub in for surgery and, depending on the student's ability and confidence, either I watch and guide them with the surgery, or in some cases I take over," Frost says. He also often invites members of his clinic to help. At his last outing, he was accompanied by three technicians and a veterinarian from Silver Lake.

Students running SIRVS are always seeking both financial support and volunteers, since their services are in high demand and they benefit academically and professionally from the experience. SIRVS performs five or six clinics each year. While there are requests to conduct more clinics, the student organization is somewhat limited by student schedules. However, SIRVS sees more than 600 animals each year, completed more than 150 spay and neuter surgeries in 2017-18.

Five years and 20 SIRVS clinics later, Frost continues to be amazed by the efforts of the organization's student volunteers. "It's something that's almost solely driven by the students, which to me is very commendable," says Frost. "They're doing really good work, so it needs to be supported."

Thinking big

BY JODI AUVIN

Not many five-year-olds can accurately predict what they'll be when they grow up, but Don French, '51 BS, '53 DVM, never had any doubts. "I grew up in a rural area in southern Minnesota and got a pony when I was four years old," he says. It instilled a lifelong appreciation for horses and the work that veterinarians do.

So when Don was accepted into the University of Minnesota College of Veterinary Medicine (CVM), no one was surprised. He graduated in the College's third class.

He spent the next 10 months working for a veterinary clinic in Rochester, Minn., where he cared for large and small animals. But work was slow. "I woke up one morning and decided if my family and I were going to starve, I didn't want to blame anyone but myself," he says. "So in 1954, we moved to Chatfield, Minn., and opened an ambulatory practice called Chosen Valley Veterinary Clinic."

Don, wife Isabelle, and their first child lived in an apartment above a jewelry store and eked out a living for several years. Isabelle did the books, and Don went wherever work took him. He describes a "good day" as getting a call. "The first few times I walked into the barbershop, I was greeted with, 'Our town already has a vet; what are you doing here?'" He also has vivid memories of emptying a café near the apartment whenever he went into the alley to attend to squealing pigs and stomping horses.

After business took off, Don and Isabelle ran the office on their own until Don realized he couldn't get by on three hours of sleep. He began hiring veterinarians and moved the clinic to downtown Chatfield in 1971. "I also 'fired' Isabelle from day-to-day practice management," he says with a laugh.

Throughout his career, Don was known for his work with horses, including his help founding the Upper Midwest Endurance and Competitive Rides Association. "The idea was born when one of my clients, a distance rider, wanted to put on a competitive ride in Minnesota," says Don. He helped care for horses that required attention and occasionally served as a judge.

Don retired in 1998, but his interest in veterinary medicine remains strong, due in part to a son and granddaughter who followed in his footsteps. Don and Isabelle are also regular contributors to a memorial fund at the CVM honoring one of Don's classmates. And recently, they established the Don and Isabelle French Large Animal Medicine Fund with a generous gift. The fund supports clinical equipment purchases, research projects, and resident training in the areas of large animal medicine and equine sports medicine.

"I had a lot of fun as a vet," says Don. "I did it all—or at least tried to. But the practice of veterinary medicine is changing. More and more people are going into small animal medicine. You have to go a long way to find a large animal practice, which is why Isabelle and I decided to support that program."

Illustration by Hairan Li

profiles

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