College of Veterinary Medicine
2018 Highlights
Regional veterinary education program advances
The University of Minnesota College of Veterinary Medicine (CVM) and South Dakota State University (SDSU) are finalizing an agreement that addresses the shortage of veterinarians pursuing mixed animal or food animal medicine in rural areas. The program would enroll approximately 20 veterinary students annually and prioritize students from South Dakota and surrounding states. SDSU would host the first two years of instruction. Students would then complete their degree, including clinical rotations, at the CVM. At the earliest, veterinary students might enroll at SDSU for Fall 2021.

New international education standards compliance
The CVM is the first US veterinary school to announce compliance with the World Organisation for Animal Health’s Day 1 Competencies. These standards seek to fight the increasing risk of global pandemics and help graduates promote animal and public health through entry-level National Veterinary Services tasks.

The Raptor Center
A generous anonymous gift enabled TRC to launch the three-year initiative “Partners for Wildlife.” Through this program, TRC is working with rehabilitation centers in seven pilot states to optimize care-providing capacity.

Relocating wolves to Isle Royale
Two wolves were moved from Minnesota’s Grand Portage Indian Reservation to Michigan’s Isle Royale National Park in October. This ongoing wolf translocation project aims to balance the island ecosystem. Tiffany Wolf, DVM, ’15 PhD, assistant professor in the Department of Veterinary Population Medicine at the CVM, and National Park Service wildlife veterinarian Michelle Verant, ’10 DVM, ’12 MPH, examined the health of both wolves pre-translocation.

College and Davis Family Dairies extend partnership
The CVM and Davis Family Dairies have extended their partnership to train veterinary students at the Dairy Education Center through 2023. Over the past 10 years, nearly 120 veterinary students have completed the intensive four-week training program to advance their careers in dairy production medicine. The partnership has merged an academic program and facility with a commercial dairy committed to high-quality milk production, economic success, environmental stewardship, and animal welfare.

College responds to African swine fever expansion
African swine fever was discovered spreading across China’s swine-producing regions in 2018. The deadly disease can survive in the environment for months, and there is no widely available vaccine. CVM faculty addressed worldwide concerns by sharing information and advice online as well as through presentations. Their efforts reached thousands of people in the global swine industry, which led to additional requests for information and personal appearances.

Doubling down on diversity and inclusion
The CVM’s Diversity and Inclusion Committee has put forward an actionable plan to improve College diversity and inclusion. It has three main goals: to diversify organizational composition, to foster an inclusive culture, and to build an inclusive organizational reputation. Specific objectives include focusing hiring processes around diversity and increasing communication between the committee and the College.

West Metro Equine Practice moves to Long Lake
To accommodate the practice’s growth, the Veterinary Medical Center’s West Metro Equine Practice has moved to a larger facility in Long Lake, Minn. The new building will offer small-group client education sessions, a full-time certified veterinary technician, expanded student learning opportunities, and a stronger connection with campus-based equine clinicians to consult on more challenging cases.

Center for Animal Health and Food Safety
The Center for Animal Health and Food Safety (CAHFS) works across disciplines to solve complex food safety and public health issues both locally and globally. In May, CAHFS held a first-of-its-kind meeting of representatives from the World Organisation for Animal Health’s five Collaborating Centers for Capacity Building, which includes CAHFS. The center continues to develop frameworks for new projects and partnerships through its international research program.

Veterinary Diagnostic Lab re-accredited
The University of Minnesota Veterinary Diagnostic Laboratory (VDL) was re-accredited for another five years by the American Association of Veterinary Laboratory Diagnosticians after meeting stringent standards and outcomes at both the main laboratory in St. Paul and the Minnesota Poultry Testing Laboratory in Willmar, Minn. The VDL annually performs more than 1.2 million procedures, which makes it one of the busiest labs in the U.S.
Distinguished achievements

State funds four new faculty in agriculture
Special state funding is being used to bring four new faculty to the CVM who are part of a cohort of 17 agricultural positions hired with Agricultural Research, Education, and Extension Tech Transfer funds. The new College faculty are Matthew Aliota, PhD, and Peter Larsen, PhD, in the Department of Veterinary and Biomedical Sciences and Noelle Noyes, DVM, PhD, and Kim VanderWaal, PhD, in the Department of Veterinary Population Medicine.

A banner year for research funding
Generating nearly $35 million in 2018 research expenditures, the CVM’s research activities continue to rank among the top accredited veterinary schools in the nation. According to the QS World University Rankings, the CVM’s research impact score and citations rankings are the 12th-highest in the world for veterinary schools. In 2018, CVM faculty generated a wealth of information in nearly 300 scholarly research publications showcasing a breadth of knowledge contributed by students, faculty, and staff.

Seeking cancer solutions in the immune system
Kristin Snyder, a veterinary student at the CVM, received a Howard Hughes Medical Research Fellows award for $43,000 funded by the Burroughs Wellcome Fund. She is using the award to study cancer immunotherapy in the lab of Bruce Walcheck, PhD, for 2018–19. The Walcheck Lab is dedicated to improving the immune system’s cancer cell recognition. The long-term goal is to attack cancer cells better than the immune system alone by delivering enhanced natural killer cells to patients.

Yang’s presentation takes second at AASV annual meeting
The American Association of Swine Veterinarians (AASV) Foundation recently awarded Zhen Yang, class of 2019, a $2,500 scholarship sponsored by Elanco Animal Health. His oral presentation on porcine circovirus type 3 garnered the sizable scholarship by taking second place at the 2018 AASV annual meeting in San Diego. It was Yang’s second time winning this award. The first time he placed second in 2017, he was the first non-native English speaker in the competition.

Points of Pride Research Day
On Points of Pride Research Day, the Office of the Associate Dean for Research announced the recipients of four different awards, which recognize researchers who have demonstrated outstanding research achievements to advance knowledge in their field of expertise and organizations that enhance the CVM’s overall research mission.

The Zoetis Award for Excellence in Research went to Bruce Walcheck, PhD, professor in the Department of Veterinary and Biomedical Sciences. Jane Christopher-Hennings, MS, ’83 DVM, department head, director, and professor in the Department of Veterinary and Biomedical Sciences at South Dakota State University was named the Distinguished Research Alumnus. The Mark of Excellence Award went to Michael Conzemius, DVM, PhD, DAVCS, professor in the Department of Veterinary Clinical Sciences and director of the Clinical Investigation Center. Zoetis Animal Health was named Distinguished Research Partner.

Staff Appreciation Day 2018
More than 50 awards were given to dedicated staff and faculty at CVM Staff Appreciation Day. The Carl Edborg, III Award went to Janelle Wachtcr, administrative office supervisor for the VDL. This award goes to a CVM employee who is hardworking, dedicated, conscientious, productive, cooperative, positive, and customer service oriented. The Outstanding Faculty or P&A Award went to Kristi Flynn, DVM, assistant clinical professor in the Veterinary Clinical Sciences department. This award is for candidates who are supportive, hardworking, attentive, dedicated, conscientious, cooperative, positive, and customer service oriented.

Pat Redig retires after more than 40 years of service to TRC
The Raptor Center’s founder Pat Redig, DVM, PhD, retired in June after dedicating 44 years to TRC. Under his leadership, TRC became the world’s leading organization committed to the health and medical care of raptors.
Shaw blazes new trails for VetLEAD
To meet the increasing demand for veterinarians while promoting professional diversity, the CVM introduced the Veterinary Leadership through Early Admission for Diversity (VetLEAD) program a few years ago. Miranda Shaw, ’18 DVM, graduated in May—trailblazing a new College culture by becoming VetLEAD’s first alumna.

U of MN among top schools for turkey research, education, service
The U was recently ranked second in Expertscape’s World’s Top Institutions for Turkeys. Additionally, three CVM faculty made the top ten of the World’s Top Experts for Turkeys list: Kent Reed, MS, PhD, professor in the Department of Veterinary and Biomedical Sciences and director of graduate studies in the Comparative and Molecular Biosciences program; Sunil Kumar Mor, BVSc & AH, MVSc, PhD, assistant professor in the Department of Veterinary Population Medicine; and Sagar Goyal, MS, PhD, professor in the Department of Veterinary Population Medicine.

Modiano mentors Emperor Science Award recipient
High school student Jaron Magstadt spent his summer at the 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 was a recipient of the Emperor Science Award—a prestigious national award for high schoolers interested in cancer research. Five days a week, he came to the Modiano Lab looking for a specific gene in canine osteosarcoma that can sometimes be lost in dog tumors. Magstadt hoped to find out why and when that happens.

McCue named interim associate dean of research
Molly McCue, DVM, MS, PhD, professor in the Department of Population Medicine, has been named interim associate dean of research. The associate dean of research is charged with leading the research mission of the College, implementing the CVM’s research strategic plan, and reviewing the current functions of this position and the office of the associate dean of research.

Larissa Minicucci wins Community-Engaged Scholar Award
Larissa Minicucci, DVM, MPH, received the annual CVM Community-Engaged Scholar Award, for her exemplary and engaged scholarship in her field. Minicucci is an associate professor in the Department of Veterinary Population Medicine and directs the DVM/MPH program in collaboration with the U’s School of Public Health, which reaches veterinary public health students at over 20 schools across the United States. Her research interests include infectious disease epidemiology, zoonotic disease prevention, cultural competence, and community health.

Lee named to Academy for Excellence in Health Care Practice
David Lee, DVM, MBA, director of the Veterinary Medical Center, was recognized as one of seven inaugural members of the U of M Academic Health Center’s new Academy for Excellence in Health Care Practice, the highest recognition of excellence in the practice or provision of health care by Academic Health Center faculty.

Three honored for diversity and inclusion work
Three employees were celebrated as champions for diversity and inclusion around the College. Larissa Minicucci, DVM, MPH, associate professor in the CVM; Jessica McElmury, supervisor of the Primary Care Department; and fourth year veterinary student Rae Richardson were each awarded a $1,000 stipend. They were recognized for initiating or participating in programs working with diverse populations or helping to create a more supportive environment in the College.

Alumnus John Howe selected as AVMA president-elect
The American Veterinary Medical Association (AVMA) House of Delegates elected John Howe, ’77 DVM, of Grand Rapids, Minn., as the organization’s president-elect. Howe will begin his presidential term in July 2019.
Cutting the cost of canine cardiac care
Wanda Gordon-Evans, DVM, PhD, has collaborated with the University of Minnesota Medical School in creating an innovative way to perform mitral valve repair on dogs. The new procedure abandons a common medical practice called cross-clamping, which is the act of clamping the aortic valve and submerging the heart in a solution that keeps it still and clear of blood during surgery. Cross-clamping makes surgery easier, but complications and costs arise when returning the patient to a stable state. The entire endeavor typically adds up to around $20,000 for dog owners.

Instead, Gordon-Evans uses strategic electric shocks to send her patient’s heart into fibrillation, which allows her enough stillness to rebuild the damaged valve. Meanwhile, a bypass machine supplies the patient’s organs with oxygenated blood. This process cuts recovery time down to just a few days, which helps decrease the total cost for owners to around $8,000.

The answer in the enzyme
Alonso Guedes, DVM, MS, ’06 PhD, associate professor of anesthesia and pain medicine in the Department of Veterinary Clinical Sciences, is studying how blocking a particular enzyme (JHEH) can improve mammal health. His team is starting with horses suffering from laminitis—a severely painful hoof disease that makes horses (and other hoofed animals) unable to walk, develop, or behave normally. Euthanasia is the primary outcome for severe cases. But Guedes and his team have developed a compound that inhibits JHEH and aids blood flow and nutrient delivery to the harmed area. Many of Guedes’ patients exhibit improvement within days. Additional testing will help evaluate the compound’s potential.

Collaboration blasts glioblastoma
G. Elizabeth Pluhar, DVM, MS, PhD, a professor of veterinary surgery in the Department of Veterinary Clinical Sciences, is working to manipulate the immune response to glioblastoma and effectively kill cancer in dogs. In its first year, the project’s first follow-up MRIs show no evidence of tumors in Pluhar’s patients whose brain tumors were surgically removed. In the fall, the U’s Medical School launched a human clinical trial based on her findings.

Clean air, healthy swine
Researchers in the CVM are collaborating with the U’s College of Science and Engineering (CSE) to improve swine barn air filtration. Air inside swine barns is typically filtered to remove airborne pathogens, but the United States Department of Agriculture is supporting the researchers’ pursuit to add cold atmospheric gaseous plasma technology to the process. Sagar Goyal, MS, PhD, professor in the Department of Veterinary Population Medicine at the CVM, and Peter Bruggeman, PhD, professor of mechanical engineering at the CSE, head the team—and are finding that bacteria and viruses stand little chance against cold plasma. Combining current air filtration systems with cold plasma could help better eliminate airborne diseases affecting swine.

A step ahead of antimicrobial resistance
As a postdoctoral associate, Elizabeth Miller, PhD, tracked down antimicrobial resistance (AMR). She investigated strains of antibiotic-resistant E. coli among giraffes in central Kenya. By finding the source of AMR, she hoped to better predict its transmission throughout an ecosystem.

Miller says she modeled her PhD thesis after that of Kim VanderWaal, PhD, assistant professor in the CVM Department of Veterinary Population Medicine, VanderWaal’s unprecedented thesis researched how social interactions among giraffes influences disease transmission. Energized by VanderWaal’s findings, Miller leapt at the chance to work for VanderWaal. Miller has since expanded VanderWaal’s research to include the prevalence of resistant E. coli in giraffes. Surprisingly, Miller’s team found a high prevalence of resistant E. coli strains in baby giraffes. The research indicates antimicrobial resistant gene transmission between nearby domesticated animals and the giraffe population.
Advancing education

Prioritizing veterinary education
Seventeen faculty members from across the College are participating in the first cohort of the CVM Instructor Development Program. The overarching goal lead by Assistant Dean Peggy Root-Kustritz ’87 DVM, ’95 PhD, DACT, MMedEd, is to provide resources and education in best practices for the didactic and clinical instruction of all CVM students. Participating faculty will have the opportunity to supplement their established expertise with effective teaching tools.

MnDRIVE Global Food Ventures graduate fellows announced
MnDRIVE, a partnership between the University of Minnesota and the State of Minnesota, addresses grand challenges by aligning areas of research strength with key and emerging state industries. Through this fellowship program, students from CVM, CFANS, and SPH seek solutions to the growing challenges posed by food insecurity and population growth. Eight graduate students have received the fellowship. They make up the sixth group of global food graduate fellows.

An idea to improve dental education
Spring semester introduces second year veterinary students to dental basics. But for most students, practice makes perfect... and Michael Congiusta, class of 2020, felt a step was missing between class and lab. So Congiusta, whose parents are dentists, invented the Dental Vet typodont, a tool for universities and veterinary technician schools to help students practice dental skills. Recently, the plastic models took home a grand prize of $10,000 at “The Idea”—an innovation competition exclusively for veterinary students.

International Leadership in Veterinary Education
After two years of leading an international group of colleagues, Laura Molgaard, DVM, associate dean for Academic and Student Affairs, presented a new framework for competency-based veterinary education at the annual Association of American Veterinary Medical Colleges meeting in March. The framework includes competencies and core entrustable professional activities (EPAs) that provide a modern, shared educational framework to guide schools in curriculum review and assessment. It also sets out to help students track their progress along developmental milestones. The CVM is the first veterinary school to pilot the use of the EPAs to provide daily coaching feedback to students to help them develop clinical competence.