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FROM THE DEAN

Dear Friends,

This was an extraordinary year for year for the College of Veterinary Medicine. Research discoveries made international news, and we experienced several noteworthy changes in leadership. Those changes include my appointment as dean of the College, a role I am both honored and humbled to serve. As dean, I look forward to many years of building collaborative partnerships that will continue to play a critical role in the lives of the animals and people of Minnesota, the country, and the world.

The College can celebrate numerous successes in research, including an increase in research funding of more than 10 percent. Our researchers have made exciting breakthroughs, including the discovery that certain cancers in dogs are caused by the same genetic abnormalities found in humans, and the identification of genes that cause neurologic and muscular diseases in horses and dogs.

The College of Veterinary Medicine is engaged in strategic planning so that we will be well-positioned to respond to rapidly changing state, national, and world events. For us to meet our goals of discovering and disseminating new knowledge, educating the next generation of veterinarians and biomedical scientists, and providing innovative services for our stakeholders, we must respond to the ever-changing environment. College leadership, together with faculty and staff, is identifying and implementing a new strategic plan for 2010-14 in which collaboration creates solutions to important societal issues. Only by convening higher education, private industry, and public agency stakeholders in dialogue can we gain the diverse perspectives that will bring about interdisciplinary approaches to solving problems. Our strategic planning involves bringing people together to identify the goals, strategies, projects, and measures of success that will serve as our road map for the future.

This past year brought several changes in leadership: Mark Rutherford was named associate dean for graduate programs, Al Beitz was appointed interim chair of the Veterinary and Biomedical Sciences department, and Will Hueston was appointed executive director of the Global Initiative for Food Systems Leadership. At the Center for Animal Health and Food Safety, Jeff Bender was appointed director and Linda Valerie was named chief operating officer. In addition, several faculty and staff received honors and recognition: Scott Dee represented North America on the international PRRS group, Stephanie Valberg won the Distinguished Women Scholar Award, Tim Johnson was awarded the Brian Wilkins Memorial Prize, and Randy Singer testified before the U.S. House of Representatives committee on Agriculture subcommittee on Livestock, Dairy, and Poultry. Students Aric Frantz received top honors from the Morris Animal Foundation and Ian Rubinoff received a student leadership award.

Your generosity and philanthropic support are always appreciated and will be especially critical for future initiatives. Philanthropy continues to provide the scholarships, fellowships, and other opportunities that promote excellence and innovation throughout the veterinary and animal science community. As a result, we have much to celebrate this year, including fellowships and scholarships that prove to be increasingly important for our students in the stressed economic climate we face today. Your support in this area is particularly important at this time because the nation faces a shortage of veterinarians and biomedical researchers.

As you read the wonderful stories and updates in this issue of Profiles, please know that you have been instrumental in helping the College of Veterinary Medicine thrive. We are extremely grateful for your support.

With warm regards,

Trevor Ames. D.V.M., M.S.
Diplomate ACVIM
Dean
Discovery paves way for genetic test—
Researchers find gene for exercise-induced collapse

Judy and Jim Powers understand firsthand the heartbreak of buying a dog affected with exercise-induced collapse (EIC). EIC, the once-puzzling neurological syndrome, has become prevalent in pedigreed Labrador retrievers over the past couple of decades.

As their 3-year-old dog progressed through training exercises, he started to exhibit signs of the dreaded condition—weakness in the rear limbs during strenuous exercise that can spread to the forelimbs. If not immediately rested, their dog would collapse. Since there is no treatment for EIC, the Wisconsin couple removed the dog from training.

Until recently, there was no test for EIC, and while veterinarians, Labrador retriever breeders, and owners of field trial dogs suspected the syndrome was becoming more common, no one knew just how prevalent it had become. A recent discovery at the College of Veterinary Medicine has changed that: Genetic researchers have pinpointed the mutant gene that causes EIC. The findings have vast implications, not only for the Labrador retriever population, but also for molecular research in both veterinary and human medicine.

“This extraordinary research is a great example of the strong emphasis the College places on comparative medicine,” says Trevor Ames, dean. “Discoveries of this magnitude involving naturally occurring diseases of animals can help the affected animals as well as humans with related conditions.”

EIC involves a mutation in a gene critically involved in the communication between nerves within the central nervous system.

“Communication between neurons occurs at synaptic junctions,” says James R. Mickelson, professor of veterinary biosciences and one of the lead researchers. “This synaptic communication requires structures called ‘synaptic vesicles’ to contain necessary neurotransmitters. The gene involved with EIC is responsible for making new synaptic vesicles and enabling nerve communication to continue. A naturally occurring mutation in this gene has not been identified (in any mammal, including humans) until now.”

Until recently there was no test for EIC...no one knew just how prevalent it had become.

Mickelson was one of several researchers to publish the study in the October 2008 issue of the journal Nature Genetics. Other University researchers were on the team, as well as colleagues from the University of Saskatchewan and the University of California-San Diego.

Not only did the researchers identify the gene involved in EIC, they also developed and submitted a patent application for a genetic test that can identify affected dogs and carriers of the disease. The $65 test is available exclusively through the University of Minnesota Veterinary Diagnostic Laboratory. The test is welcome news because the Labrador retriever is the most common dog breed in the world. The American Kennel Club alone issues more than 120,000 new registrations for Labrador retrievers each year.

While many Labrador retrievers are genetically susceptible to EIC, some may never exhibit signs of the disease because they typically don’t reach the level of exercise that hunting and field trial dogs achieve. “It takes 5 to 10 minutes of very strenuous exercise before the first clinical signs appear,” says CVM internal medicine specialist Edward “Ned” Patterson. “If you stop dogs right away when they first become wobbly on their back legs, and you rest them, they’ll be fine. But sometimes, if dogs are not stopped, it affects their front legs, and later maybe their breathing—we are not certain. In severe episodes, a dog can die.”

G. Diane Shelton, a research team member from the University of California-San Diego, was the first to describe the disease. She saw Labrador retrievers affected with EIC in 1990 and presented the condition to the veterinary community three years later. Shelton and Susan M. Taylor, another team member from the University of Saskatchewan,
began investigating EIC, analyzing owner questionnaires and evaluating affected dogs in an attempt to determine the root of the problem: muscular, cardiovascular, or neurological. They compared symptomatic dogs with asymptomatic dogs during and after strenuous exercise, but found that clinically, both populations are identical: their blood is normal, their hearts and lungs are normal, and no pathology is found in their muscle. Suspecting the syndrome had a genetic basis, Shelton and Taylor turned to the University of Minnesota researchers in 2001.

The breakthrough
“We suspected EIC was an inherited condition and that it might be inherited by a single gene based on the pedigrees,” says Patterson. That led researchers from the University of Minnesota and the University of Saskatchewan to solicit blood samples and pedigrees for the genetic research.

The genetic research team had to isolate which of the 20,000 or so genes might be responsible for the syndrome by testing genetic markers spread throughout the dog’s chromosomes. In the fall of 2006, five years after beginning their work, the research team found a linked marker in a small area of one chromosome, with 10 or so genes nearby. Within eight months of narrowing the area down, the team isolated the responsible gene: dynamin 1.

The prevalence
The next step was to determine how prevalent EIC was in the breed. To do that, CVM researcher Katie M. Minor traveled to field trials in Minnesota, Wisconsin, and the Dakotas, and Taylor traveled to trials in western and central Canada throughout the summer of 2007, collecting DNA samples from the cheeks of dogs enrolled in competitive events. “We went to seven field trials in the area and we swabbed almost every dog there,” says Minor. The group also tested dogs that exhibited signs of EIC that were seen at veterinary hospitals.

“That’s when we started getting a really strong idea of the frequency of this mutant gene in Labrador retrievers,” says Mickelson. The group’s estimate is that 3 to 5 percent of all Labrador retrievers are affected and carry two copies of the mutant dynamin 1 gene. Another 30 percent are carriers with just one bad gene. “That’s true of field trial and hunting dogs and show dogs, as well as pets,” Mickelson adds.

The team also found EIC-affected Labrador retrievers from Europe, the Middle East, and Australia. “EIC occasionally occurs in Labrador retriever crosses, and in two other retriever breeds that are closely related to the Labrador retriever: the Chesapeake Bay retriever and the curly coated retriever,” he says.

Now that a test is available to identify carrier and affected dogs, breeders will be able to breed dogs in such a way that no offspring receive two mutated genes.

“Most breeders and buyers will want the test done,” says Beverly Garcia, who breeds Labradors in Georgia. “The ethical person will want to give a guarantee to the buyer of the puppy that it is not an affected dog.”

Points of Pride Research Days event honors researchers
On March 25-26, 2008, the College hosted its annual Points of Pride Research Days event, which included a poster competition, seminars, and award presentations.

The recipient of the 2008 Pfizer Research Excellence Award was Michael Murtaugh, a professor in the Veterinary and Biomedical Sciences department. Murtaugh’s research centers on infectious diseases in swine, where he has done extensive work on the molecular and cellular components of the immune response.

Chand Khanna, who completed his Ph.D. in pathobiology at the University of Minnesota, received the Distinguished Research Alumnus Award. Khanna is now with the National Cancer Institute, where he heads the Tumor and Metastasis Biology Section in the Pediatric Oncology Branch and is director of the comparative oncology program.

Poster competition winners included graduate students Rebecca LaRue, Terri Mattila, and Meetu Seth; postdoctoral fellow Mike Olin; and Summer Scholar Aric Frantz.

The 2009 Points of Pride Research Day is scheduled for March 25.
Researchers with the University of Minnesota College of Veterinary Medicine, Medical School, and Masonic Cancer Center have successfully performed the first steps of an experimental procedure to treat a dog with brain cancer. The team’s two-fold goal: cure or extend the life of the patient and gain information that will advance scientific knowledge about brain tumors for treatment of animals and humans with this disease.

The patient, a 10-year-old shepherd-mix dog named Batman (for his black, pointed ears that resemble the superhero) had been diagnosed with a cancerous brain tumor which, left untreated, would have been fatal.

The August 5 three-hour procedure involved removal of as much of the brain tumor as possible, followed by the injection of a gene therapy around the perimeter of the tumor area. The injection served to prime the remaining cancer cells for a vaccine, which was developed in the research laboratory using tumor tissue removed during surgery. In September, Batman received three injections of the vaccine.

The procedure team:
• Liz Pluhar, associate professor., performed the surgery. Pluhar specializes in veterinary orthopedics and neurosurgery at the College and conducts veterinary cancer research through the Masonic Cancer Center.
• Stephen Haines, a neurosurgeon at the University of Minnesota Medical Center, Fairview, who operates on humans diagnosed with brain tumors, assisted Pluhar with the surgery.
John Ohlfest, director of the University’s translational neurosurgery gene therapy program, provided the gene therapy and created the vaccine. Ohlfest conducts brain cancer research through the Masonic Cancer Center.

To date, research has involved separate investigations of the impact of gene therapy and vaccines on brain tumors. The University of Minnesota scientists and clinicians conducting this research think that surgery followed by combining the two experimental agents in one study—a one-two punch of gene therapy followed by vaccine—may have a greater impact on the cancer. If this two-step process works, it could have significant importance for improving treatment for brain tumors in both animals and people.

The gene therapy was a modified virus that cannot replicate but expresses the protein interferon gamma (IFN-g). IFN-g primed the tumor site, making the tumor cells more visible to Batman’s immune system.

“The problem with brain tumors is that they can hide from the immune system because the cancer cells typically don’t have surface proteins that allow the immune system to recognize and kill them,” Ohlfest says. “IFN-g should reverse this, exposing the tumor to the immune system and allowing the vaccine to work at peak efficiency.”

The tumor cells taken during the surgery were killed in the laboratory to make one part of the vaccine. The other part of the vaccine was an immunogenic portion of DNA derived from bacterial DNA called CpG ODN.

“The CpG ODN serves to trick the dog’s immune system into thinking it has a bacterial infection, only we co-injected tumor cell proteins along with the CpG ODN so the immune system goes after the tumor with similar vigor that it would against bacteria,” Ohlfest says. We expect that tumor-specific immune cells will then migrate into the brain to kill the remaining cancer cells.”
Cancer researchers at the University of Minnesota and North Carolina State University have found that humans and dogs share more than friendship and companionship—they also share the same genetic basis for certain types of cancer. Furthermore, the researchers say that because of the way the genomes have evolved, getting cancer may be inevitable for some humans and dogs.

Professor Jaime Modiano, Al and June Perlman Oncology Chair, and Matthew Breen, a genomics professor at North Carolina State University’s Center for Comparative Medicine and Translational Research, collaborated on the research, which was funded by the American Kennel Club Canine Health Foundation and the American Cancer Society. Their findings are published in a special edition of the journal *Chromosome Research* that explores comparative cytogenetics and genomics research by scientists from around the world.

Genomes are divided into chromosomes, which act as nature’s biological filing cabinets, with genes located in specific places.

“Many forms of human cancer are associated with specific alterations to the number or structure of chromosomes and the genes they contain,” Breen explains. “We have developed reagents to show that the same applies to dog cancers, and that the specific genome reorganization that occurs in comparable human and canine cancers shares a common basis.”

More specifically, Breen and Modiano found that the genetic changes that occur in dogs diagnosed with certain cancers of the blood and bone marrow, including chronic myelogenous leukemia, Burkitt’s lymphoma, and chronic lymphocytic leukemia, are virtually identical to genetic abnormalities in humans diagnosed with the same cancers.

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Genetic cancer link between humans and dogs continued

“We believe the implication of this finding is that cancer may be the consequence of generations of genetic evolution that has occurred similarly in dogs and humans,” Modiano says. “This means that, to some degree, cancer may be inevitable in some humans and dogs just because of the way our genomes have developed since the separation from a common ancestor. Since we know now that dogs and humans seem to share a common pathogenetic basis for some cancers, we believe that studying dog cancers may allow us to identify cancer-associated genes more easily in dog populations than in human populations. Once identified, we may be able to translate these findings to human cancers as we seek to provide a greater level of insight into cancer risk, diagnosis, and prognosis.”

According to Breen and Modiano, dogs are good research subjects because they develop the disease spontaneously, and many of the modern breeds have developed over the past few hundred years using restricted gene pools. This selective breeding has preserved the genetics of the breeds. It has also made some breeds more susceptible to certain cancers. These factors, coupled with the high degree of similarity between the genomes of dogs and humans, provided the researchers with an opportunity to compare the genomes and study the evolutionary genetic changes associated with cancer.

The human genome has 46 chromosomes, and the dog genome contains 78 chromosomes. Sometimes, in the normal duplication process of cells, chromosomes can become rearranged or relocated. This rearrangement or relocation is called translocation. It can lead to a cell losing its normal function, becoming abnormal, and possibly developing into cancer.

“Interestingly, we found that the same translocation of chromosomes happens in dogs as in humans for the three blood and bone marrow cancers we studied,” Modiano says.

Breen and Modiano conclude that despite millions of years of divergence, the evolving genomes of dogs and humans seem to have retained the mechanism associated with cancer, and that the conserved changes in the genomes have similar consequences in dogs and humans.

“Like people, our pet dogs suffer from a wide range of spontaneous cancers. For thousands of years, humans and dogs have shared a unique bond,” says Breen. “In the 21st century, this relationship is now strengthened to one with a solid biomedical basis; the genome of the dog may hold the keys to unlocking some of nature’s most intriguing puzzles about cancer.”

Trevor Ames, dean of the College, says that the research findings will potentially lead to better treatment options for diseases that affect humans and animals.

“It is unique discoveries like this that involve parallel health conditions of humans and animals that will help us continue to move medical research from the laboratory into mainstream medical practice,” Ames says. “This is a crucial step in assuring that the University of Minnesota and the nation remain at the forefront of human and animal health research as we continually search for new and better ways to treat diseases like cancer.”

The next step for Breen and Modiano is to use grants received from the National Cancer Institute to start pinpointing risk factors for cancer in various breeds of dogs.

FRAN HOWARD
utility of the NBIS through an integrated process of needs assessment, data access and availability investigation, options planning, fundamental system, and basic to applied research.

The NBIS combines health data from the Centers for Disease Control and Prevention, agricultural data from the U.S. Department of Agriculture (USDA), food data from a combination of the USDA and the Department of Health and Human Services, and environmental monitoring from BioWatch to improve detection and response.

Krishona Martinson, assistant professor, Animal Science, Molly McCue, assistant professor, Veterinary Population Medicine, Jim Mickelson, professor, Veterinary and Biomedical Sciences, and Stephanie Valberg, professor, Veterinary Population Medicine, and director of the Equine Center, were awarded a $500,000 National Research Initiative integrated genomics grant for an integrated research and extension program for equine metabolic syndrome and shivers.

Michael Murtaugh, professor, Veterinary and Biomedical Sciences, and Scott Wells, associate professor, Veterinary Population Medicine, were awarded research grants by the USDA Cooperative State Research, Education, and Extension Service’s Critical Issues program to perform research related to time-critical, emerging plant and animal pest and disease issues. The program is designed to provide one-time seed funding to help initiate work requiring immediate attention until other, longer-term resources can be secured to address the issue.

Murtaugh was awarded $200,000 to study the etiology and molecular pathogenesis of porcine high fever disease (PHFD). Since its appearance in the spring of 2006, PHFD has devastated the swine industry in China, causing severe economic hardship to swine producers and increased prices for the principal protein source in the Chinese diet. It has since spread to neighboring countries and is currently a scourge of Vietnamese swine production. A better understanding of the etiology and pathogenesis of PHFD is urgently needed to help protect the swine industry from its potential introduction into the United States. The overall goal of the research is to rapidly identify nucleic acids and proteins that are diagnostic for PHFD for immediate development of diagnostic tests and further investigation of molecular pathogenesis.

Wells was awarded $200,000 for the evaluation of the cost-benefit of the use of Johne’s disease (JD) vaccine while considering effects on bovine tuberculosis. There is an urgent need to evaluate the economic impact of JD vaccination on the control of the disease and its impact on bovine tuberculosis (bTB) eradication due to the high herd prevalence of JD and the emergence of bTB in the United States. If economically advantageous, JD vaccine has the potential to reduce losses and expedite control programs for individual herds, but not at the expense of the bTB eradication program. Information for Mycobacterium avium subsp. paratuberculosis transmission parameters will be collected from existing field studies. This information will be used to develop a JD vaccination simulation model framework and to evaluate the cost-benefit of JD vaccination, including effects on the national bTB eradication program.

Other College of Veterinary Medicine researchers were also recently awarded grants of $100,000 or more:

- James Collins, director of the Veterinary Diagnostic Laboratory, was awarded $300,000 from the USDA Animal and Plant Inspection Service for evaluation of avian influenza A virus matrix, H5 AI RT PCR, and H7 AI RT PCR diagnostic tests in swine samples.

- Han S. Joo, professor, Veterinary Population Medicine, was awarded $108,578 from MJ Biologics Inc. for evaluation on productive immunity of porcine reproductive and respiratory syndrome virus envelope proteins in pigs.

- Tom Molitor, co-chair of the Veterinary Population Medicine department, received $202,620 from Pfizer Inc. for pathogen investigation, surveillance, and acquisition.

- Srirama Rao, associate dean for research and professor, Veterinary and Biomedical Sciences, was awarded $357,938 from the National Institutes of Health for a study of serotonin (5-HT) and 5-HT2A in allergic inflammation.

- Mark Rutherford, associate dean of graduate programs and associate professor, Veterinary and Biomedical Sciences, received $229,500 from the USDA for doctoral training of veterinarian scientists in animal infectious agents and zoonoses.

- Vicki Wilke, assistant clinical specialist, Veterinary Clinical Sciences, received $129,985 from Solace Pharm Inc. for evaluation of a novel compound for use in the control of osteoarthritic pain in dogs. Wilke was also awarded $119,672 from the Morris Animal Foundation to study chromosomal regions and genes associated with cranial cruciate ligament rupture in dogs.
Trevor Ames appointed permanent dean
The University of Minnesota Board of Regents officially approved the appointment of Trevor Ames as dean of the College of Veterinary Medicine in June.

"Trevor has done an outstanding job as interim dean, and I believe that he has the experience and skills to lead the College of Veterinary Medicine," said Frank B. Cerra, senior vice president for health sciences.

Ames had been interim dean since June 2007. Previously chair of the College’s Veterinary Population Medicine department, he joined the faculty in 1981. A diplomate of the American College of Veterinary Internal Medicine, he received his D.V.M. in 1978 from the Western College of Veterinary Medicine at the University of Saskatchewan and his master of science degree in 1981 from the University of Minnesota.

Jane Goodall presents commencement address
Thanks to a generous gift from an anonymous donor, renowned primatologist Jane Goodall was the commencement speaker at the College’s annual commencement ceremony at Northrop Memorial Auditorium on May 3. In addition to 91 D.V.M. degrees, 8 D.V.M./M.P.H. degrees, 6 Ph.D. degrees, 4 M.S. degrees, and 1 D.V.M./Ph.D. degree were awarded. Dean Trevor Ames gave the opening and closing remarks, and University of Minnesota President Robert Bruininks gave the welcome. Dr. Goodall was introduced by Sue Miller, a member of the graduating class of 2008, and Mary McKie presented the response for the class of 2008. Teresa Hershey, president of the Minnesota Veterinary Medical Association, administered the veterinarian’s oath, and congratulatory remarks were presented by Barbara Brandt, assistant vice president of the Academic Health Center. Jack Risdahl, president of the Alumni and Friends Society, welcomed the group to the Minnesota Alumni Association.

Annual awards ceremony salutes accomplishments
The College’s annual spring awards ceremony, held at the St. Paul Student Center on April 24, celebrated the accomplishments of students and faculty, presented scholarships, and recognized the generous support of donors.

In addition to more than $160,000 in scholarships, these awards were presented:

- Caleb Dorr Medal: Leah Renne
- Carl J. Norden Distinguished Teaching Award: Jane Quandt, associate clinical professor
- Mark of Excellence: Cathy Carlson, professor, Veterinary Population Medicine
- Outstanding Service Award: Joni Scheftel, state public health veterinarian, Minnesota Department of Health (class of 1982)

Veterinary Clinical Sciences teaching awards were presented to Drs. Leslie Sharkey, Jane Quandt, and Susan Simmerson, and Veterinary Population Medicine teaching awards were presented to Drs. Susan McClanahan, Stacy Tinkler, and Christie Ward.

In a new category of teaching awards for course coordinators, the recipients were Dr. Jeff Bender in public health, Dr. Leslie Sharkey in veterinary clinical pathology, and Dr. Robert Washabau in veterinary physiology.
Veterinarians and students come to aid of animal shelter

Losing your home and belongings in a flood can be devastating, but having to abandon your pets because you can’t take them with you or no longer can afford to care for them can make the pain unbearable. It can also overload animal shelters. To help ease the pain of flood victims—human and animal alike—the University of Minnesota Medical Reserve Corps (MRC) deployed two teams of veterinarians and students to Cedar Rapids, Iowa, to help staff a temporary shelter for animals displaced by floods in June and July.

In response to a request from David Schmitt, Iowa’s state veterinarian, Larissa Minicucci, program director and assistant professor in veterinary population medicine at the College, deployed the first team of three veterinarians June 27 to July 1 to help Iowa’s response team. A second team consisting of two veterinarians and two veterinary students led by Roberto Novo, associate professor in small animal surgery, left June 30 and returned July 3.

“Our mission was to provide some assistance to the core group working in Cedar Rapids and to provide continuous care of the animals,” says Minicucci. “They were interested in a team that could provide continuous care, and by going through the University, they were able to find a team that could commit a longer period of time. We can respond rapidly by sending emergency veterinary crews when they’re requested by Minnesota or other states. It’s nice as a faculty member to be able to get out and provide that service.”

After the town’s existing animal shelter was destroyed due to flooding, the community created a large makeshift shelter at Kirkwood Community College, where more than 650 animals were cared for. Most animals were companion animals such as dogs and cats, but some were exotic pets such as birds, hamsters, guinea pigs, rabbits, and lizards.

“For me, it was sobering to see a disaster like that first-hand,” says Minicucci, adding that she was particularly impressed by the way the community came together after losing the only animal shelter the town had. “Just seeing a system that functioned as well as it did—just being part of the animal-care team, since I think that during disasters, animals are often forgotten—was humbling. People were comforted knowing their animals had a place to go.”

Dental collaboration

The University of Minnesota College of Veterinary Medicine and School of Dentistry have been working together the past four years sharing facilities and resources to teach dental students and veterinary dental and oral surgery residents. The University of Minnesota Veterinary Medical Center (VMC) is one of only eight veterinary schools across the country that offer a full-time veterinary dentistry curriculum. Because of the close proximity of the School of Dentistry (only six university systems in the country have both a dental school and veterinary school on the same campus), the College forged a partnership with Dr. Jim Hinrichs in the department of periodontics. Each year, senior students with an interest in periodontics take a three-month course in advanced periodontal surgery at the School of Dentistry, culminating with a hands-on wet lab at the College.

“This shows how the University of Minnesota and Academic Health Center can partner and take advantage of all our resources,” says Gary Goldstein, associate professor of veterinary dentistry and oral surgery and associate medical director at the VMC. The veterinary dentistry service offers many of the same procedures that are available to human dental patients, from scaling and polishing to root canals and crowns to maxillofacial surgery.
AROUND THE COLLEGE

In memory: Walt Mackey

Walter J. Mackey, one of the College’s founding fathers and the curator of the Minnesota Veterinary Historical Museum, died on Oct. 19, 2008, at age 84.

Many remember Mackey for being instrumental in founding the College of Veterinary Medicine and for the thousands of hours of dedicated work he donated to the Minnesota Veterinary Historical Museum.

After serving in the Navy during WWII, Mackey attended the University of Minnesota, where he earned his bachelor’s degree in 1949, his D.V.M. in 1951, and his master of public health degree in 1968. He started his veterinary career in Blooming Prairie, Minnesota, and had a private practice for 13 years in Hayfield, Minnesota. He then became director of the University’s Research Animal Division, followed by a position teaching anatomy at the College. He finished his career working as assistant veterinarian for the Minnesota Board of Animal Health until retiring in 1992.

CAHFS hosts ‘One Health’ workshop, awards seed grants

Nearly 50 attendees from higher education, private industry, commodity groups, government, and non-profit associations participated in a “Global One Health” workshop, “Embracing the Interdependence of Animals, Humans, and the Environment,” sponsored by the Center for Animal Health and Food Safety (CAHFS) at McNamara Alumni Center on May 14. Supporters of the One Health initiative urge greater understanding of where risk exists globally and recognition of the next threat.

Workshop presenters revealed that 13 of the last 14 human health epidemics came from animal species.

The CAHFS also administers a Global One Health Leadership Fund that catalyzes new public, private, and academic partnerships focused on the increasingly complex dilemmas at the convergence of animals, humans, and the environment. To help kick off several of these new collaborations, seed grants of $10,000 each were awarded to:

- **Katie Pelican**, assistant professor, Veterinary Population Medicine, for “Long-term Ecological Monitoring Plots as Sentinel Sites for Emerging Infectious Disease.”
- **Julia Ponder**, executive director, The Raptor Center, for “Training One Health Scientists: Developing a New Paradigm.”
- **Michelle Willette**, staff veterinarian, The Raptor Center, for “Integrating Wildlife Health-Strategic Planning Workshop.”

NCFPD hosts exercise on food protection

Fifty participants from Canada, France, Germany, Japan, the United Kingdom, and the United States attended a three-day exercise on food supply protection hosted by the National Center for Food Protection and Defense (NCFPD) May 27-29. The exercise aimed to strengthen coordination, cooperation, and communication between G8 (Group of Eight) nations in the event of an intentional attack on the food supply. The G8 is an international forum for the governments of Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States.

“The increasing global integration of the food supply makes food defense an issue without borders, as the G8’s interest in this exercise illustrates,” says Shaun Kennedy, assistant professor, Veterinary Population Medicine, and director of the NCFPD. “The participation of government officials from five countries, international organizations, and food system experts is emblematic of the public/private partnerships that will be necessary to defend the food system from intentional contamination.”

Established in 2003 and led by the University of Minnesota, the NCFPD is a Department of Homeland Security Center of Excellence. The Center is a consortium of academic, public sector, and private sector partners tasked with developing technologies and strategies to prevent, respond, and recover from intentional contamination of the food system in order to mitigate the public health and economic impact of the event.

Mackey is survived by wife, Phyllis, of 55 years; children Cathleen Quinn, Kevin Mackey, Carol Kujawa, and Steven Mackey; six grandchildren; and many other relatives and friends. Memorials may be made to the Minnesota Veterinary Historical Museum.
Brian Rodrigues’ wide grin may be one reason his supervisors describe his performance as “service with a smile,” but it certainly is not the only one. A member of the Veterinary Medical Center (VMC) barn crew since October 2007, Rodrigues looks the part in his steel-toed boots, straight-leg jeans, plaid flannel shirt, and John Deere baseball cap. The Minnesota Governor’s Council on Developmental Disabilities (GCDD) recently honored the lanky 29-year-old along with his supervisor Sergio Gonzales and the VMC.

GCDD recognized 10 innovative employers at its Oct. 1 meeting held on the St. Paul Campus. The council chose the featured employers from 45 nominations based on two main selection criteria: the employer must provide direct employment to an employee with a developmental disability; and the position must be a permanent year-round job.

“Brian is a pleaser,” says Sheryl Ferguson, VMC manager. “He is service with a smile. We are very pleased to have him as an employee and we are honored to have been chosen as an innovative employer by the Governor’s Council on Developmental Disabilities.”

Rodrigues also couldn’t be more pleased, both with the recognition and with his position as a member of the barn crew. Landing a position with the University of Minnesota is no easy feat, but Rodrigues had a proven foot in the door when the barn crew position opened up. He began his work at the University in July 2000, but all of his positions were either temporary or seasonal. And all were orchestrated by Merrick, a non-profit organization dedicated to providing those with developmental disabilities employment networking opportunities. When Ellen Otto of Merrick found out that the VMC was opening its new Equine Center, she knew Rodrigues would be perfect for the job because of his love of farm animals.

“Brian helps me a lot,” says Gonzales, who supervises a crew of 22 workers who clean and disinfect stalls as well as feed and exercise animals. Typically, veterinary students, who are limited in the number of daytime hours they can work, fill barn crew positions. “Brian fills the gap between shifts when the students are in classes,” Gonzales notes. “He’s my right hand.”

Rodrigues says he does not favor one species of large animal over another, and he finds barn crew work more exciting than the duties he had at his previous positions. “I know some about bulls,” Rodrigues says. “I used to bull ride with my friends.” That was in high school, but it gives him plenty to talk about with Gonzales, who is a top-10 bull rider from Guatemala.

FRAN HOWARD
Tapir visits VMC for MRI

A Malayan tapir from the Minnesota Zoo was one of the more unusual patients at the Veterinary Medical Center in recent months. The 5-year-old female had a swelling on her right mandible and was brought to the VMC for an MRI on March 26.

"Radiographs were suggestive of root infection of one or more teeth, but were not diagnostic enough to guide treatment," explained Micky Trent, associate professor, Veterinary Population Medicine. "The MRI gave us more complete and detailed information, and we were able to eliminate the teeth as the source of the swelling." Photos by Sue Kirchoff

The medical imaging team wheels the tapir into the MRI suite as the anesthesiology team readies monitoring equipment.

Will she fit? Veterinary radiologist Travis Saveraid measures the tapir.

Final preparations are made by Ryan Nichols, a veterinary technician specialist in anesthesia. The tapir remains anesthetized throughout the procedure.

VETERINARY MEDICAL CENTER
West Metro Equine Practice turns two

West Metro Equine Practice, the University of Minnesota’s only satellite veterinary clinic, turned two in July. Serving the greater Maple Plain area, the practice is staffed by board-certified internal medicine specialist Spring Halland. It handles everything from routine vaccinations to complex injuries and disease.

The practice began using digital radiography last year, which provides immediate results and sharper images. Over the past year, Halland has noticed an increase in a relatively rare condition in horses called “stylohyoid osteoarthropathy.” Without digital radiography, the condition would be much more difficult to diagnose. The disease affects the stylohyoid apparatus, located near the middle ear. If left untreated, calcification and scarring can lead to neurological problems in the head and face.

“If the bone fractures, the result can be seizures or sudden death,” Halland says.

The practice also offers a fertile training ground for veterinary students and veterinarians furthering their carriers through a residency program. Senior veterinary students are required to spend two weeks at the satellite clinic as part of their curriculum.

“The West Metro Equine Practice has been a wonderful addition for the teaching of our veterinary students,” says Trevor Ames, dean. “It prepares them to work in the field by providing them with an opportunity to work side-by-side with an equine practitioner affiliated with the University of Minnesota. It also provides horse owners in the west metro area more immediate access to the expertise of the College and the University’s Veterinary Medical Center’s cutting-edge equipment.”

“Many of these students get the benefit of seeing horses that they may have already seen in the Veterinary Medical Center,” Halland adds. “Or they may see a case on the ambulatory rotation that is referred into the hospital. It gives the students the opportunity to see a case through its entire process. In this environment, everyone benefits.”

New clinicians join Veterinary Medical Center

Several new faculty members have joined the Veterinary Medical Center:

Dr. Antonella Borgatti Jeffreys has joined the Oncology Service. Jeffreys received her doctorate in veterinary medicine from the University of Torino, Italy, and completed her residency in veterinary medical oncology and master of science degree at the Purdue University School of Veterinary Medicine in Indiana. Board certified in oncology, she was previously a medical oncologist at the Veterinary Specialty Hospital of the Carolinas in North Carolina.

Also new to the VMC are:

• Dr. Sue Lowum, a 2007 graduate of the University of Minnesota College of Veterinary Medicine. Lowum joined the General Practice Service.
• Dr. Julie Schildt, who has joined the Emergency Services team. Schildt recently completed a residency in emergency medicine at Michigan State University.
• Dr. Laura Snyder, who recently completed her residency at North Carolina State University and joined the Clinical Pathology Service.

Veterinary Medical Center launches Advanced Veterinary Imaging Direct

The Veterinary Medical Center (VMC) has launched Advanced Veterinary Imaging Direct (AVID), a new outpatient medical imaging service. The service provides veterinarians with the most advanced veterinary imaging technology in the nation, with consultation and interpretation provided by the VMC’s team of experienced radiologists. Practitioners can use an online request form at www.vmc.umn.edu/avid/request/request.cfm or call 612-624-9583 for more information. Photo by Sue Kirchoff
Mark Rutherford named associate dean of graduate programs

Mark Rutherford, associate professor, Veterinary and Biomedical Sciences, was named associate dean of graduate programs in July.

“Mark possesses tremendous enthusiasm, experience, and knowledge of our graduate programs,” says Dean Trevor Ames. “He also has a comprehensive overall knowledge of graduate education at the University of Minnesota and he understands how our graduate programs relate to the College’s overall mission. I believe Mark will develop and lead highly successful graduate programs for our College.”

Mark earned his Ph.D. in immunology from the University of Illinois and did post-doctoral work at St. Jude Children’s Research Hospital in Memphis, Tennessee. In 1993, he joined the College as assistant professor in the Department of Veterinary Pathobiology. He was promoted to associate professor in 2001. A five-year member of the molecular veterinary biosciences graduate program and senior member of the toxicology and veterinary medicine graduate programs, he received first prize for innovative ideas in graduate education from the University of Minnesota Graduate School in 2006.

Cris Marques receives U of M’s Best Diss

Cris Marques, who received her Ph.D. in comparative and molecular biosciences from the College in 2008, was the recipient of the University of Minnesota Graduate School’s 2008 Best Dissertation Award in biological and life sciences.

Born and raised in Newark, New Jersey, Marques graduated with a bachelor’s degree in animal science from Rutgers University. When she’s not working on research projects, she can be found with her husband, Mike, and their black lab, Libby, exploring Ohio. She recently took time to answer a few questions for Profiles.

*What was the topic of your Ph.D. research?*

Herpes simplex virus-1 (HSV-1) infection of the brain, which is the leading cause of fatal encephalitis in immunocompetent patients. Despite the advent of antiviral therapy, less than 20 percent of surviving patients recover without significant long-term neurological deficits.

My thesis project investigated the immune response to HSV infection of the brain. I worked with a murine model of HSV-1 infection that mimics primary herpes encephalitis in humans. The results from this work suggest that microglia are a “double-edged sword” in defense of the HSV-infected brain. These resident brain macrophages initiate a cascade of neuroimmune responses that are meant to protect, but can also contribute to the serious brain damage seen during herpes encephalitis.

*Why did you choose the U of M for your graduate degree?*

I wanted to experience a new part of the country during graduate school and go somewhere with a solid reputation for research. It was also important for me to join a program that would give me some freedom to explore my options during the first year. After my interview, I knew the U of M would be a great fit.

*What was the most valuable part of your graduate education?*

The people I met. I had the privilege to interact and learn from experts in different arenas who taught me to always keep the big picture in sight. Thanks to my committee, I left graduate school with a great model of the type of professor and mentor that I would like to be. I also made incredible friends and met my greatest treasure, my husband and fellow
Comparative and molecular biology graduate program
Ph.D. students
Mary Boyce
Claudia Fernandez
Aric Franz
Willie Greggs
Adam Nettles
Sally Robinson
John Schwartz
Jennifer Triemstra

Veterinary medicine graduate program
Ph.D. students
Abaineh Endalew
Kristina Kiefer
Hyeun Bum Kim
Nick Phelps
Max Sepulveda

Master's degree students
Giordana Costa
Eva Furrow
Michelle Goulart
Tiffany Granone
Brian Hardy
Abirami Kugadas
Nate Rose
Megan Swaab

Lisa Hubinger recognized as best director of graduate studies assistant
Lisa Hubinger, graduate program coordinator, was honored with the University of Minnesota Graduate School’s Best Director of Graduate Studies (DGS) Assistant Award in May. The Graduate School established the award to recognize and reward the University’s most outstanding DGS assistants. Lisa was one of only two people campus-wide to receive the award, which included a $1,000 honorarium, a special plaque, and a reception in her honor.

New graduate students
Welcome to the following students who joined the College’s comparative and molecular biology and veterinary medicine graduate programs in 2008:

Carlos Pijoan Graduate Student Fellowship recipient graduates
Maria Pieters successfully defended her doctoral dissertation July 21. Maria’s dissertation “Mycoplasma hyopneumoniae Infection in Sow Herds: Epidemiology and Control,” demonstrated for the first time the total clearance of Mycoplasma hyopneumoniae, which occurred by 254 days after infection.

Another important aspect of her research demonstrated that cross-fostering in the farrowing rooms profoundly affected the transfer of Mycoplasma hyopneumoniae passive immunity in regard to timing for antibodies and of source for cell-mediated immunity.

Pieters was supported in part through the Carlos Pijoan graduate student fellowship. The Carlos Pijoan Graduate Student Fellowship in Swine Medicine was named in honor of Carlos Pijoan, who was internationally recognized for his work in the area of swine respiratory disease and the influence of swine production systems on the dynamics of microorganisms such as porcine reproductive and respiratory syndrome virus, Haemophilus parasuis, Streptococcus suis, and Mycoplasma hyopneumoniae.

Pieters is currently a postdoctoral research associate at the University of Illinois, Champaign-Urbana. She is conducting research in the areas of immune responses and disease resistance in swine.

What you are doing now?
I am currently a postdoctoral fellow at the Cleveland Clinic Lerner Research Institute in Ohio.

What are your plans for the future?
I’ve always wanted to teach and plan to pursue a career in academia, but I’m also open to considering more non-traditional opportunities that may arise.

What advice you would give students just beginning their Ph.D. education?
Surround yourself with people you can learn from and take advantage of the resources at the U. Take on a project you believe in and can be excited about for a long time. Go to conferences. Publish. Enjoy the journey.
College of Veterinary Medicine inventors were honored when the University of Minnesota recognized the creative and commercial achievements of its students, staff, and faculty at the 2008 University of Minnesota Inventor Recognition Event at McNamara Alumni Center on Sept. 17. The Office for Technology Commercialization presented awards to University of Minnesota inventors who had a patent issued, a license signed, or both in fiscal years 2006, 2007, and 2008. They included:

**Inventors with both a commercial license signed and patent issued**

- **James E. Collins**, professor, Veterinary Population Medicine, and director, Veterinary Diagnostic Laboratory. Technology licensed: Online Submission for University of Minnesota LIMS System. Patent title: Porcine Reproductive and Respiratory Syndrome Virus and Methods of Use

- **David Halvorson**, professor emeritus, Veterinary and Biomedical Sciences. Technology licensed: Avian Pneumovirus Vaccine Development Possibilities. Patent title: Avian Pneumovirus Vaccine

**Inventors with a commercial license signed**

- **James Mickelson**, professor, Veterinary and Biomedical Sciences. Technology licensed: Glycogen Storage Disease Type IV - Mutation in Equines. Patent title: Method of Detecting Equine Glycogen Storage Disease IV


- **Stephanie Valberg**, professor, Veterinary Population Medicine, and director, Equine Center. Technology licensed: Glycogen Storage Disease Type IV - Mutation in Equines. Patent title: Method of Detecting Equine Glycogen Storage Disease IV

**Inventors with a patent issued**


- **Han S. Joo**, professor, Veterinary Population Medicine. Technology licensed: A Method to Prepare Immunizing Substance for Prevention of Diseases in Pigs

- **Kurt Rosso**, associate clinical professor, Veterinary Population Medicine. Technology licensed: Mycobacterial Diagnostics

Also recognized was Lingling Li, a former graduate student at the College who had a patent issued. Li completed her Ph.D. in February.

**Randy Singer testifies before House subcommittee**

Randy Singer, associate professor, Veterinary and Biomedical Sciences, testified before the U.S. House of Representatives Committee on Agriculture Subcommittee on Livestock, Dairy, and Poultry in Washington, D.C., on Sept. 25. The hearing reviewed advances in animal health, particularly the use of antimicrobials in the livestock industry.

The subcommittee heard testimony from federal agency representatives responsible for animal and human health as well as representatives from animal health groups, the animal agriculture industry, and higher education. Testimony focused on how antimicrobials are used in animal agriculture and best management practices that help producers responsibly manage their use.

“It is clear from today’s hearing and the testimony of producers and veterinarians in the field that antimicrobial use decreases mortality of animals, decreases disease, reduces cost of food, and increases food safety,” says Rep. Leonard Boswell, D-Iowa, chair of the subcommittee. “I believe in science-based research. Healthy animals bring us healthy food, and science plays a huge role in that.”

**Scott Dee represents North America on international PRRS group**

Scott Dee, professor, Veterinary Population Medicine, and director of the Swine Disease Eradication Center, was selected by the Office International des Epizooties (OIE), the World Organization
for Animal Health, to represent North America on an ad-hoc meeting on porcine reproductive and respiratory syndrome (PRRS) at OIE headquarters in Paris in June. The OIE consists of more than 170 member countries and territories. In addition to Dee, veterinary scientists from Asia, Europe, and South Africa participated in the PRRS group.

**Stephanie Valberg receives Distinguished Women Scholar Award**

Stephanie Valberg, professor, Veterinary Population Medicine, and director of the University of Minnesota Equine Center, received the University’s 2008 Distinguished Women Scholar Award in sciences and engineering in April. The award was presented at a ceremony held at the Annual Celebration for Women sponsored by the Office for University Women at McNamara Alumni Center. Valberg was awarded $2,000 to be used for research, scholarly, or artistic activities. The Distinguished Women Scholar Award was established to acknowledge and honor the accomplishments of distinguished women scholars at the University of Minnesota. The program awards one person per year in two separate areas: sciences and engineering; and humanities, social sciences, and arts.

**Carl Osborne receives WSAVA Healthcare Award**

Carl Osborne, professor in the Veterinary Clinical Sciences department, was the 2008 recipient of the WSAVA Healthcare Award at the 33rd annual World Small Animal Veterinary Association (WSAVA) Congress in Dublin, Ireland, in August. Osborne presented an overview of his life’s work entitled “State of the Stone: Epidemiologic Shifts in Feline Urolith Type.”

**Robert Washabau**, chair of the Veterinary Clinical Sciences department, presented a state-of-the-art address, “Gastrointestinal Standardization: From Endoscopy to Biopsy and Histopathology.”

**Tim Johnson awarded Brian Wilkins Memorial Prize**

Tim Johnson, assistant professor, Veterinary and Biomedical Sciences, was awarded the Brian Wilkins Memorial Prize for outstanding young scientists at the International Plasmid Biology Conference in Gdansk, Poland, Aug. 30-Sept. 5. Eligible scientists are at an early phase of their career and committed to studying mobile genetic elements, horizontal gene transfer, or properties linked to these topics.
The Minnesota Veterinary Medical Association honored CVM faculty and staff with the following awards in February:

**Veterinarian of the Year: Dr. Carl Osborne**

This award is given to well-rounded, outstanding members of the veterinary profession who have given much to the profession as well as to their community. Osborne is a longtime professor in the Veterinary Clinical Sciences department.

**Outstanding Faculty of the College of Veterinary Medicine: Dr. Pat Redig**

This award is given to a faculty member who provides outstanding service to Minnesota veterinarians, gives his or her time and talent to the veterinary profession, makes a difference to the profession, and is a dedicated contributor to organized veterinary medicine. Redig is a Veterinary Clinical Sciences professor and cofounder of The Raptor Center.

**Distinguished Service Award: Dr. Joni Scheftel**

This award is given to an MVMA member who has given special service to the profession of veterinary medicine, improving the profession as a result of that service. A state public health veterinarian, Scheftel is an adjunct member of the College’s Veterinary Population Medicine faculty.

**President’s Award: Lisa Berg**

Berg is a longtime staff member in the College’s Veterinary Medical Library.

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**Eight faculty members promoted**

Promotions for eight College faculty members were approved by the University of Minnesota Board of Regents in May:

**Greg Anderson**, Veterinary Clinical Sciences—promoted to associate clinical professor

**Yinduo Ji**, Veterinary and Biomedical Sciences—promoted to associate professor and granted indefinite tenure

**Roberto Novo**, Veterinary Clinical Sciences—promoted to associate clinical professor

**Elizabeth Pluhar**, Veterinary Clinical Sciences—promoted to associate professor and granted indefinite tenure

**Jane Quandt**, Veterinary Clinical Sciences—promoted to associate clinical professor

**Paul Rapnicki**, Veterinary Population Medicine—promoted to full clinical professor

**Srinand Sreevatsan**, Veterinary Population Medicine—granted indefinite tenure at the rank of associate professor

**Arno Wuenschmann**, Veterinary Population Medicine—promoted to associate professor

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**R.K. Anderson receives lifetime achievement award**

R.K. Anderson, professor emeritus, received the APDT Lifetime Achievement Award from the Association of Pet Dog Trainers (APDT) at the organization’s educational conference and trade show in Louisville, Kentucky, in October. A retired professor with the College of Veterinary Medicine and School of Public Health, Dr. Anderson is the director of the University of Minnesota Center to Study Human-Animal Relationships and the co-inventor of the Gentle Leader headcollar and Easy Walk harness for dogs.
FACULTY & STAFF NEWS

College well-represented at AVMA convention

The College was well-represented at the American Veterinary Medical Association (AVMA) convention in New Orleans in July. Trevor Ames, dean, and Sharon Staton, advancement director, hosted an alumni reception at Hilton New Orleans Riverside, and 12 faculty and staff made presentations during the conference. Peggy Root, associate professor and vice chair, Veterinary Clinical Sciences department, was appointed to the AVMA Council on Education, the accrediting body for the AVMA. Margaret Duxbury, assistant clinical professor, was elected to the board of regents of the American College of Veterinary Behaviorists at the group’s annual meeting, which was held in New Orleans in conjunction with the AVMA meeting. Jan Swanson, director of continuing education, attended the Association of Veterinary Advancement Professionals meeting, where she was re-elected to the executive board. Dean Trevor Ames attended the annual summer meeting of the Association of American Veterinary Medical Colleges.

Al Beitz named interim chair of Veterinary and Biomedical Sciences

Al Beitz was named interim chair of the Veterinary and Biomedical Sciences department in August. Beitz earned his Ph.D. at the University of Minnesota and conducted post-doctoral research at Harvard Medical School. His laboratory has several lines of ongoing research, including a project focused on identifying factors secreted by tumors that cause cancer pain in animals and humans.

Lights, camera, action!

Jody Lulich to be featured in commercials for United Negro College Fund

A production crew was at the College in September to shoot commercials for the United Negro College Fund (UNCF)—featuring the CVM’s own Jody Lulich, professor, Veterinary Clinical Sciences. The ad will be shown at the UNCF’s annual “An Evening of Stars” event, which will be televised January 24 and 25.

A graduate of Tuskegee University, a UNCF-supported university, Lulich was one of only two representatives selected from hundreds of alumni of UNCF-supported colleges and universities for their dedication and extraordinary accomplishments.
Veterinary student Olutokumbo “Toks” Adebusuyi never dreamed that his summer studies in Minnesota would lead him to become part of a food-safety detective team that would receive national acclaim for solving one of the biggest mysteries in years. And that was only a bonus experience.

A 2008 animal science graduate of Florida A&M University (FAMU), Adebusuyi was encouraged by FAMU faculty member Ray Mobley to apply to the University of Minnesota College of Veterinary Medicine’s Summer Scholars program, a 10-week program for veterinary students interested in exploring research.

“I did have to look Minnesota up on the map,” Adebusuyi says. “I didn’t realize it was on the border with Canada.” Even though closer to the Arctic Circle than he had anticipated, Adebusuyi says he has appreciated the opportunity to learn more about public health veterinary medicine. “It transformed my understanding of public health,” he says.

Adebusuyi’s main project was developing a database on the capabilities of veterinary diagnostic labs in the Upper Midwest to deal with an avian influenza outbreak. The information he gathered through Internet research, phone calls, and site visits will be part of a Web site being developed by the Center for Animal Health and Food Safety (CAHFS). Along with doing the actual research, Adebusuyi learned how to prepare a scientific presentation and shared his findings with the other summer scholars.

While working with the CAHFS, Adebusuyi received a learning bonus: the opportunity to work on emerging food safety issues after raw tomatoes were implicated in an early-summer salmonella outbreak that spread rapidly across the country. He was part of the food-safety detective team that scoured stacks of data to try to identify the source of contamination. The team made national news in July when it discovered that contaminated peppers likely played a key role in the outbreak.
Adebusuyi also participated in rotations with the senior veterinary class, which included several food inspections and a behind-the-scenes tour of the Minnesota Zoo, as well as visits to a meat processing plant and a live-bird market.

“It’s interesting to see how working with animals can relate to society and the economy,” he says. “It definitely opened my eyes.”

Adebusuyi says the summer-long experience helped him solidify his interest in public health veterinary medicine as a career. He’s planning to apply to collaborative programs offered by the College of Veterinary Medicine (CVM) and the School of Public Health, and hopes to eventually become a food inspector.

Now in its seventh year, the Summer Scholars program offers first- and second-year veterinary students a structured experience over the summer to learn about research opportunities in veterinary medicine. With partnership funding from corporations, this opportunity is available to CVM students, as well as veterinary students from outside the College. The strength of this program lies in the research expertise of the CVM faculty and the opportunities available for students in their laboratories. This is enhanced by collaborative endeavors with the other University of Minnesota colleges in the Academic Health Center (Medicine, Dentistry, Public Health, Pharmacy, and Nursing) as well as through close ties to the College of Food, Agricultural and Natural Resource Sciences.

Opportunities like Summer Scholars are developed with funding from companies like Pfizer Animal Health, creating a win-win-win situation for students like Adebusuyi, businesses, and the CVM, says Trevor Ames, dean.

“This is a great example of how public-private partnerships with a corporation like Pfizer can provide academic opportunities for individuals from underserved populations, and also promote diversity in our workforce,” Ames notes. “We are thankful for companies like Pfizer and delighted to be leading such a promising program.”

Meanwhile, the CVM is exploring the development of an early decision program with Adebusuyi’s alma mater, a historically black college, as a way to help diversify veterinary medicine. Based on the CVM’s highly successful VetFAST program, an early decision program would guarantee admission for qualifying undergraduates if they keep their grades up. It also would provide mentoring to encourage success.

“There’s been a lot of national discussion on the need for diversity in the profession, yet many schools are stumped on how to address the gap,” says Laura Molgaard, associate dean for academic affairs. “We believe that an early decision program is one creative way to address this.”

MARY HOFF

**Aric Frantz receives top honors from Morris Animal Foundation**

As part of last year’s Summer Scholars program, D.V.M./Ph.D. student Aric Frantz was supported by the Morris Animal Foundation (MAF), participated in MAF’s Veterinary Student Scholars Program, and presented a poster about his research at MAF’s annual meeting in June.

The poster competition was judged by members of MAF’s scientific advisory boards, and Frantz won the $5,000 Ballard Award for Companion Animals. His research examined the use of stem cell therapy to repair a dog’s heart after a heart attack. Frantz’s mentor for this project was Tim O’Brien, a professor in the Veterinary Population Medicine department.

“Participation in this research has significantly altered my career plans,” Frantz says. “I had several years of previous research experience but had not planned to pursue a graduate degree. This opportunity allowed me to combine newfound knowledge in veterinary medicine with a translational research project that had significant implications for the practice of medicine. It re-ignited my passion for research.”

**Ian Rubinoff receives student leadership award**

Ian Rubinoff, class of 2009, was one of 42 University of Minnesota students honored by President Robert Bruininks at the President’s Student Leadership and Service Awards Banquet in May. Rubinoff was recognized for his leadership to the Student Chapter of the American Veterinary Medical Association during the 2007-08 academic year. Students are nominated by faculty, staff, and peers, and recipients are selected by a University-wide committee.

**Steve Toussignant named vice president of VBMA**

Steve Toussignant, class of 2011, has been selected as the 2009 vice president of the Veterinary Business Management Association (VBMA). The VBMA is a student-driven organization dedicated to advancing the profession by increasing business knowledge, creating networking opportunities, and empowering students to achieve their personal and professional goals. The largest independent veterinary student organization in the world, the VBMA has 28 chapters at veterinary schools across the country, three international chapters, and more than 2,600 student members.
PHILANTHROPY

Support the College with a gift to the Tribute Fund

Celebrate, honor, or memorialize animal owners, veterinarians, family members, friends, associates, volunteers, or that special someone—on any occasion. By making a gift through the Tribute Fund, you can reach out to someone special during times of joy or sorrow and let them know they are not forgotten. A tribute gift can commemorate or acknowledge:

- Birthdays
- Graduations
- Weddings and anniversaries
- Promotions and special accomplishments
- Recoveries from an illness or accident

Each tribute gift is acknowledged by a distinctive card sent to the person or family in whose name your gift is made. (The card will not mention the amount of your gift.) As the contributor, you will receive a separate acknowledgement and a receipt for your records.

Your tribute gift will help companion animals by:

- Finding solutions for diseases and other causes of animal suffering
- Upgrading patient facilities and equipment used to diagnose and treat patients at the Veterinary Medical Center
- Assisting veterinary students in mastering their profession, ultimately advancing the health of companion animals well into the future

Other ongoing campaigns at the College include:

- Al and June Perlman Endowed Oncology Chair
- Companion Animal Fund
- Dr. Gary Duke Lecture Fund
- Dr. Linda Wolf Animal Emergency Fund
- Katherine B. Andersen Fund Matching Grant for The Raptor Center
- Minnesota Veterinary Historical Museum
- Nestle Purina Memories Garden
- Osborne-Hills Professorship in Nephrology/Urology
- Student scholarships and fellowships
- University of Minnesota Equine Center

For more information about making a tax-deductible donation to the Tribute Fund or other campaign, contact Sharon Staton, director of advancement, at 612-624-1247 or stato001@umn.edu. Checks may be mailed directly to Sharon Staton, College of Veterinary Medicine Advancement Office, 460 Veterinary Medical Center, 1365 Gortner Avenue, Saint Paul, MN 55108.

Credit card contributions can be made online 24 hours a day through the University of Minnesota Foundation at www.giving.umn.edu.

Barenscheer Arena dedicated

The Barenscheer Arena at the Leatherdale Equine Center was officially dedicated as part of the College’s alumni reunion on June 21, 2008. Stephanie Valberg, director of the Equine Center, John McKany, a representative of the Barenscheer Foundation, and Dean Trevor Ames, above, spoke about the value of having a riding arena of this quality for the Equine Center’s mission of advancing the health, well-being, and performance of the horse and its goal of having a facility where the horse community can gather to attend events promoting the care, handling, and riding of horses.
As a wildlife and fisheries major at the University of North Dakota, Erika Butler was fascinated by the diseases that affect animals in the wild. Now, as wildlife veterinarian with the Minnesota Department of Natural Resources (DNR), she’s immersed in them. Bovine tuberculosis, Newcastle disease, parasites, avian influenza—you name it, she deals with it.

And she couldn’t be happier. Being outdoors, working with wild animals, snowmobiling in winter, and air boating in summer… “Stuff people would normally pay to do in their free time, I get to do and get paid for it,” she says.

Butler first decided she wanted to be a veterinarian in about second grade. That interest was temporarily eclipsed by a focus on wildlife biology, fueled by walks in the woods with her dad. Then a professor who noticed her affinity for animal ailments suggested she combine the two.

Butler applied and was accepted to the College of Veterinary Medicine’s D.V.M. program. The program’s interdisciplinary track, she says, gave her the flexibility she needed to learn materials most relevant to wildlife medicine. Externships in Alaska and Georgia helped round out her experience. After graduating in 2006, she worked for North Dakota as a wildlife veterinarian before being offered the parallel position in Minnesota last spring.

Though wildlife veterinary medicine may not be for everyone, it’s perfect for Butler, who would much rather necropsy a decomposed moose than neuter a cat. She says she enjoys the mystery of figuring out why an animal died. “I have a really bad nose,” she adds. “I think that helps me a lot.”

Part of Butler’s work is at her desk, solving puzzles posed by the public, DNR staff, and staff from other agencies. What are the lumps under this deer’s skin? Where have all the squirrels gone? Can I eat meat from a grouse with worms? She could make an entire album out of the photos people have sent her—many of which are not ones you’d likely bring to the dinner table.

The rest—and the best—of her time, Butler spends in the field. Much of that, she says, involves “collecting usually dead things.” But she also gets to participate in activities like radio-collaring game and chasing down wild ducks to test them for disease. One big project she’s working on right now is trying to figure out why Minnesota’s moose are dying off. Another is helping to reduce the risk to humans of eating venison from deer killed with lead ammunition. She’s also dealing with outbreaks of virulent Newcastle disease and bovine tuberculosis, and will soon be starting work focused on rehabilitating lynx that get caught in bobcat traps.

Currently, Butler says, most states do not have a full-time wildlife veterinarian. With increasing concern about the role of wild animals in spreading diseases such as avian influenza and chronic wasting disease, she says that’s changing.

“There are definitely a lot of opportunities, and it’s only going to be increasing,” she says.
In memory

JoAnne Schmidt O’Brien, one of the first women to earn her D.V.M. from the University

JoAnne Schmidt O’Brien, 79, one of the first two women to receive her D.V.M. from the University of Minnesota, died of congestive heart failure at her home in Washington, D.C., on April 21, 2008.

“It was in the summer of 1947 that she and I were rejected from admission to the year-old College of Veterinary Medicine,” recalls Bee Wolf Hanlon, the other female graduate. “She and her employer were University alumni and went to work contacting other prominent alumni, the president of the U, the Board of Regents, and other influential people. The rejection was overturned, two chairs were added to the class of 48 male applicants, and thereafter the school remained open to women.”

After receiving her veterinary degree in 1952, O’Brien worked with small animals in the Chicago area. She then married a career Marine officer and lived in Hawaii, California, and Washington, D.C. She began practicing veterinary medicine at the W.P. Collins Memorial Hospital in Washington, D.C., in the mid-1960s. In 1969, she acquired the practice, now called Collins Hospital for Animals. She also served on the Board of Veterinary Medicine for the District of Columbia and the admissions committee for the Virginia-Maryland Regional College of Veterinary Medicine at Virginia Tech, where she was involved with the creation and funding of a laboratory for companion animal reproduction and endocrinology studies.

O’Brien retired in 1987, but continued her lifetime involvement with chow chows, showing her champion dogs across the country and serving as president of the Chow Chow Club and president and treasurer of the National Capital Kennel Club in Washington, D.C. In addition to traveling with her dogs to shows, she visited Kenya, Russia, China, and other countries.

Susan Ann Clarey, beloved house-call veterinarian

CVM alumna Susan Ann Clarey, D.V.M., died at her home in Minneapolis, Minnesota, on July 7, 2008. After earning her D.V.M. from the College in 1981, Clarey founded and owned her own business, Home Veterinary Services, through which she spent more than 25 years examining and treating pets in their own homes.

Walt Mackey, a founding father of the College

Walter J. Mackey, one of the College’s founding fathers and the curator of the Minnesota Veterinary Historical Museum, died on Oct. 19, 2008, at age 84. See story on page 12.

Continuing education opportunities abound

The College has coordinated a variety of veterinary continuing education opportunities in recent months, including the International Symposium on Rehabilitation and Physical Therapy in August, the Allen D. Leman Swine Conference in September, and the Equine Fall Conference, and Care and Management of Captive Raptors in October. The Mather Lecture Series, which began in October, continues through May, with these 7 p.m. lectures scheduled in 2009:

- **March 5:** Accurate Sample/Biopsy Collection Techniques to Maximize Results, presented by Drs. Brian Husbands, Jody Lulich, and Sheila Torres
- **April 2:** Oncology, presented by Dr. Antonella Borgatti Jeffreys
- **May 7:** Radiology Film Interpretation Session: Watch the Experts at Work, presented by Drs. Kari Anderson and Laura Ziegler

For more information about the Mather Lecture Series and other continuing education opportunities at the College, visit www.cvm.umn.edu/outreach.

Holly Neaton reappointed to Board of Animal Health

Governor Tim Pawlenty announced the reappointment of Dr. Holly Neaton, a College alumna, to the Board of Animal Health in February.

The Board of Animal Health consists of five members appointed by the governor. It oversees numerous voluntary and mandatory programs that focus on controlling and eradicating animal diseases in Minnesota. Neaton was reappointed as a veterinarian member to the board for a four-year term that expires in 2012. She has been the attending veterinarian for the Beckman Coulter Immunodiagnosics Animal Facility in Maple Plain, Minnesota, since 1997.
Alumni reunion honors class of 1958

The College hosted its annual alumni reunion at the Leatherdale Equine Center on June 21. Honoring the class of 1958, the event featured tours of The Raptor Center, Veterinary Medical Center, Pomeroy Student-Alumni Learning Center, Minnesota Veterinary Historical Museum, and Leatherdale Equine Center; the dedication of the Equine Center’s Barenscchein Arena; a dental marketing lecture by Gary Goldstein; speeches by Dean Trevor Ames, veterinary student Nina Kieves, members of the Alumni and Friends Society, and members of the class of 1958; class photos with a 1958 Impala; a barbecue; live music; and more.

Members of the Class of 1958, from left, are Oscar Hildebrandt, Jr., Burton Anderson, Darrel Joel, Maurice Hanify, Kern Schwartz, Ann Holt, Don Hastings, Leroy Olson, John Rafforth, Roderick Stenzel, and Clayton Torbert. Photo by Sue Kirchoff

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.
Mark your calendar—

College of Veterinary Medicine

Points of Pride Research Day

March 25, 2009

Animal Science/Veterinary Medicine Building and Pomeroy Student-Alumni Learning Center

University of Minnesota St. Paul Campus

The College of Veterinary Medicine invites all interested individuals to attend the annual Points of Pride Research Day event, which celebrates collegiate research programs. This event honors those who spend so much of their time performing research that improves the health of animals and humans. The event also recognizes the partners who make much of this research possible.

The day begins with a poster competition and culminates with seminars by the recipients of the Distinguished Research Alumnus Award and Pfizer Animal Health Award for Research Excellence. A reception follows, during which attendees can view posters describing current research initiatives and interact with students, staff, and faculty.

Everyone is welcome to attend.