

UNIVERSITY OF MINNESOTA
Winter 2005

Profiles

Veterinary Medicine

Veterinarians impact the lives of
Minnesotans every day

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**College of
Veterinary Medicine**
UNIVERSITY OF MINNESOTA

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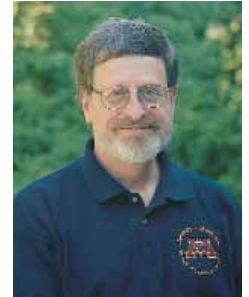
Winter 2005

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From the Dean

As you are probably aware, the University of Minnesota is entering a critical period in its history. We are working to shift our thinking, planning, and daily actions in response to political, economic, and demographic challenges.



The University is committed to its land grant mission – meeting and anticipating the needs of Minnesota by generating new knowledge, sharing this knowledge, and providing services to its citizens. In return, the state historically has partnered with the University by providing substantial resources. Today, the state is an uncertain partner with limited resources to invest in higher education. In the past two years, \$185 million has been cut from the University's budget. Adjusted for inflation, state support for the University is less than it was in 1978. At the same time, demands and costs are increasing.

To deal with the challenges and to ensure that the University remains one of the great public research universities, the University and its colleges have embarked on a strategic planning process. Each college has been asked to define its core programs based on mission and centrality; quality, productivity, and impact; uniqueness and comparative advantage; demand and resources; and alignment, efficiency, and effectiveness. Ultimately, the Regents will determine programs to be improved, combined, expanded, reduced, or eliminated. There is little doubt that we will see significant change.

The College of Veterinary Medicine has many strategic advantages, but faces many complex problems. Our food animal programs – especially dairy and swine – are strong, but long-term funding remains a question as state resources decline. Student interest in food animal veterinary medicine has been waning for several years. Tuition and student debt are rising much faster than starting salaries. The Veterinary Medical Center faces increasing competition and last year lost more than \$600,000. The Raptor Center is having difficulty raising operating funds and the Veterinary Diagnostic Laboratory has become dependent on revenue from the swine industry.

At this critical time, we have begun a College-wide strategic planning process. We must evaluate our programs, our funding strategies, and operations to ensure that we are well-positioned for future success. The College's Strategic Planning Committee began meeting monthly this past fall and is in the process of drafting a new strategic plan.

I am confident that this College will continue on the course to be one of the nation's premier veterinary colleges with strength in education, research, and outreach. We have an outstanding faculty and staff who are deeply committed to serve students and the people of Minnesota. It is their talent and dedication that will carry us through these difficult times.

Sincerely,

A handwritten signature in black ink that reads "Jeffrey S. Klausner". The signature is written in a cursive style.

Jeffrey S. Klausner, D.V.M.
Dean, College of Veterinary Medicine

Healthy Foods, Healthy Lives

Healthy Foods, Healthy Lives is one of President Robert H. Bruininks' eight initiatives to sustain and grow the University as a top public research institution. Over the next 10 years, the Healthy Foods, Healthy Lives initiative will address critical health issues with four goals:

- n To utilize and advance knowledge about the integration of agriculture, food science, nutrition, and medicine to promote healthy lives
- n To emphasize prevention of diet-related chronic diseases and obesity through diet, exercise, and human behavior
- n To enhance food safety at all stages, from farm to table
- n To inform public policy

The University of Minnesota is a leader in food and health promotion and is one of only two U.S. universities to have six key disciplines on one campus: agriculture, exercise science, human nutrition, medicine, public health, and veterinary medicine.

The College of Veterinary Medicine will significantly contribute to this initiative, especially in the area of food safety. Faculty experts will also address chronic disease, specifically obesity in pets and humans, and continue to identify causes and treatments of human disease using animal models of spontaneously occurring disease.

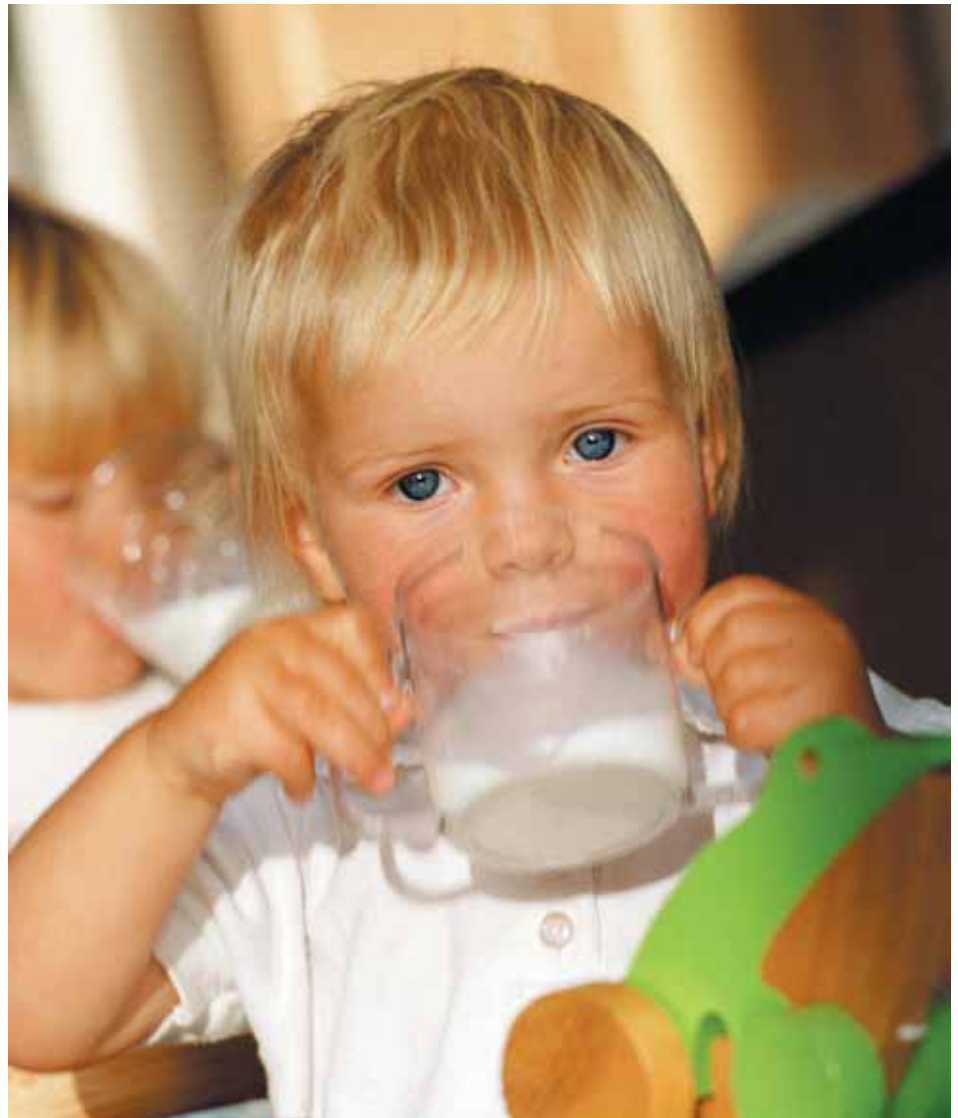
“Faculty at the College have discovered treatments for urinary stones, diabetes, and other animal diseases,” says Dean Jeffrey Klausner. “This initiative is an

important opportunity for faculty to continue their research and advance human and animal health.”

A recent planning conference brought together University and community partners to launch the President’s initiative on Healthy Foods, Healthy Lives. The participants developed an action

plan to advance research in food production and processing, consumer choice, public policy, and public health.

A full report from the conference will be released soon and available online at <http://www.healthyfoodshealthylikes.u.umn.edu/about.htm>.



The College of Veterinary Medicine will contribute to the Healthy Foods, Healthy Lives initiative in the area of food safety.

U of M is one of three Homeland Security Centers of Excellence

The University of Minnesota has been named one of three **Homeland Security Centers of Excellence** and has received a three-year \$15 million grant from the U.S. Department of Homeland Security to help develop ways to protect the nation's food supply from deliberate contamination or terrorist attack.

The Center of Excellence, called the National Center for Food Protection

and Defense, is led by Frank Busta, professor emeritus of food science and nutrition. The center brings together the resource of the private sector, and the academic community.

“The center gives the College of Veterinary Medicine the opportunity to work with biosecurity issues and the entire pre-farm-to-table food process,” says Shaun Kennedy, who was appointed associate director for the National

Center for Food Protection and Defense. He will manage the grant as he continues his work as associate program director for the Center for Animal Health and Food Safety. “The Homeland Security Center will focus researchers on important food safety issues effecting millions of people.”

West Nile virus claims five bald eagles



A bald eagle patient at The Raptor Center.

Just as admissions of raptors with **West Nile virus** seemed to be slowing down, clinicians at The Raptor Center were faced with a new concern: Suddenly, bald eagles were developing the disease.

West Nile virus is carried in birds and spread by mosquitoes. It entered the United States in 1999, quickly spread to all lower 48 states, and was found in raptors in Minnesota in 2002. That summer, The Raptor Center admitted 71 raptors with West Nile virus, none of which were bald eagles. In 2003, the center saw approximately half that number of cases, one of which was a bald eagle. Great horned owls, red-tailed hawks, and Cooper's hawks were hardest hit, and reports of West Nile virus in bald eagles were rare – to the point where bald eagles were regarded as relatively resistant.

But in August and September 2004, The Raptor Center admitted five bald eagles that were exhibiting neurological signs such as head tremors, blindness, and seizures – classic symptoms of West Nile virus. Diagnostic tests performed by the University of Minnesota Veterinary Diagnostic Laboratory and

the Minnesota Department of Health confirmed West Nile virus.

“We may have to change our view of bald eagles and West Nile virus,” says Pat Redig, director of The Raptor Center. “Each year, we’ve learned something new about the virus. We won’t know for some time the extent to which the disease may be affecting bald eagles, but it is definitely something to be concerned about.”

Minnesota and Wisconsin are home to more than 1,500 pairs of bald eagles and an unknown number of young non-nesting birds. The bald eagle is still listed as threatened under the Endangered Species Act.

by SUE KIRCHOFF

Students gain global perspective

Students benefit from international learning experiences

Laura Molgaard, associate dean for academic and student affairs, feels a mixture of envy and admiration when she hears about students who incorporate international travel into their veterinary education. She is particularly impressed with the initiative it takes for students to plan and participate in international experiences. While international travel grants of \$500 or \$1,000 are sometimes available from the College's Alumni and Friends Society, the students almost always pay for the trips personally, sometimes using student loans.

"We don't have a standardized program, but it's obviously a very rich educational experience," Molgaard says. "Students learn how veterinary medicine is practiced in other parts of the world and work directly with a variety of public health problems. Much like the college's expansion into the public health arena, international learning experiences are a reflection of an increasingly global perspective at the college."

Molgaard is working on more formal ways to support international learning experiences for students and faculty, including organized trips. One possibility: a faculty-led trip to China by Hwa Choi, the Veterinary Medical Center's integrative medicine specialist, to explore traditional Chinese medicine.



Catherine (Cat) Angle takes a river water sample in Chile.

Catherine Angle
D.V.M./M.P.H. student
Class of 2006
Chile



When Catherine (Cat) Angle heard that assistant professor Randy Singer was studying *E. coli* and salmonella in the waterways of Chile, she approached him with some ideas about how she could assist with his research for her master's degree project.

Angle ended up spending two months in Chile as a participant in the College's 2004 Summer Scholars Program, through which veterinary students are paid to work on faculty research projects. Staying in a cabana, she conducted fieldwork in a small farming town, collecting river-water, well-water, and cow fecal samples. She helped write a survey, translate it into Spanish, and conduct the survey with

12 farm managers. She also collected data on antibiotic use and helped with preliminary lab analysis.

On Nov. 15, Angle presented her Summer Scholars research, "Characterization of Antibiotic Resistance in *E. coli* from River Systems in Rural Chile," at the Conference for Research Workers in Animal Diseases in Chicago.

"Going to Chile was an excellent experience," Angle says. "I hope that the College takes steps to support the growing interest of the student body in international medicine issues. Having the opportunity to study abroad was good for me as an individual and highlighted ways that I can better prepare myself for my future career."

Luther Groth
D.V.M./M.P.H. student
Class of 2005
Bolivia



When a veterinary school in Bolivia invited assistant professor Jeff Bender to visit its country and make presentations about public health, **Luther Groth**, who is advised by Bender, was the ideal student to take along. Groth had always been interested in international veterinary medicine, infectious disease, and the role of veterinarians in public health.

During 10 days in Bolivia, the pair accompanied public health veterinarians, professors, and students as they visited communities suffering from public

health-related problems such as brucellosis, an infectious disease that affects sheep, goats, cattle, deer, elk, pigs, and dogs, as well as humans, food safety in public markets, and slaughter and carcass-management issues. They vaccinated dogs for rabies, treated cattle for parasites, reviewed animal management practices, and visited a high school where public health issues were discussed. Their accommodations ranged from a Santa Cruz hotel to tents in rural communities, where livestock, poultry, and dogs wandered among the buildings, houses, huts, and tents in the



Luther Groth helped treat a cow for parasites in Bolivia.

grasslands and jungle landscape.

Groth came home with a new perspective.

“The state of Bolivia and the battles that Bolivian veterinarians and public health personnel are fighting made me appreciate the immense infrastructure that we have in the United States and the support we receive as medical students and practitioners,” he says. “In Bolivia, the scientific knowledge to deal with medical issues was there, but the tools and money needed to implement that knowledge and educate the public were very hard to come by. There was

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Allison Newman
D.V.M./M.P.H. student
Class of 2006
South Africa

Allison Newman learned about the Vets-in-the-Wild program in an e-mail from Larry Bjorklund, the college’s director of student affairs and admissions, in December 2003. Eight months later, she was in the **African bush**, tracking and capturing wildlife as part of a 22-day, three-credit course at the University of Pretoria, South Africa.

They were 22 days she will never forget – alive with memories of the sounds of lions roaring, hyenas laughing, and baboons screaming and the sights of lions mating, a giraffe running full speed alongside the motorcycle on which she was riding, and a leopard stalking, killing, and eating a baboon. She traveled to three different game reserves to

participate in training and assist in the capture of game.

Newman has already planned her next trip to Africa: a 70-day internship with South African wildlife veterinarian Cobus Raath. This program will take her to back to South Africa, as well as to Mozambique, Zimbabwe, and Botswana.

“I plan to use my experience in Africa to find better strategies to improve the health and production of animals, as well as to reduce the incidence of endemic and zoonotic diseases,” she says. “Whether or not I decide to work full-time in Africa when I graduate, the experience of going there and working with those animals in their natural habi-



Allison Newman and members of a wildlife capture team hold an impala being prepared for relocation to another wildlife reserve. To minimize stress, the animal was blindfolded and rubber tubes were placed on his horns to prevent injury to his handlers and the other animals.

tat will always be a part of what I do and who I am.”

n SUE KIRCHOFF

Veterinary students make house calls for elderly pet owners

Block Nurse Program

What do the elderly do when they can't take their dogs to the vet? Those who are residents of St. Paul's North End and South Como neighborhoods are fortunate: They can call on veterinary students to make house calls through the **Block Nurse Program**.



Veterinary students Marie Louderback and Carl Larson (class of 2007) visit Marine McTeague and her dog Phoebe. Phoebe recently died from diabetes complications and other causes.

The Block Nurse Program is a senior home care agency made up of nurses, home health aides, and volunteers. The program's mission is to keep seniors in their homes for as long as possible. Currently, there are 17 neighborhood block nurse programs in the metro area, providing services to and helping 529 seniors live safe and happy at home.

"Last spring I attended an undergraduate health career fair on campus and I was looking for ways to get students out in the field, working with pets," says Rebecca McComas, assistant clinical professor. "The Block Nurse Program was a great program to collaborate with, get our students involved, and be of service to seniors. This is our students' first experience working with people and their pets."

The Block Nurse Program experience was added to the professional skills course

curriculum required for second-year students. Each fall, veterinary students pair up and visit a senior's home. They gather a medical history and conduct an exam of the pet. They leave a health report card with the senior and make a referral to a veterinarian, if necessary.

"This is a great program; the seniors are excited and honored to have veterinary students in their homes," says Chris Langer, program director and volunteer coordinator for the North End-South Como Block Nurse Program. "They value their pets and only want the best for them."

Marine McTeague was cared for by the members of the North End-South Como Block Nurse Program in November. Veterinary students **Marie Louderback** and **Carl Larson** visited her and her dog, **Pheobe**. Pheobe had diabetes and was severely ill when the students met her. They reassured McTeague that she was doing a great job caring for Pheobe, but that her condition was worsening. Five days after their visit, Pheobe passed away in McTeague's loving arms. Because of the students' reassuring words, McTeague knew she had done all she could do and that Pheobe had lived a good life.

"I will never forget when Carl was petting Pheobe and told me she was a nice dog. Having the vet students at my house meant so much to me," says McTeague.

For more information about the Block Nurse Program, contact The Elderberry Institute at 651-649-0315 or 1-800-320-1707 or online at www.elderberry.org.

by **MARIAH CARROLL**

Visiting Washington, D.C.



SCAVMA president Dan Kovich (second from left) with fellow SCAVMA members in Washington, D.C.

Dan Kovich, president of the Student Chapter of the American Veterinary Medical Association (SCAVMA), accompanied Dean Jeffrey Klausner and members of the College leadership team to Washington, D.C., in October to meet with congressional members and individuals from the U.S. Department of Agriculture. He and other students had visited Washington, D.C. earlier in the summer.

"Many topics related to veterinary education were discussed – including the Veterinary Medical Services Act, which reimburses tuition for veterinarians who work in underserved areas," Kovich says. "Currently, this act is not funded, so I'm encouraging students to help lobby for funding."



Randy Singer, assistant professor, Veterinary and Biomedical Sciences

In November, **Dr. Randy Singer** presented “Potential Risks and Benefits of Tylosin Use in Poultry” at the Interscience Conference on Antimicrobial Agents and Chemotherapy in Washington, D.C., a gathering of infectious disease professionals from around the world. His team’s research sparked the interest of a variety of scientific and agricultural Web sites and news outlets, from the Wisconsin Ag Connection and FoodNavigator.com to CBS MarketWatch, a top online financial Web site.

Singer received his D.V.M. in 1995 and his Ph.D. in 1999, both from the University of California-Davis. In 2000, he received a Presidential Early Career Award for Scientists and Engineers, the highest honor bestowed by the U.S. government on outstanding scientists and engineers beginning their independent careers.

Q: *Your presentation generated a lot of interest in the agriculture and food production industries. What do you think sparked their attention?*

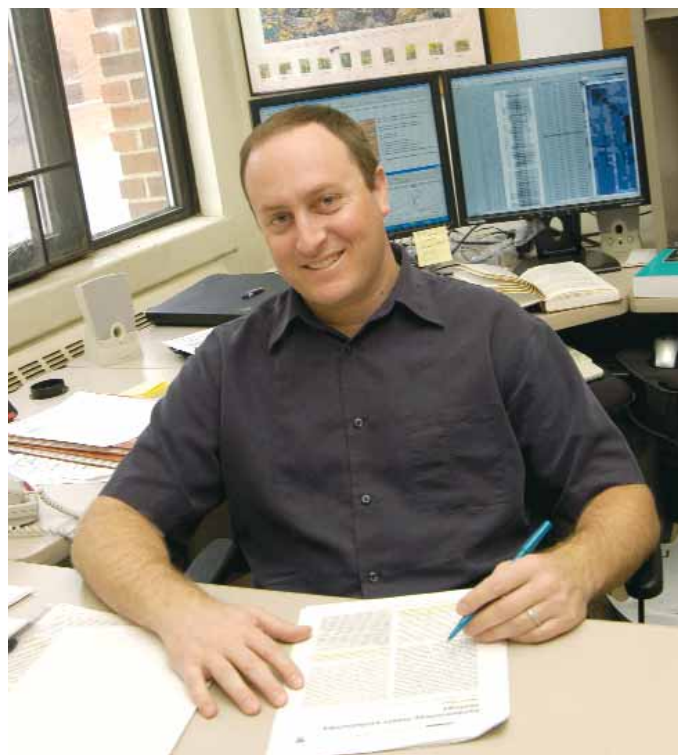
A: Our study revealed something new about antibiotic use in animals – that there are potential benefits to human health that should be weighed against any potential risks. Up until now, we haven’t considered human health benefits – only animal health benefits and economic benefits to the producer.

Q: *If you were asked to sum up your findings in 20 words or less, what would they be?*

A: The potential benefits to human health associated with the use of antibiotics in animal agriculture can outweigh the potential risks.

Q: *How did you reach that conclusion?*

A: We developed a mathematical model and conducted a risk-benefit analysis to evaluate the potential human health risks and benefits of the use of macrolide antibiotics in chickens. We compared the potential risks associated



Dr. Randy Singer

with increased levels of antibiotic-resistant bacteria in meat to the potential benefits associated with decreased risk of food-borne illness. I led a team of researchers that also included L. Anthony Cox at Cox Associates in Denver, Colorado; Jim Dickson and Scott Hurd at Iowa State University; Ian Phillips at the University of London; and Gay Miller at the University of Illinois.

Q: *What did your model show?*

A: Our model showed that ill animals can lead to higher bacterial loads on meat. These higher bacterial levels can lead to more human illness. If macrolides were removed from use in chickens, rates of animal illness could potentially increase, resulting in a potential increase in the number of human cases of campylobacteriosis caused by eating chicken.

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VDL key protector of human and animal health

Networks encompass human health, animal health, and food safety

No one likes to dwell on what would happen if the United States were hit with a terrorist attack on our food supply, a devastating animal illness like foot-and-mouth disease, or a human health emergency. But who wouldn't feel more secure knowing that the University of Minnesota Veterinary Diagnostic Laboratory (VDL) is a key protector of human and animal health? Its membership in a trio of national networks encompassing human health, food safety, and animal health enables the lab to stay ahead of the curve, says laboratory director Jim Collins. The "big three" networks are –

n The Centers for Disease Control's Laboratory Response Network (LRN), an extensive network of local, state, and federal public health, food testing, veterinary diagnostic, and environmental testing laboratories that provide the laboratory infrastructure and capacity to respond to biological and chemical terrorism and other public health emergencies. To become a member of the LRN, a laboratory must demonstrate certain capabilities and capacities, meet established performance standards, and prove its capability, capacity, and accuracy. The VDL is the **only** veterinary laboratory in the nation that's a biosafety-level-three member of the LRN, which means that it's equipped to work with infectious agents that may cause serious or potentially lethal disease as a result of inhalation.

n The Food Emergency Response Network (FERN), a network of federal laboratories and state public health, agriculture, and veterinary diagnostic laboratories that are committed to analyzing food samples in the event of a biological, chemical, or radiological terrorist attack in the United States.

n The National Animal Health Laboratory Network (NAHLN), a network of federal and state resources intended to enable a rapid response to animal health emergencies, including foot-and-mouth disease and other foreign animal diseases. Its primary objective is to establish a functional national network of existing diagnostic laboratories to rapidly and accurately detect and report animal diseases of national interest, particularly pathogens that have the potential to be intentionally introduced through bio-terrorism.

"By being a member of all three organizations, we have access to procedures and protocols that other diagnostic laboratories don't," Collins says. "We have connections to a network of laboratories nationwide that can alert us if, for example, we need to be on the lookout for a particular infectious disease in Minnesota. And the networks give us access to surge capacity if we were ever overwhelmed by more tests than we could handle."

n SUE KIRCHOFF

Infectious disease program expands

Marguerite Pappaioanou, who recently retired from the Centers for Disease Control and Prevention, is joining the University of Minnesota faculty as a professor in the School of Public Health and College of Veterinary Medicine. Pappaioanou will be heading the infectious disease program and working on research and surveillance with the Veterinary Diagnostic Laboratory. She will also be a faculty member of the Center for Animal Health and Food Safety, where she will work on surveillance and risk communication.



Dr. Marguerite Pappaioanou

Pappaioanou was formerly the associate director for science and policy at the Centers for Disease Control and Prevention's Office of Global Health. Her areas of interest are to bring the public health and animal health sectors together and to study the impact of increasing wildlife and human interaction on emerging infectious diseases.

Noroviruses: Did You Know?

- n People get norovirus infection by ingesting food or water that has been contaminated with feces from an infected person. In the United States, outbreaks are often linked to eating raw shellfish, especially oysters and clams. Shellfish become contaminated via feces from sick handlers or from raw sewage dumped overboard by recreational and commercial boaters. Contaminated water, ice, produce, and eggs are other sources of infection.
- n Symptoms of norovirus illness usually begin about 24 to 48 hours after ingestion of the virus, but they can appear as early as 12 hours after exposure.
- n Noroviruses are very contagious and can spread easily and rapidly from person to person. People infected with norovirus are contagious from the moment they begin feeling ill to at least three days after recovery.
- n No antiviral medication exists to fight norovirus, nor is there a vaccine to prevent infection.
- n You can prevent norovirus infections by washing your hands frequently – especially after toilet visits and changing diapers and before eating or preparing food – and carefully washing fruits and vegetables before eating them. People who are infected with norovirus should not prepare food while they have symptoms and for three days after they recover. After an episode of illness, it is important to clean contaminated surfaces, including clothing and linen.

Battle against norovirus



Sager Goyal, professor—weapons-tester in the battle against norovirus

Sager Goyal, a professor in the College's Veterinary Population Medicine Department, is looking for a killer. An effective killer of viruses, that is – specifically **noroviruses**, a group of viruses that cause food poisoning, or gastroenteritis, in people. The term “norovirus” was recently approved as the official name for this group of viruses, which have also been known as Norwalk-like viruses.

In his research, Goyal uses feline calicivirus (FCV) as a surrogate for norovirus because it belongs to the same virus family as norovirus. His research has found that many commonly used disinfectants

were inadequate in killing appreciable amounts of FCV on food contact surfaces – not good news for those trying to avoid the highly contagious virus.

His research continues, but in the meantime, what does Goyal recommend for cleaning surfaces contaminated with norovirus?

“We found Lysol IC brand disinfectant and Microbac II, an Ecolab product, to be effective,” he says. “Bleach can also be effective if it is allowed to work for some time.”

n **SUE KIRCHOFF**

Companion Animal Love, Loss and Memories Group offers grief support

The **Carlones** have always had dogs in their home, but none was as special as **Princess**, their Great Pyrenees.

In the mid-1990s, Jacquie and Tony Carlone's daughter, Alex, wanted a Great Pyrenees, a large dog with a long, thick, white coat. But Alex was away at college and could not care for a dog. Jacquie and Tony agreed to care for a new Great Pyrenees puppy at their home in Wisconsin.

The Carlones picked up the puppy on a snowy December day in 1995.

"The puppy did not want to leave the breeder," Alex remembers. "All of us, even the dog, cried as we drove away. The ride home got better when we named her Princess. We all bonded during that car ride home."

When Princess was two years old, she experienced her first seizure. Their local vet treated Princess and she returned home. Daisy, their poodle, was also sick and referred to the **Veterinary Medical Center** for specialized treatment. Daisy was treated, but passed away in June 2003.

"If it hadn't been for Daisy being sick, I wouldn't have known about the Veterinary Medical Center," Jacquie says.

Jacquie made an appointment for Princess with neurologist **Alistair McVey**. The doctor, staff, and the Carlones believed they were making progress, but Princess was still experi-



The Carlones made Princess very comfortable while she was sick.

encing seizures. As her condition worsened, McVey instructed the Carlones to set up a makeshift hospital for Princess in their house.

"Dr. McVey knew that Princess and our family should not be separated. We were able to be with her all the time at home," says Jacquie. "At the Veterinary Medical Center, there are so many people who love and care for the animals. It's such a great facility."

In September 2003, the Carlones euthanized Princess. Jacquie joined the first **Companion Animal Love, Loss, and Memories (CALLM)** group offered at the Veterinary Medical Center, which was led by social worker **Jeannine**

Moga. Jacquie and other grieving companion animal owners met and discussed this difficult time in their lives and offered support to each other.

"In this group you feel safe and that you have a voice," says Jacquie. "The support group was a godsend, and I tell everyone about it."

To learn more about the Companion Animal Love, Loss, and Memories group or other client support services, contact 612-624-9372 or go to www.cvm.umn.edu/vmc/aboutvmc/clientsupport.html

MARIAH CARROLL



Faculty Kudos

FDA honors Jim Collins

Jim Collins, director of the Veterinary Diagnostic Laboratory, received the Food and Drug Administration's Leveraging/Collaboration Award as a member of the Monkeypox Interagency Work Group. Collins was chosen for his superior performance and innovation in implementing a collaborative multi-federal, state, and local agency approach that minimized the spread of monkeypox.

Certified pathologists

Drs. Nicole Kirchhof and **Ilze Matisse** of the Veterinary Diagnostic Laboratory successfully completed all parts of the certifying examination for pathologists given by the American College of Veterinary Pathologists.

Dr. Jeremy Schefers goes the extra distance

When **Ryan Jancik** brought his cat, Bon, to the Veterinary Diagnostic Laboratory for a postmortem exam, **Dr. Jeremy Schefers** took the time to explain the results and answer questions about Bon's health. Schefers even sent Jancik a copy of a medical paper that explained that Jancik's other cat might be susceptible to the same genetic problem that may have caused Bon's enlarged heart. Jancik and his entire family were impressed with how much time Schefers spent answering questions—some wishing that they had known about Schefers and the Veterinary Diagnostic Lab when their own pets had died. Schefers went above and beyond his job duties to make Jancik feel comfortable about what happened to Bon. Kudos to Dr. Schefers!

Dean joins delegation to China

Tradition and innovation mesh at China Agricultural University's Veterinary Medicine College in Beijing. Pekinese, Chihuahuas, and other dogs from China's capitol and its suburbs benefit from acupuncture and other traditional Chinese medicine treatment methods used by veterinarians at the college clinic. On the same campus, researchers ensure the safety of China's food supply by scanning for chemical residues, transmissible spongiform encephalopathies, and infectious diseases at the college's up-to-date national laboratory.



Dean Jeffrey Klausner, third from left, received a tour of the Veterinary Medicine College at China Agricultural University in Beijing, China.

Jeffrey Klausner, dean of the College of Veterinary Medicine, took it all in last summer, when he visited the university's Veterinary Medicine College, which will mark its 100th anniversary in October 2005. During the visit, Klausner and **Ming Wang**, dean of the Veterinary Medicine College, signed a memorandum of understanding promoting faculty and student exchanges.



Dean Wang and Dean Klausner.

"As the world continues to get smaller, it is imperative that veterinarians have a global perspective," Klausner noted. "Disease and animal health issues don't stop at national borders."

Among the highlights of the trip was the visit to the college's clinic, which has seen its patient base change in recent years from large animals to small animals, primarily dogs, as people in Beijing have begun owning pets. The Veterinary Medicine College also runs a clinic with a private group in downtown Beijing.

Klausner was a member of a delegation to China led by **Frank B. Cerra**, senior vice president for health sciences. The delegation also included the deans of the University of Minnesota Medical School and School of Public Health, as well as **Hong Yang**, director of the China Center.

Randy Singer awarded McKnight Land Grant Professorship

Randy Singer, an assistant professor in the Veterinary and Biomedical Sciences Department, has been awarded a McKnight Land-Grant Professorship.

The **McKnight Land-Grant Professorship** is a two-year appointment that includes a \$30,000 research grant in each of two years, summer support, and a research leave in the second year. McKnight Land-Grant professors are chosen for their potential for important contribution to their field; the degree to which their past achievements and current ideas demonstrate originality, imagination, and innovation; the potential for attracting outstanding students; and the significance of the research and the clarity with which it is conveyed to the non-specialist. The program's goal is to advance the careers of the University of Minnesota's most promising junior faculty during a crucial period in their professional lives.

Singer's research interest is infectious disease epidemiology.

"I apply an ecological approach to a disease system, in which host, environment, agent, and other factors that influence pathogen transmission and persistence are evaluated," he explained. "Within this framework, I have investigated food-borne pathogens, vector-borne pathogens, and the spread of antimicrobial resistance genes among bacteria. Ultimately, my goal is to combine epidemiological, ecological, microbiological, and hydrological models to predict the likelihood and extent of ecosystem-human-animal transmission of specific bacteria."

"We're very proud that Dr. Singer has been selected as a recipient of this prestigious award," said Richard E. Isaacson, professor and chair of the College's Department of Veterinary and Biomedical Sciences. "The College is now home to two faculty members with McKnight awards." In 2004, Moses Kariuki Njenga, an associate professor in the Veterinary and Biomedical Sciences Department, received a McKnight Presidential Fellows Award.

The University of Minnesota Graduate School established the McKnight Land-Grant Professorship in 1987. It was named for a significant endowment gift from the McKnight Foundation that was then combined with a share of the Permanent University Fund (PUF). This fund, released to the University by the legislature in 1985, came from the original land grant to the University. The name of the professorship emphasizes this public-private partnership.

n SUE KIRCHOFF

Vets and students care for sheep injured in fire

Within two hours of learning about the fire at Shepherd's Way Farms in Nerstrand, Minn., on Jan. 24, a team of veterinarians and students was at the farm helping to treat hundreds of critically injured sheep.



Help is on the way

College veterinarians and students prepare to head for Shepherd's Way Farm to care for sheep injured in a Jan. 24 fire. Front row, from left, are Dr. Susan McClanahan and students Rachel Hedlin and Shayna Gotvaslee. Back row, from left, are student Andrea DiBartolo, Dr. Jen Johnson, and students Joel Vasgaard, and Kathy Maudal. Not present but also at the farm were Dr. Luann Hunt, Dr. Jamie Zarda, and student Robyn Ball.

At mid-day, the group was joined by an additional two veterinarians and three students from the College. The team was back at the farm the following day, applying antibiotic ointments to the eyes and skin of the ewes and using anti-inflammatory drugs to treat the lung damage caused by smoke inhalation.

"Veterinary medicine is a helping profession," said **Susan McClanahan, D.V.M.**, an assistant clinical professor who specializes in small ruminant and beef herd health. "Dealing with disasters like this is part of our job. We want to help, and it's also valuable training for our students."

n SUE KIRCHOFF

Symposium honors Robert K. Anderson

A symposium honoring the legacy of **Dr. Robert K. Anderson** was held at the Conference of Research Workers in Animal Diseases in Chicago.

The professor emeritus and director of the Center to Study Human Animal Relationships and Environments gave the keynote address,

“Epidemiology as a Synergist for Science, Education, and Service.” He was presented the Calvin W. Schwabe Award for Lifetime Achievement in Veterinary Epidemiology and Preventive Medicine.

Anderson co-invented the Gentle Leader headcollar for dogs, a humane behavior modification training aid that was in the Smithsonian Institute as one of the 100 most innovative inventions. He received his D.V.M. from Colorado State University and worked in public health before joining the University of Minnesota, where he was a professor in both the College of Veterinary Medicine and the School of Public Health.

In 1975 Anderson co-authored a sentinel research report commissioned by the National Institutes of Health, “The Human Health Responsibilities of Veterinarians.” This paper was the first official recognition of the triangular interrelationships among people, veterinarians, and their pets. He co-founded the Delta Society, the first professional, interdisciplinary organization to focus on the human-animal bond. Anderson operates an animal behavior consulting and referral practice and works with veterinarians, trainers, dog owners, and humane societies. He is a lecturer and teacher for state, national, and international meetings, author or co-author of more than 100 articles in scientific and professional publications, and co-author of several books.



The Gentle Leader headcollar, co-invented by Robert K. Anderson.

In memory: Don Low

Don Low, head of the Veterinary Medical Center (then called the Veterinary Teaching Hospital) from 1965 to 1970, died from complications of Lewy body disease (an illness encompassing Alzheimer’s disease and Parkinson’s disease) on Nov. 7.

A pioneer in canine urology, Low is often referred to as the **father of veterinary urology**. He served as director of three university veterinary medical teaching hospitals and was a **founder of the American College of Veterinary Internal Medicine**.



Dr. Don Low

Low completed his veterinary education at Kansas State University in 1947, was a captain in the U.S. Veterinary Corps at Walter Reed Army Medical Center during 1953-1955, and spent three years in a mixed-animal practice in Iowa before entering academic medicine at the University of Minnesota. A clinician, then director of veterinary clinics, and then head of the department of veterinary hospitals, Low developed a special interest in renal diseases and physiology during his 20-year tenure at the College. His studies in nephrology produced many of the fundamental concepts that veterinarians still use today.

“Don emerged as one of the premier veterinary clinicians in the late 1950s and early 1960s,” says Professor Carl Osborne, Low’s longtime colleague and friend. “At that time, very few veterinarians had in-depth knowledge about veterinary internal medicine. He was part of a nucleus of faculty at the University of Minnesota who began a tradition of post-D.V.M. graduate education in clinical medicine that has become standard today.”

Low’s areas of interest encompassed disorders of the kidney, liver, and pancreas. He became a nationally and internationally recognized speaker at various conventions throughout the 1960s, 1970s, and 1980s, training countless veterinarians who in turn applied contemporary knowledge to improving the primary care they provided to companion animals.

“Those of us who had the privilege of working with Don recognize that his major contributions to our individual lives lie far beyond being one of the veterinary profession’s most dynamic leaders,” says Osborne. “By example, he taught us that not what we get, but what we give measures the worth of the life we live.”

Student news

The U.S. Army awarded F. Edward Hebert Armed Forces Health Professions Scholarships to second-year veterinary public health students **Meg (Margaret) Carl** and **Diane Murphy**. In return for a commitment to active duty, each will receive a full scholarship, including tuition, books, and incidentals, plus a stipend for the remainder of the time they're enrolled in the DVM/MPH program.

Cat Angle, a veterinary public health student, presented her Summer Scholars research at the Conference for Research Workers in Animal Diseases (CRWAD) in Chicago on Nov.15. The title of her presentation was "Characterization of Antibiotic Resistance in E. coli from River Systems in Rural Chile."

Third-year students **Lucas Clow** and **James Gerdes** were awarded \$1,750 Amstutz scholarships at the 2004 American Association of Bovine Practitioners meeting in Fort Worth, Texas, in September. Amstutz scholarships are awarded based on interest in bovine medicine, scholastic achievement in veterinary school, and need.

A 2005 Western Veterinary Conference Student Scholarship was awarded to DVM student **Kara Nelsen**. Nelsen and 30 other scholarship winners from around the country attended the 77th Western Veterinary Conference at the Mandalay Bay Resort in Las Vegas on Feb. 20-24.

Kelly Griffin participated in the Bayer Animal Health Faculty Development Program in New Haven, Conn., in June. The program helped strengthen her skills to become an effective coach.

Fort Dodge Animal Health named DVM student **Jennifer Wiseman** as a student representative and **Cheri Nielsen**, veterinary medical associate, as resident scholar. Wiseman will be responsible for facilitating educational meetings and communications between Fort Dodge's field veterinarians, salespeople, and students at the College. Nielsen accepted the liaison position with the primary goal of enhancing communications between the college's academic community and veterinarians in service and research positions at Fort Dodge.

Katja Wucherer was selected as the Pfizer student representative for 2004-2005 school year.

Congratulations students!

Alumni news and events

Alumnus **Michael T. Collins**, class of 1972, a professor in the Department of Pathological Sciences at the University of Wisconsin-Madison School of Veterinary Medicine, received the Van Hise Outreach Award for teaching excellence from the University of Wisconsin-Madison in April. Collins has devoted his career to working with farmers to improve detection of Johne's disease.

James B. Johnson died on June 16, 2004. After graduating from the College in 1965, Johnson started his own consulting business working with turkey growers in the upper Midwest. In recognition of his work with the turkey industry, he received the Ranelius Award from the Minnesota Turkey Growers Association in 2004.

The 2004 Conference of Research Workers in Animal Diseases, held in Chicago in November, was dedicated to **Harley W. Moon**, who received his D.V.M. in 1960 and his Ph.D. in 1965 from the University of Minnesota. A leader in the area of diseases of livestock animals, Moon held the endowed Frank Ramsey chair at Iowa State University until his recent retirement. Prior to that, he was the director of the National Animal Disease Center in Ames, Iowa. In 1991 Moon became one of the few veterinarians to be elected to the National Academy of Science.

Mark your calendars!

Alumni Reception During AVMA Convention

Minneapolis Convention Center
July 17, 2005

For more details, go to www.cvm.umn.edu/newsandevents/events/

Alumni—We'd love to hear your accomplishments!

E-mail kirch004@umn.edu or fax us at 612-624-8753 with your updates and achievements.

New Faculty/Staff



Carol Barnhart
Director of Informatics
Veterinary Medical Center



Laure Campbell
Quality Improvement Manager
Veterinary Medical Center



Brian Husbands
Assistant Clinical Professor
Veterinary Clinical Sciences



Florien Jenner
Assistant Clinical Professor
Veterinary Population Medicine



Laura Larson
Director of Human Resources



Colin Mitchell
Assistant Clinical Professor
Veterinary Population Medicine



Juan Romano
Associate Clinical Professor
Veterinary Population Medicine



Sheri Ross
Assistant Clinical Professor
Veterinary Clinical Sciences



Jerry Torrison
Associate Clinical Professor
Veterinary Population Medicine



Robert Washabau
Professor and Chair
Veterinary Clinical Sciences

Exchange program

Bert E. Stromberg, associate dean for research and graduate programs, spent a week in Washington, D.C., shadowing Mary Torrence, national program leader, food safety, at the U.S. Department of Agriculture's Cooperative State Research, Education, and Extension Service (CSREES). Mary spent a week at the college in September.

The purpose of the exchange was to encourage a better understanding of each organization's function, to identify areas of responsibility, and to develop relationships between the University of Minnesota and CSREES, a major source of funding for many agriculture programs at the University of Minnesota.



Bert E. Stromberg

Allen D. Lemman Swine Conference

The College hosted more than 700 swine industry professionals from around the world at the annual **Allen D. Lemman Swine Conference** in September. Sessions were translated into Spanish and Chinese.



Mariah Carroll, Sarah Summerbell, Lynne Leary, and Jan Storebo greeted conference attendees.

The closing session, “Current Practices of Antimicrobial Use in Finishing Hogs – Is it Prudent?” was presented by Steve Roach from Food Animal Concerns Trust and Rich Carnevale from the Animal Health Institute. For the first time, audience members were able to interact and reply to questions individually using personal interactive devices. The results were shown immediately on a large screen. Participants learned that very few opinions were changed regarding the topic but a lot of good information was exchanged.

■ **JAN SWANSON**

Mini-Vet School

Dr. Robert Novo, medical director, Veterinary Medical Center, hosted **Mini-Vet School** in October and November. The students were amazed to learn about the many species veterinarians treat, the medical and surgical specialists available, and the role veterinarians play in food safety and human health.

Mini-Vet School II begins March 15, 2005. Topics will include:

- End-of-Life Care for Your Pet – How the Human Animal Bond Affects a Veterinarian’s Diagnosis and Treatment
- Surgery – Basic Techniques and Interesting Procedures
- Transfusion Medicine – Artificial Blood and Blood-Donor Programs
- The Veterinary ER – Emergencies and Critical Care
- Bite Me – An Interactive Discussion of Veterinary Dentistry
- The Wildest Vets at the Veterinary College – Raptors and Conservation Medicine

To register, go to www.cvm.umn.edu/outreach/events/mvs2

Behavior in Dogs and Cats

In October, Sarah Heath, president and charter diplomate of the European College of Veterinary Behavioral Medicine (Companion Animals), presented a program for veterinary professionals on behavior issues. Learners had the opportunity to practice their new skills during case history workshop sessions.

Equine Fall Conference

The Equine Fall Conference focused on lameness and upper respiratory disorders. Faculty presented posters on equine research and new techniques.

Upcoming

Helping Owners Cope with Puppy, Kitten, and Adolescent Behavior Problems

Friday, March 11, 2005

1-8 p.m.

Presented by Dr. Wayne Hunthausen and cosponsored by Veterinary Products Laboratories, this class is designed for veterinarians and veterinary technicians.

Puppy Classes

Start Wednesday, March 23, 2005

Continue for the next four Wednesdays 7- 8:15 p.m.

Subsequent classes are scheduled to start May 25, July 20, Sept. 14, and Oct. 19. (Class dates are subject to change.) For more information, visit www.cvm.umn.edu/newsandevents/events/2005PuppyClasses/

2005 College of Veterinary Medicine Open House

Sunday, April 3, 2005

11 a.m. to 4 p.m.

Get a behind-the-scenes look at the Veterinary Medical Center and The Raptor Center. **Free!**

For more information about College events, visit www.cvm.umn.edu/newsandevents/events/

Luther Groth *continued from page 6*

frustration on the part of Bolivian veterinarians as they saw the numerous diseases—animal and human—that could be prevented if only they had the funding, government support, educational tools, and personnel. In Bolivia, they not only have to deal with complex and often political issues, but they then need to figure out how to deliver goods and personnel to the people in need when there are no adequate roads, electricity, or reliable means of communication. The need for help and support was obvious.”

His time in Bolivia gave Groth a better idea of the sort of work he would like to do full-time after he completes his D.V.M./M.P.H. program.

“I was very interested in the many public health issues that the Bolivian people were dealing with, and there were many circumstances where small interventions could impact the health of a great many people in a very positive way,” he says. “This aspect of international work – the impact for good that is possible – is something I would love to be involved with in future years.”



Faculty Q&A *continued from page 8*

Q: *What is campylobacteriosis?*

A: It's an infectious disease caused by bacteria of the genus *Campylobacter*. People who get it can have diarrhea, cramping, abdominal pain, and fever. It's one of the most common bacterial causes of diarrhea in the United States. Most cases are associated with handling raw or undercooked poultry. Even one drop of juice from raw chicken meat can infect a person, and many chicken flocks are infected with the organism but show no signs of illness. Campylobacteriosis can cause many lost days of employment due to the illness.

Q: *And your study found that if macrolides weren't used in chickens, more people would get campylobacteriosis?*

A: That's right. Our model showed that if macrolides were removed from use in chickens, the number of human cases of campylobacteriosis caused by eating chicken could increase by 11,000 to 70,000 a year and the number of sick days caused by campylobacteriosis could increase by 50,000 to 500,000 days a year. This is because animals that receive antibiotics can be healthier, resulting in lower levels of bacteria contaminating the meat product. Lower levels of bacterial contamination result in fewer cases of food-borne illness.

Q: *But couldn't the use of antibiotics in chickens – which humans, in turn, eat – contribute to the problem of antibiotic resistance that we've been hearing so much about?*

A: Yes, that's a risk. All uses of antibiotics, both in humans and animals, influence antibiotic resistance. But the major factor influencing antibiotic resistance in bacteria that affect humans is the use of antibiotics by humans.

Q: *What's your take-home message for Profiles readers?*

A: The bottom line is that there are both human health risks to using macrolides in chicken – antibiotic resistance – and human health risks to removing macrolides from chicken – an increase in the number of human illnesses. These risks must be weighed against each other. Recent studies show that there's a correlation between animal sickness and human food-borne illness, and any way we can reduce illness in chickens will help reduce human food-borne illness. Before we make a major change, such as removing an antibiotic from animal agriculture, we need to consider the potential food-safety benefits along with the potential risks of this antibiotic use.

n SUE KIRCHOFF

Contact Us

Alumni help connect College and Medtronic

College alumni are not only doing great things at **Medtronic**, the Minnesota-based medical technology company, they're building bridges between the corporation and the College.

Alisen Vetter received her D.V.M. from the college in 1985 and her Ph.D. in veterinary biology in 1997. At Medtronic, she led a global team of physicians and engineers in the development of a new pacemaker that, for the first time in the history of cardiac care, treated congestive heart failure as well as abnormally slow heartbeats. Since the market release of this cardiac-pacing system, thousands of patients around the world have found relief from the symptoms of congestive heart failure. Some patients were even taken off the waiting list for a heart transplant because of the effectiveness of the new pacemaker. When the Veterinary Medical Center began to work with pacemakers in dogs, Vetter helped its veterinary cardiologists program the pacemakers after they were implanted. Vetter currently teaches cardiovascular and respiratory physiology to first-year veterinary students at the College.

Another alumna, Medtronic employee **Carolyn McClay**, is working with Laura Molgaard, associate dean, academic and student affairs, and Bert Stromberg, associate dean, veterinary research and graduate programs, on an internship program with Medtronic for third and fourth-year students. McClay received her D.V.M. from the College 1982 and her Ph.D. in veterinary pathology in 1995.

■ **SUE KIRCHOFF**

Open House celebrates state's allocation of \$1.5 million for renovation of Molecular Diagnostic Laboratory



Ribbon cutting ceremony to dedicate new laboratory space, L to R: VDL Director Jim Collins, Senator Steve Dille, Department of Agriculture Commissioner Gene Hugoson, Board of Animal Health Executive Director Bill Hartmann, and Dean Jeffrey Klausner.

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Dean's Circle—major donors recognized for their support of College



Fall Fest—St. Paul campus open house to showcase College efforts



A pet nutrition table was one of several special exhibits.



Rides around campus were provided.



Visitors' hand-washing skills were put to the test.



Visitors to The Raptor Center met a live owl and other birds of prey.

Mini-Vet School—pubic learning about veterinary medicine



Cake was served on graduation night.



Dr. Petra Mertens discussed animal behavior issues.



Jan Storebo, Veterinary Continuing Education, greeted students.



Students were invited to Mini-Vet School II in March 2005.

For more information on events and current news at the College, go to www.cvm.umn.edu/newsandevents/events/