

UNIVERSITY OF MINNESOTA
Winter 2008

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Profiles

Veterinary Medicine

Veterinarians impact the lives of Minnesotans every day



UNIVERSITY OF MINNESOTA
College of Veterinary Medicine

Profiles

Veterinary Medicine

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On the Cover

Sheryl Ferguson demonstrates the high-speed treadmill at the grand opening of the Leatherdale Equine Center on Oct. 15.

Photo by Patrick O'Leary

From the Dean

Dear Friends,

The University of Minnesota College of Veterinary Medicine plays a critical role in the lives of the animals and people of the state, nation, and world. The significant impact is made possible through our dedicated students, staff, and faculty who contribute to the College's mission of teaching, research, and service. The year 2007 saw many changes and transitions. I have stepped into the role of interim dean with a national search currently underway.



The opportunities are limitless, and I am thrilled that you have chosen to partner with our College. The great support we have received from the University, the Academic Health Center, our congressional and legislative members, and our generous donors, corporations, and industry partners, as well as the collaborations we have with state, federal, and international agencies are all vital to our success in education and interdisciplinary research initiatives.

Significant investments were made in new building and renovation projects, such as the Ben Pomeroy Student-Alumni Learning Center, the Equine Center, the Veterinary Medical Center laboratories and MRI projects, and the Veterinary Diagnostic Laboratory Biosafety Level 3 necropsy facility, as well as various individual research laboratories. These investments in our buildings and infrastructure will attract great faculty, staff, and students to our College and foster the innovative teaching, research, and service, which will continue to enhance our reputation. It is the strength of our faculty, programs, and facilities that recently gained us full accreditation status for the next seven years.

Last year brought about changes in leadership with new hires: Jaime Modiano as the Al and June Perlmann Endowed Oncology Chair, Srirama Rao as associate dean of research, and Sharon Staton as director of advancement. This year, we will be working very closely with the University, the Academic Health Center, and our many partners to chart our strategic endeavors with a permanent dean at the helm.

Thank you for your investment and support of this great institution! For more than 60 years, we have been training veterinarians and biomedical scientists who influence the health and well-being of animals and people. We are driven to continue the discovery of knowledge that benefits all human (and animal) kind. From all of us at the College of Veterinary Medicine we wish you much success and we look forward to our continued partnerships this year and into the future. Our excellence is only achieved by your support, and we thank you for this privilege to serve you.

Warm regards,

A handwritten signature in black ink that reads "Trevor R Ames". The signature is fluid and cursive, with a long horizontal stroke at the end.

Trevor Ames, D.V.M., M.S., Diplomate ACVIM
Interim Dean, College of Veterinary Medicine

VDL tools up for fish testing



The Veterinary Diagnostic Laboratory is helping to stop the spread of viral hemorrhagic septicemia by offering testing services. Photo by Sue Kirchoff.

A devastating nonnative fish disease is heading our way, and the Veterinary Diagnostic Laboratory (VDL) is doing its part to stop this spread by offering testing services to commercial fish farms and others who need it.

Known as viral hemorrhagic septicemia, or VHS, the disease is known to infect more than two dozen species of freshwater fish found in the Upper Midwest, including walleye, muskies, northern pike, smallmouth bass, and bluegills. Signs include bloating, hemorrhaging, and bulging eyes, and the disease can be fatal.

VHS was first found in the Great Lakes area in 2005 in Lake St. Clair. Since

viral hemorrhagic septicemia virus (noun): An extremely serious pathogen of fresh and saltwater fish causing an emerging disease in the Great Lakes region of the United States and Canada

—U.S. Department of Agriculture

then it has been found in fish from other bodies of water, including Lakes Huron, Ontario, Michigan, and Erie; Lake Winnebago in Wisconsin; and inland lakes in New York and Michigan. Because of VHS's huge threat to commercial and sport fisheries, the U.S. Department of Agriculture issued a federal order in October 2006 prohibiting the movement of susceptible fish among the eight states bordering the Great

Lakes as well as Ontario and Quebec under most conditions.

The VDL is setting up facilities to test commercial fish for the disease, so they can be transported between states.

“With the regulations coming down, there is a huge surge in the number of tests being done,” says Nicholas Phelps, aquaculture specialist with the VDL's new fish lab. Phelps anticipates additional

continued on page 4

Viral hemorrhagic septicemia FAQs

What is viral hemorrhagic septicemia (VHS)?

VHS is a deadly infectious fish disease caused by the viral hemorrhagic septicemia virus. VHS was historically a very serious disease of freshwater-reared rainbow trout of Europe. It was first discovered in the United States in 1988 among salmon returning to Washington from the Pacific and in wild herring and cod from the U.S. Pacific Coast.

What is its impact on fish populations?

Thirty-seven species of freshwater and marine fish in several parts of the northern hemisphere are considered susceptible to VHS. Mortalities may appear to be large as VHS first runs its course through fish populations, but biologists believe most fish can survive this infection if they are not otherwise stressed or weak. Fish that survive VHS develop antibodies to the virus and can become lifelong carriers of the virus, contaminating water and thus transmitting the virus to other fish.

What is its impact on Minnesota fish populations?

In the past three years, a new strain of VHS was identified as the cause of fish kills in Lake Huron, Lake St. Clair, Lake Erie, Lake Ontario and the St. Lawrence River in the Great Lakes. It has also spread to Lake Michigan and inland lakes in New York, Michigan, and Wisconsin. It is unclear how the virus travels from one body of water to another, though the use of infected baitfish is suspected. In the Great Lakes, VHS has been found in smallmouth bass, yellow perch, crappie, muskellunge, northern pike, bluegill, walleye, round gobies, sheepshead, and some sucker species. VHS has not yet been found in Minnesota.

What's being done to minimize VHS?

Many things are being done to prevent and minimize VHS in fish populations. Efforts such as not moving fish from areas where the virus is known to exist to areas outside the Great Lakes are being put into practice. The U.S. Department of Agriculture's Animal and Plant Health Inspection Service has issued a federal order severely restricting movement of fish from the eight states bordering the Great Lakes. Movement of water from lakes with fish that have tested positive is also restricted. Actions to reduce the spread of this virus include cleaning boats before moving them from one body of water to another, draining and drying live wells, and not moving bait minnows or other live bait from an infected area to a non-infected area.

How is the College of Veterinary Medicine assisting in this effort?

The College of Veterinary Medicine's Veterinary Diagnostic Laboratory is establishing a program for testing fish for VHS. The laboratory's aquaculture specialist, Nicholas Phelps, expects fish growers in the state will use the test to provide evidence that their fish are free of VHS so they can ship them to other states. The VDL will also offer its services to the Minnesota Department of Natural Resources for use with its surveillance programs.

Fish testing *continued from page 3*



demand for VHS testing as the Minnesota Department of Natural Resources and other public agencies ramp up surveillance for the disease in Lake Superior and other major fishing lakes.

Minnesota has close to 80 aquaculture facilities. According to the DNR, Minnesotans and visitors spend more than \$1 billion per year on sport fishing.

In addition to keeping an eye out for VHS, the new fish laboratory will also offer testing for other viruses that affect producers' ability to ship fish. These include spring viremia of carp and infectious pancreatic necrosis, which affects a wide range of species.

■ MARY HOFF

Fish Health Certificate field training offered

The University of Minnesota Veterinary Diagnostic Laboratory teamed up with the University of Wisconsin to offer a half day of field training for the Fish Health Certificate program on March 6. Veterinarians completed five online modules prior to field training. For more information, visit www.cvm.umn.edu/outreach or contact Nicholas Phelps at phelp083@umn.edu or 612-7450.

CVM provides leadership in international avian influenza surveillance

Professor of veterinary population medicine Sagar Goyal and molecular virology technician Michele Leiferman traveled to Bandung, Indonesia, in November to help strengthen testing capabilities for highly pathogenic H5N1 avian influenza there.

The two assisted staff at Medion, an Indonesian vaccine manufacturer, as they set up a program for



using molecular genetic analysis to identify the presence of the virus in nasal and cloacal swabs from domestic fowl. Last July, four members of the Indonesian team attended a short course in molecular biology taught by Pamela Skinner, assistant professor of veterinary biosciences. They then

traveled to the U.S. Department of Agriculture National Animal Disease Center in Ames, Iowa, for further training in applying molecular genetics to avian influenza diagnostics. Goyal and Leiferman advised them as they applied what they learned here to get their own facilities up and running. Professor Goyal has done similar work in other countries, including the Philippines and Tanzania.

Indonesia has been in the international spotlight for highly pathogenic avian influenza since the disease began spreading widely through Asia in 2003. As of this writing, the country has reported 85 human deaths from H5N1, which is readily transmitted from birds and is fatal to humans in most cases.

The University of Minnesota has taken on a growing role in helping monitor for and prevent the spread of avian influenza worldwide. Last spring, under the leadership of School of Public Health professor Marguerite Papaioanou, the University established an International Center of Excellence for Influenza Research and Surveillance with a \$22.5 million grant from the National Institute of Allergy and Infectious Disease. The CVM is a key player in the center's efforts, which includes providing strategies for monitoring the presence of the disease and technical assistance in eight countries and the United States.

■ MARY HOFF



Sagar Goyal

Sagar Goyal is founding fellow with Institute on the Environment

Sagar Goyal, professor in the Veterinary Population Medicine Department, is a founding fellow with the University of Minnesota's Institute on the Environment, which partners with colleges and centers at the University to pursue research, education, and outreach initiatives related to the environment. The Institute's primary objective is to identify, organize, and support collaborative, interdisciplinary research teams to develop and disseminate innovative and practical solutions to the most pressing environmental problems. It sponsors a variety of events and seminars. For more information, visit www.environment.umn.edu.

College granted full accreditation

The American Veterinary Medical Association Council on Education granted the College full accreditation for up to seven years in October 2007. Among the College's strengths, as cited in the Council on Education report:

- The **social worker/counselor** employed by the CVM interacts with clients, faculty, and students who have life issues and provides valuable counseling services.
- The **Pomeroy Center** provides state-of-the-art classrooms and a number of areas for student interaction in a unique and attractive setting.
- The use of **numerous educational posters/brochures** throughout the hospital helps develop knowledgeable clients who use the services of the CVM.
- The CVM is generally **clean and well-maintained**.
- The CVM is committed to an **animal/client friendly hospital**.
- The **UVIS** medical record/business management system as developed by the CVM provides a contemporary system for students/faculty to manage medical information, and the College is commended for its plans to enter medical records into the UVIS system retroactively to 2001.
- The CVM has developed a strong commitment to **medical imaging** and uses the resources in the teaching program.
- The CVM has made a significant commitment to using **certified veterinary technicians** in the teaching/animal care program which enhances the learning environment for the students.



The new Ben Pomeroy Student-Alumni Learning Center was cited in the Council's report as one of the College's strengths. The College hosted a grand opening for the new center in October.

- The **off-campus food animal facilities** provide good resources for student learning.
- **The Raptor Center** provides exceptional avian wildlife resources for D.V.M. students interested in rehabilitation medicine/surgery.
- The **library staff** is strongly service oriented in providing the resource needs of CVM personnel.
- The **D.V.M. students** are mature, enthusiastic, motivated, articulate, and committed to their education and to the CVM.
- The CVM summer **research programs**, other Academic Health Center, and high school programs provide information and incentives for enrollment of minority students in the DVM program. The VetFAST program is used to attract students interested in food animal veterinary medicine.
- The **teaching faculty** are committed to the D.V.M. students and to providing teaching/learning resources needed for a successful educational program.
- The **Community Practitioner Preceptor Program** and other College programs provide early hands-on opportunities for the DVM students in a veterinary practice that reflects a small business operation.
- The CVM is commended for the philosophy of a **commitment to student learning** rather than student technical work.
- The CVM **research programs** and the investigators support the student summer research program and employment opportunities that allow students to explore research as a career.
- The CVM has processes to measure student learning and institutional outcomes and the data generated are being utilized to improve the curriculum.
- The **alumni** are pleased with their education and the education and competencies of the graduates, and are supportive of the CVM.

College announces affiliation with Davis Family Dairies

In September, the College and Davis Family Dairies, LLC, announced an affiliation to design, construct, and operate a commercial, educational, and demonstration dairy facility in New Sweden Township in Nicollet County, Minnesota.

This new state-of-the-art dairy facility will bring together educational, research, and commercial dairy practitioners to improve management practices and dairy husbandry, teach veterinary medicine, research emerging products, and serve as a center for continuing education. The facility will also offer the unique opportunity to integrate various academic and educational functions into the commercial environment that will exist at the site.

“The Davis family and everyone associated with Davis Family Dairies are excit-



ed and flattered by the opportunity to work with the University of Minnesota College of Veterinary Medicine to help further the experience and knowledge base of the dairy industry in Minnesota and across the United States,” says Mark Davis, CEO, Davis Family Dairies, LLC. “This partnership will help improve dairy practices and products from the farm to fork by connecting our commercial dairy production and processing businesses with the College’s research and teaching expertise.”

“The College is thrilled by this partnership with Davis Family Dairies,” says Trevor R. Ames, interim dean of the College of Veterinary Medicine. “Our students and faculty will benefit greatly from the opportunity to learn and teach in a large, well-run Minnesota dairy.

We are convinced that the quality of our graduates will be significantly enhanced by our relationship with Davis Family Dairies.”



The new dairy facility will house more than 4,000 animals and employ more than 40 people. It will serve as a birthing site for more than 6,000 calves per year, milk 3,000 cows on site, and provide management support to another 3,000 cows at the existing Northern Plains Dairy, LLP. It will also include dormitory facilities, classrooms, and teaching laboratories.

The project will cost over \$15 million. It will purchase more than \$200,000 in feed each month from local farmers and sell nutrients for fertilizing more than 2,000 acres each year to local farmers. Davis Family Dairies will fund and own the facilities while the College will contribute toward the components of the facility specific to academic functions.

Tom Molitor receives Distinguished Teaching Award

In April 2007, Tom Molitor, professor and interim co-chair of the Veterinary Population Medicine Department, was named a recipient of the Distinguished Teaching Award, the University of Minnesota’s most prestigious award for excellence in teaching. The Graduate-Professional Teaching Award for outstanding contributions to postbaccalaureate, graduate, and professional education recognized Molitor as a member of a distinguished group of faculty who exemplify the University of Minnesota’s commitment to quality education. He was also inducted into the Academy of Distinguished Teachers, a group of faculty members who provide leadership to the University community by serving as mentors, advisers, and spokespersons for the University’s mission. He and other award recipients were recognized at a ceremony at the McNamara Alumni Center on April 23.



Tom Molitor

Srirama Rao named associate dean for research

After a comprehensive national search, Srirama Rao has been appointed as associate dean for research and professor in the Department of Veterinary and Biomedical Sciences. Rao provides visionary leadership in articulating and implementing the College's strategic plan for research, cultivating

relationships with commodity groups, industry, and government to seek new sources of funding for research programs.



Srirama Rao

Rao was previously vice president and head of research in the division of vascular biology at the La Jolla Institute for Molecular Medicine, a nonprofit academic research institute focused on cancer and vascular biology in San Diego, California. At the Institute, Rao established research focuses and priorities that fostered a collaborative and multidisciplinary research environment by integrating cancer biology, wound healing, lung biology, and immunology programs into an emerging center of excellence in vascular research.

Rao received his Ph.D. in immunology and allergy from the Indian Institute of Science in Bangalore, India, in 1989, after which he conducted post-doctoral studies in cell and molecular biology at Pharmacia-Experimental Medicine in La Jolla, Calif. He received his master of science degree in biochemistry from the Postgraduate Institute for Medical Education and Research in Chandigarh, India, in 1985.

Over the course of his career, Rao has received many awards, including the Asthma and Allergy Foundation of America Investigator Award, the National Institutes of Health (NIH) FIRST Award, and multiple NIH and California state research grants. His research interests include understanding the mechanisms of leukocyte and eosinophil

trafficking in the context of inflammation, allergy, and asthma, in addition to cancer research. Rao has pioneered the use of intravital imaging to understand the role of adhesion molecules, cytokines, and chemokines in promoting cell trafficking in inflammatory diseases.

“I am excited about my new role at the College of Veterinary Medicine,” Rao says. “I believe that the veterinary program—with its strong interdisciplinary focus and commitment to cutting-edge research, teaching, and training—is uniquely poised to make significant contributions to improve veterinary and human health locally, nationally, and globally. I look forward to working with my scientific and administrative colleagues across the University to build on these strengths through the strategic addition of new faculty, the promotion of exciting new collaborative research initiatives, and increased external funding through grants and gifts.”

“The College’s focus on basic, applied, and translational research on emerging and zoonotic infectious agents and comparative medicine, including spontaneous animal models of human disease, benefits Minnesota’s agricultural economy and contributes to the health and well-being of animals and people,” says Trevor Ames, interim dean. “Research is key to our success in discovering new knowledge, and Dr. Rao’s experience and leadership will help assure that success.”

Strategic plan for research—

One Medicine—One Science: at the interface of animal and human health

As a pioneer in animal health research, the College of Veterinary Medicine is uniquely positioned to provide solutions to current and emerging problems that threaten animal and human health. Global, interlaced, and complex, these problems require multidisciplinary, integrated approaches that unify biology and medicine. At a January 8 meeting, College faculty discussed a strategic plan for research to focus on three vital areas:

- Population health and disease
- Infectious disease in global food systems
- Comparative and animal medicine

Details will be developed in the coming months.

Rapid Response projects take on emerging disease issues

Several College faculty members received funding from the Minnesota Agricultural Experiment Station's Rapid Agricultural Response Fund to address emerging disease issues in 2008 and 2009:

- **Scott Dee**, a professor in the Veterinary Population Medicine department and director of the Swine Disease Eradication Center, was awarded \$206,000 to improve pork producers' ability to minimize the impact on production of co-infections with multiple pathogens. With the help of the Rapid Response funds, Dee and colleagues will use the Swine Disease Eradication Center, which mimics the conditions of modern swine production facilities, to explore strategies for keeping the dis-

eases from spreading, improve understanding and diagnosis of co-infections, and develop educational materials for farm workers.

- **Sagar Goyal**, professor, Veterinary Population Medicine, received \$82,000 for research aimed at learning the identity of the pathogen responsible for poult enteritis syndrome, which causes lethargy and diarrhea, stunts growth, and can be fatal to young turkey poults. Goyal hopes to identify the pathogen and develop diagnostic tools as a first step toward preventing and treating it.
- **Kakambi Nagaraja**, a professor in the Veterinary and Biomedical Sciences department, was awarded \$68,458 for research on cellulitis in turkeys, including pathogenesis and its control using

an inactivated vaccine.

- **Simone Oliveira**, assistant professor, Veterinary Population Medicine, received \$138,000 for surveillance of highly virulent strains affecting North American swine herds using multi-locus sequence typing.
- **Scott Wells**, associate professor, Veterinary Population Medicine, was awarded \$100,000 for bovine tuberculosis research aimed at reducing interactions between cattle and white-tailed deer in northern Minnesota.

The Rapid Agricultural Response Fund was established by the Minnesota Legislature in 1998. It provides a mechanism for quickly addressing emerging agricultural needs.

Sheila Torres, Mayo researcher awarded grant

The Minnesota Partnership for Biotechnology and Medical Genomics has awarded a \$709,852 grant to **Sheila Torres**, assistant professor of dermatology, and Doug Plager, Ph.D., a research associate in dermatology in the Allergic Diseases Research Laboratory at the Mayo Clinic College of Medicine. The subject of their research: therapeutic targets for atopic dermatitis, a form of eczema that affects animals and people.

The Minnesota Partnership for Biotechnology and Medical Genomics was established in 2003 by the University of Minnesota, the Mayo Clinic, and the state of Minnesota to position Minnesota in the forefront of biomedical research. The collaboration brought together Minnesota's two

renowned research institutions, which collectively managed major research projects amounting to \$700 million in funding, a figure that has been substantially rising during the last few years.

The partnership represents a commitment from both institutions to unite on biotechnology and medical genomics research projects, leveraging their scientific and research strengths. The second part of the venture was securing the involvement of



Veterinary dermatologist Sheila Torres examines a golden retriever. Photo by Sue Kirchoff

the state of Minnesota.

The partnership initially is aiming for advances in biotechnology and medical genomics that have the potential to create breakthroughs in scientific understanding and patient treatments for cancer, heart disease, and neurological diseases. Over the long term, the partnership is expected to contribute to Minnesota's economy by stimulating new

businesses, creating quality jobs, and expanding the tax base.

Summer Scholars gain research

The Summer Scholars Program provides first- and second-year veterinary students with an opportunity to participate in organized, meaningful research and gain insight into the planning and conduct of research experiments, data evaluation, and effectively working in a research setting.

Sara B. Jacobsen

Mentor: Larissa Minicucci

Project: Rapid Lyme disease testing: estimating the prevalence of canine Lyme disease in Minnesota and evaluating current management strategies for the test-positive dog

For her Summer Scholars project, Sara created a mail-based survey for Minnesota veterinarians about canine Lyme disease. The survey asked veterinarians how many Lyme



Sara Jacobson with her dog, Scruffy. Sara's Summer Scholars project explored Lyme disease, which affects both dogs and humans.

disease-positive dogs they see at their practice in order to obtain a rough estimate of the prevalence of canine Lyme disease in Minnesota by county. The survey also asked veterinarians about the tests they use for Lyme disease, how they typically treat dogs that test positive for Lyme disease, which Lyme disease vaccines they use, and when they recommend vaccinating for Lyme disease. Sara later looked at human Lyme disease statistics in Minnesota by county to see if canine seroprevalence of Lyme disease is a good predictor of areas of high risk of Lyme disease for humans.

Dee Koski

Mentor: Alvin Beitz

Project: Electroacupuncture treatment of pain associated with experimentally induced osteosarcoma in Balb-C mice as a model for alleviating small animal bone cancer pain

Seeking relief from chronic pain is a common reason for visits to veterinarians as well as physicians, and the use of complementary therapies to treat chronic pain is on the rise.



Dee Koski

Acupuncture is a popular complementary treatment option in human medicine, and owners are increasingly seeking acupuncture for their pets. More research is necessary to determine the effectiveness of acupuncture treatment in domestic animals.

Electroacupuncture has been shown to be effective in treating cancer pain, cancer fatigue, and chemotherapy-induced nausea in human patients. In her Summer Scholars project, Dee worked on research to investigate its effectiveness in mice with bone cancer.

Aric Frantz

Mentor: Tim O'Brien

Project: Characterization of canine multi-potent adult progenitor cells

Aric's Summer Scholar project was in the Stem Cell Institute lab of Tim O'Brien and Christina Clarkson, who work with bone marrow-derived multipotent



Aric Frantz

adult progenitor stem cells (MAPC). The lab had previously demonstrated that MAPC-like cells from canine bone marrow have the ability to improve cardiac function in dogs with chronic myocardial infarcts, but the means by which the cells achieved the improvement is unknown. Aric's work was to use RT-PCR to assess established canine MAPC-like lines for expression of a group of cytokines and angiogenic factors.

"We were able to generate strong evidence that these cells are producing a number of the factors," says Aric.

experience

Laura Lancieri Mentor: Srinand Sreevatsan

Project: Discovery and application of surrogate marker diagnostics of transmissible spongiform encephalopathies (ovine and murine scrapie)

Laura worked with Srinand Sreevatsan, associate professor in the Veterinary Population Medicine Department to conduct research on transmissible spongiform encephalopathies (also known as prion diseases), a group of degenerative brain disorders of humans and animals.



Veterinary student Laura Lancieri worked with Srinand Sreevatsan, associate professor in the Veterinary Population Medicine Department, to conduct research on transmissible spongiform encephalopathies (also known as prion diseases), a group of degenerative brain disorders of humans and animals.

2007 Summer Scholars

Kathleen Bolender-Neumann

Mentor: Catherine St. Hill
Project: The role of C2-O-sLeX in the binding of carcinoma cells to the endothelium in early metastasis

Aric Frantz

Mentor: Tim O'Brien
Project: Characterization of canine multi-potent adult progenitor cells

Karen Gjevre

Mentors: Leslie Sharkey and Rebecca Davies
Project: Determining breed-specific parameters for alkaline phosphatase, alanine aminotransferase, and blood urea nitrogen in the Siberian husky

Brad Goupil

Mentor: Micky Trent
Project: Como Zoo salmonella screening study

Maria Huh

Mentor: Alvin Beitz
Project: Electro-acupuncture effects on osteosarcoma: implications on the potential effective treatment in reducing the pathogenesis of cancer growth, mass, and metastasis using a mouse model

Sara B. Jacobsen Bergmann

Mentor: Larissa Minicucci
Project: Rapid Lyme disease testing: estimating the prevalence of canine Lyme disease in Minnesota and evaluating current management strategies for the test-positive dog

Dee Koski

Mentor: Alvin Beitz
Project: Electroacupuncture treatment of pain associated with experimentally induced osteosarcoma in Balb-C mice as a model for alleviating small animal bone cancer pain

Laura Lancieri

Mentor: Srinand Sreevatsan
Project: Discovery and application of surrogate marker diagnostics of transmissible spongiform encephalopathies (ovine and murine scrapie)

Shannon Mesenbourg

Mentor: John Fetrow
Project: Modifying antimicrobial drug use practices through veterinary protocol software

Daniel Pesek

Mentor: Micky Trent
Project: The prevalence of *Leptospira interrogans* and intestinal parasites in wild raccoons (*Procion lotor*) on the grounds of the Minnesota Zoo

Jennifer Peterson

Mentor: Sandra Godden
Project: Relationship between bacteria levels in colostrum and efficiency of absorption of immunoglobulin G in newborn dairy calves

Ian Rubinoff

Mentor: Joni Scheftel
Project: Avian influenza transmission to backyard poultry flock handlers in Minnesota

Nancy Rundquist

Mentors: Russell Bey, Paul Rapnicki, and Steven Stewart
Project: Determining the presence and level of bacterial pathogens in digested manure solids before and after an anaerobic digestion process

Andrea Widdel

Mentor: Srinand Sreevatsan
Project: A step forward for Johnes's disease testing

Corey Woodcock

Mentor: Cathy Carlson
Project: Technique validation for bone densitometry in small animals

State-of-the-art MRI now available at VMC

The University of Minnesota Veterinary Medical Center (VMC) now has a valuable new tool for veterinarians who want to provide the best possible diagnostic services: a 3T magnetic resonance imaging (MRI) machine, the most powerful MR system in a veterinary hospital in the world.

What is MRI?

As the name implies, MRI uses a strong magnetic field to image parts of the body. It takes advantage of the natural magnetic properties of hydrogen atoms in the body to create a detailed image that can differentiate between myriad soft tissues, bone structures, and body fluids.

Aren't all MRI systems the same?

No! There are "high-field" and "low-field" MR systems, and high-field magnets (systems with field strengths of 1.0T, 1.5T, and 3.0T) are far superior to low-field magnets in all aspects of image quality and speed of acquisition. The VMC's new 3T MRI unit allows radiologists to perform imaging exams that are not possible with lower field scanners.

Why is MRI important?

MRI can give information that cannot be obtained by other imaging modalities. Its image clarity and detail are unparalleled. Compared to radiography and CT, it also has the advantage of not using potentially harmful ionizing radiation. MRI allows doctors to make diagnoses that were previously difficult or impossible to confirm, enhancing their ability to recommend appropriate treatment options for patients.

What kinds of cases may benefit from MRI?

There are many kinds of cases for which MRI is an excellent diagnostic tool. MRI is the best modality for imaging of neurologic disease, musculoskeletal disease, and oncologic disease. For musculoskeletal disease in dogs and horses, MRI is invaluable for evaluating injuries to joint structures, tendons, and ligaments. Chronic lameness that has been localized to a general area, but for which an underlying cause cannot be determined using traditional methods, can often be diagnosed using MRI. MRI is also very versatile for imaging of the structures of the head outside of the brain, abdominal diseases, vascular diseases, certain thoracic diseases, and some cardiovascular disorders.

How long does an MRI exam take?

It depends on the body part being examined. The total procedure, including preparation, imaging, and recovery, generally lasts one to two hours. Equine patients and some small animal patients are hospitalized overnight so they can be monitored closely for several hours after recovering from anesthesia.

Who reviews the MR images?

The exams are monitored by the Veterinary Medical Center's board-certified radiologists. The images are interpreted on-site within hours. If a lesion is found, board-certified surgeons and other specialists are available to provide the necessary treatment.



Veterinary radiologist Travis Saveraid and friend display the Veterinary Medical Center's new 3T MRI machine, the most powerful MR system in a veterinary hospital in the world. Photo by Sue Kirchoff

Are there any risks in performing an MR exam?

There are no known side effects of MRI, but patients are placed under general anesthesia for the procedure. As with anything requiring general anesthesia, there are risks associated with the drugs and the recovery period. But the VMC's board-certified anesthesiologists work closely with the imaging group to minimize those risks.

When will MRI exams be available at the VMC?

MRI exams are available now for VMC patients. Starting this spring, veterinarians in the region will be able to refer cases directly to a new outpatient imaging service. Advanced Veterinary Imaging Direct (AVID) will provide imaging services, including MR, CT, fluoroscopy, and ultrasound (including biopsies) on an outpatient basis.

"We want to make these tremendous resources accessible to all veterinarians in the area," says VMC director David Lee.

Linear accelerator offers new options for animals with cancer

In August 2007, the Veterinary Medical Center unveiled a new linear accelerator facility, becoming one of the only veterinary hospitals in the Upper Midwest to offer state-of-the-art radiation therapy to animals with cancer.

“Each year, thousands of dogs and cats in Minnesota and our neighboring states are diagnosed with cancer, and their owners are faced with very difficult decisions,” says David Lee, Veterinary Medical Center director. “With the linear accelerator, our veterinarians are able to provide leading-edge cancer treatment.”

The linear accelerator replaced cobalt radiation equipment used to treat cancer patients for nearly 25 years. Identical to the linear accelerators used in human radiation treatment, it allows veterinary cancer specialists to map tumors in three dimensions and focus radiation on cancerous lesions, minimizing the impact to surrounding healthy tissue.

The linear accelerator is also a key element in the College of Veterinary Medicine’s comparative cancer research program.

“Comparative cancer research involves the study of cancer in one species with the goal of applying the lessons learned to other species,” says Robert Washabau, chair of the College’s Veterinary Clinical Sciences Department. “Cancer in animals is very similar to cancer in humans, both in cause and in response to therapy. Our research will benefit both animals and humans.”

Key features of the linear accelerator include:

- Ability to adjust the strength of the proton beam to customize the treatment of deep masses
- Electron capability, which will allow treatment of skin masses while protecting deeper tissues from exposure



Veterinary technician Kim Janisch, veterinary radiologist Dan Feeney, and Mason, an oncology patient, display the Veterinary Medical Center’s new linear accelerator. Photo by Sue Kirchoff.

A fund-raising campaign, “Accelerating Hope,” is underway to offset the cost of this new technology so it can benefit as many animals as possible. Corporate and private donations are being accepted by the College of Veterinary Medicine and the University of Minnesota Foundation. For more information, contact Katharine Anderson, development officer, at 612-626-2343 or ksander@umn.edu.

Leatherdale Equine Center opens

The Leatherdale Equine Center welcomed nearly 1,000 horse lovers into the new \$14 million facility on the St. Paul campus for a ribbon-cutting and grand opening event on Oct. 15, 2007.



Stephanie Valberg conducts a demonstration of the high-speed treadmill.

The event began with a procession led by the Ames Farm six-percheron horse hitch, which broke a ribbon to enter the Equine Center's indoor arena. Speakers included Governor Tim Pawlenty and University of Minnesota President Robert Bruininks. Equine clinic staff demonstrated the new high-tech systems in the 60,000-square-foot facility.

"The comprehensive Equine Center has been designated as a program of excellence at the College of Veterinary Medicine and is squarely aligned with the University's goal to become one of the top three public research universities in the world," says Bruininks. "But more than that, it meets a growing need of our state: Minnesota ranks among the top 10 states in horse population, and the equine industry contributes almost \$1 billion annually to the state economy—sparked by the passion and support of horse lovers like us."

The facility was named in honor of Louise and Doug Leatherdale of Medina, who made a generous lead gift to the University of Minnesota. Tad and Cindy Piper of Long Lake made the lead gift for the Piper Performance Clinic, a performance medicine and reproductive clinic in the facility.



A Percheron team from Ames Farm trot toward the Equine Center, breaking a ribbon to enter the indoor arena for the grand opening ceremony.

The Equine Center's new technology includes computerized gait analysis and high-speed cameras to test for lameness, an aqua treadmill used in rehabilitation, a state-of-the-art reproduction wing, and a high-speed treadmill that allows a horse's every breath and heartbeat to be monitored while galloping up to 30 mph.

Throughout the event, members of the We Can Ride therapeutic riding group were on hand to demonstrate their program, which teaches riding and carriage driving to children and adults living with cognitive and physical disabilities. The new facility is home to the first metro site of this popular program.

The University Police Department's mounted patrol unit is also housed in the facility, which offers a conference center and a 100-by-200-ft. indoor arena as well as an outdoor arena for demonstrations, meetings, and programs by community horse organizations.

Horse Owner Education Days offered

The Leatherdale Equine Center hosted Horse Owner Education Days in February and March. Presented by the College in partnership with the Minnesota Extension Service, the February 2 program featured discussions and demonstrations on a wide range of topics, from pastures and plants to dentistry and disasters. On March 15, a more advanced program provided opportunities to interact with experts during roundtable discussions. Both sessions included a tour of the Equine Center's new, state-of-the-art facilities and equipment. Horse owner programs were also conducted in North Mankato and Bemidji.

“This state-of-the-art facility is a home for the Minnesota equine community,” says Dr. Stephanie Valberg, D.V.M., Ph.D., director of the Equine Center. “No other facility has been designed to give such compassionate, comprehensive care and to give so much back to horse owners. The Equine Center represents our dedication to an expanded equine program, including undergraduate equine education for the next generation of equine veterinarians and a focus on equine research that will change the lives of horses worldwide. Horses that come here benefit from some of the best in equine care, research, and veterinary education anywhere in the world.”



Doug and Louise Leatherdale, Susan Hagstrom, and University of Minnesota President Robert Bruininks prepare to cut the ribbon.



Stephanie Valberg, director of the Equine Center, delighted the crowd by beginning her remarks with one word: “Woohoo!” In the background at right are University of Minnesota President Robert Bruininks and Minnesota Governor Tim Pawlenty, who also spoke at the event.



The Leatherdale Equine Center officially opened on Oct. 15.

New equine faculty

Nicolas Ernst joined the equine surgery team in November 2007. Previously a faculty member in equine surgery, emergency, and critical care at The Ohio State University College of Veterinary Medicine, he is board certified by the American College of Veterinary Surgeons. Dr. Ernst received his veterinary degree from the University of Chile and his master’s degree in clinical epidemiology from the University of Florida, where he completed a large animal surgery residency.



Nicolas Ernst

Nicole Scotty, assistant clinical professor of ophthalmology, joined the Veterinary Clinical Sciences Department in July 2007. She was previously with the University of Florida Veterinary Medical Center, where she completed a residency in ophthalmology with a strong emphasis in equine ophthalmology. Her special interests include equine corneal disease and corneal transplantation. She received her D.V.M. with honors from the University of Florida and is a diplomate of the American College of Veterinary Ophthalmologists.



Nicole Scotty

Troy Trumble, an internationally recognized expert in equine lameness, joined the Equine Center in September 2007. Previously with the University of Florida, Dr. Trumble brings 12 years of clinical experience in the diagnosis and treatment of lameness and performs surgery for conditions ranging from colic to complex fractures. He received his D.V.M. with honors from Michigan State University in 1995 and completed a residency in equine surgery, a master’s degree, and a Ph.D. at Colorado State University. He is board certified by the American College of Veterinary Surgeons.



Troy Trumble

The Raptor Center committed to the eagle's continued success

In June 2007, the U.S. Fish and Wildlife Service removed the bald eagle from the endangered species list. The bald eagle continues to be protected by federal law, and the public continues to have a critical role in keeping the population healthy by maintaining habitats and protecting the water and environment from contaminants such as lead and mercury.

The College's Raptor Center has made significant contributions to the preservation of the bald eagle. It has played a key role in restoration programs, investigated the effects of lead poisoning, studied the incidence of chemical contamination in nestling eagles, and contributed to habitat preservation. The Raptor Center has treated more than 1,600 eagles during its 30-year history, and its work has been critical in providing disease surveillance in the raptor population. Each year, more than 250,000 people are educated about how their decisions affect raptor health and well-being through overdevelopment of land, use of lead in fishing and hunting activities, and contamination through misuse of chemicals.

The bald eagle is one of The Raptor Center's most common patients, says Juli Ponder, executive director of The Raptor Center. "Our current focus is to ensure the ongoing safety and health of this bird. We will make every effort to ensure that bald eagles continue to thrive and have a healthy environment in which to live."

The Raptor Center specializes in the care, rehabilitation, and conservation of eagles, hawks, owls, and falcons, operating mostly with private funds and



The bald eagle was removed from the endangered species list in June. The Raptor Center is committed to the eagle's continued success.

through the efforts of more than 200 volunteers. Established in 1974, The Raptor Center treats approximately 800 birds a year and reaches thousands of people through public education and events. It provides training in surgery and avian medicine to veterinarians and identifies emerging issues related to raptor health and populations.

"The Raptor Center has done a remarkable job of educating and training professionals from around the world in raptor medicine and surgery," says Trevor Ames, interim dean of the College of

Veterinary Medicine. "Through its work, The Raptor Center has enhanced the health of raptors and the bond between raptors and humans."

Pat Redig, cofounder of The Raptor Center, led the University's efforts to restore the bald eagle. "I feel that we have certainly accomplished our objective, and we are pleased that the bald eagle has been taken off the endangered species list. Our promise is to continue to protect and preserve the eagle in every way we can."

Jaime Modiano joins College as Al and June Perlman Endowed Oncology Chair

Jaime Modiano, V.M.D., Ph.D., joined the College in July as the Al and June Perlman Endowed Oncology Chair and director of the Veterinary Medical Center's Animal Cancer Center. Modiano leads the College's comparative cancer research program, which ultimately seeks to develop effective strategies for cancer prevention and treatment by integrating knowledge gained from studies of cancer in people and animals.



Jaime Modiano

"Comparative medicine is an important part of research efforts at the University of Minnesota," says Robert Washabau, chair of the Veterinary Clinical Sciences Department. "The research directed by Dr. Modiano will support that program by benefiting both animals and humans."

"I am extremely pleased that Dr. Modiano has joined our faculty," says Trevor Ames, interim dean. "He has the experience, commitment, and know-how to help the College become a world leader in comparative cancer research."

Cancer accounts for almost half of the deaths of pets over 10 years of age, and each case requires individual treatment.

"Dr. Modiano's research will expand the types of treatments available to effectively treat cancer through his discoveries of new knowledge," Ames adds.

Modiano was previously associate professor of immunology and full member of the Cancer Center at the University of Colorado Health Sciences Center and senior scientist at the AMC Cancer Center in Denver, Colorado. His research focuses on control of activation and signaling in cells of the immune system, the genetic basis of cancer, and cancer gene therapy and immunotherapy.

Modiano completed his veterinary and Ph.D. training in immunology at the University of Pennsylvania, followed by a residency in veterinary clinical pathology at Colorado State University and a post-doctoral fellowship at the National Jewish Center for Immunology and Respiratory Medicine in Denver, Colo. He was assistant professor of Veterinary Pathobiology at Texas A&M University from 1995 to 1999 and joined the AMC Cancer Center in 1999. He has co-authored more than 150 scientific manuscripts, presentations, and book chapters on various aspects of immunology, cancer cell biology, the genetic basis of cancer, and applications of gene therapy.

"Recruitment of Dr. Modiano to the University of Minnesota builds a bridge between the Medical School's Cancer Center and the College of Veterinary Medicine, providing the critical link needed in the area of comparative cancer research that will benefit both animals and humans," says Tucker LeBien, associate director of basic research at the University of Minnesota Cancer Center.

New advancement model merges development, alumni affairs, continuing education, and communications

To build and strengthen relationships with the diverse constituencies that provide support, the College of Veterinary Medicine has adopted an advancement model combining development, alumni affairs, continuing education, and communications staff. **Sharon Staton** has joined the College as director of advancement, a new position that provides strategic leadership for the integrated team.

Staton works with the University of Minnesota Foundation to engage the resources of the private sector to build and sustain excellence at the College.

"I am very excited to be working for the College to enhance relationships with alumni, friends, corporations, and foundations and increase philanthropic support to sustain our research, teaching, and service efforts," she says.

Brian T. Graves joined the advancement team in January as communications manager. His background includes the development and execution of integrated communications, sales, and marketing plans and strategic partnerships in support of public relations, marketing, and fund-raising initiatives. He earned his master's degree in journalism from the University of Iowa and his bachelor's degree in public relations from the University of Northern Iowa.

Awards and Accolades

Mike Pullen, professor emeritus, received the American Veterinary Medical Association's Public Service Award, which recognizes outstanding contributions to public health and regulatory veterinary medicine. Pullen is recognized as one of the founders of the veterinary public health program at the University of Minnesota.

Shaun Kennedy, director of the National Center for Food Protection and Defense and director of partnerships and external relations for the College, received an FDA Commissioner's Special Citation for his work in promoting and defending the safety of the food supply. The award was presented in Washington, D.C., in May 2007.



Shaun Kennedy

Paul Rapnicki, associate clinical professor in the Veterinary Population Medicine Department, was given the Gordon L. Starr Award by U of M President Robert Bruininks at the President's Awards Banquet in May. This award is given annually to a faculty or staff member by the Minnesota Student Association to recognize the importance of faculty and staff participation in students' educational experience.



Paul Rapnicki

Jody Lulich was the 2007 recipient of the WSAVA (World Small Animal Veterinary Association) Excellence in Veterinary Health Care Award. The award was specifically developed by the world organization to recognize "the outstanding work of veterinarians in promoting companion animal health care and the family pet/veterinary bond through a special sensitivity to both clients and patients using leading edge clinical nutrition and advanced medical and surgical techniques." The award was presented to Lulich during the 2007 WSAVA Congress in Sydney, Australia, in August.



Jody Lulich and patient. Photo by Sue Kirchoff

Several faculty members were honored with awards at the annual meeting of the Minnesota Veterinary Medical Association in February 2007:

■ **John Arnold, Bee Hanlon, and Walter Mackey** received the Veterinarian of the Year Award. The three retired professors were honored for their involvement in forming the Minnesota Veterinary Historical Museum.

■ **Julie Wilson** received the Distinguished Service Award, which recognizes a member who has given special service to the profession of veterinary medicine, improving the profession as a result of that service.



Julie Wilson



Larry Wallace

■ **Larry Wallace** received the Outstanding Faculty of the College of Veterinary Medicine award for outstanding service to Minnesota veterinarians, giving of his time and talent to the veterinary profession, being a leader who makes a difference to the profession, and being a dedicated contributor to organized veterinary medicine.

In recognition of his dedicated service and duty to the poultry industry, **K.V. Nagaraja** of the Veterinary Biomedical Sciences Department was presented with the Meritorious Service Award at the North Central Avian Disease Conference in St. Paul in March.



K.V. Nagaraja

Kristin Hohnadel, senior veterinary technician, won the Technician Award for Best Presentation for a clinical case description of a per-catheter occlusion of a PDA (patent ductus arteriosus) in an 8-year-old golden retriever at the 2007 American College of Veterinary Internal Medicine Forum in Seattle in June.

Larissa Minnicucci, director of the D.V.M./M.P.H. dual-degree program, and **Katherine Waters**, a postdoctoral fellow in veterinary public health, recently passed the American College of Veterinary Preventive Medicine boards and are now diplomates.

Jane Armstrong of the Veterinary Clinical Sciences Department took a one-year sabbatical leave in 2007, joining the clinical research program of Dr. Jacqueline Rand at the University of Queensland in Brisbane, Australia. Armstrong worked on characterizing metabolic syndrome in the cat as a potential animal model of obesity and peripheral insulin resistance.



Julia Ponder

Julia Ponder, executive director of The Raptor Center, was a Scientist on the Spot on the Science Museum of Minnesota's Web site in August and September 2007. Visitors to the site could post questions for Dr. Ponder and read her answers online.

Researchers honored at Points of Pride Research Days

The College's annual Points of Pride Research Days event celebrated the College's research program, honoring its researchers and research partners. On March 21, a standing-room-only crowd packed 125 Animal Science/Veterinary Medicine as Distinguished Research Alumnus Thomas Besser presented the seminar "Pre-Harvest Food Safety and E. coli O157:H7: New Answers Raise New Questions." The following awards were presented:

- Distinguished Research Partner Award: Pfizer Animal Health
- Distinguished Research Alumnus Award: Thomas Besser, class of 1981
- Pfizer Research Excellence Award: Scott Dee
- Poster competition winners
 - > Summer Scholars: Katie Byrne
 - > Graduate Students: Molly McCue, Cholawat Pacharinsak, and Jun Han
 - > Resident/post-doc: Tirumurugaan Krishnaswamy Gopalan

Awards and Accolades

Teaching and service awards presented at annual spring awards ceremony

Teaching and service awards were presented at the College's annual spring awards ceremony in April. Honorees included:

Carl J. Norden Distinguished Teacher Award: **Roberto Novo**

James O. Hanson Continuing Education Award: **Tsuyoshi Murakami**

James O. Hanson Continuing Education Award: **Jennifer Granick**

Mark of Excellence Award: **Al Bietz**

Outstanding Contributions to Postbaccalaureate, Graduate, and Professional Education: **Tom Molitor**

Outstanding Service Award: **Kevin Elfering**

Small Animal Clinical Sciences Clinical Teaching Award: **Karin Christopher**

Small Animal Clinical Sciences Clinical Teaching Resident Award: **Domenico Bianco**

Small Animal Clinical Sciences Teaching Award: **Peggy Root**

Veterinary and Biomedical Sciences Teaching Award: **Vic Cox**

Veterinary Population Medicine Teaching Award: **Sandra Godden**

Veterinary Population Medicine Clinical Teaching Award: **Christie Ward**

Veterinary Population Medicine Clinical Teaching Resident Award: **Mary Boyce**

Elections and Appointments

Marie Gramer has been elected president of the Western Conference of Veterinary Diagnostic Pathologists, a group of diagnosticians, pathologists, and residents from around Canada and the United States. The group meets annually for pathology continuing education and resident training.



Marie Gramer

Richard Isaacson, chair of the Veterinary and Biomedical Sciences Department, was named president of the organization Conference of Research Workers in Animal Diseases (CRWAD). Established in 1920, CRWAD is a nonprofit organization that discusses and disseminates the most current research advances in animal diseases. Research scientists from around the world present their recent research in oral or poster presentation formats at an annual meeting.



Richard Isaacson

Cindy Wolf, Veterinary Population Medicine, was elected to the board of directors of the National Institute for Animal Agriculture (NIAA) at the association's annual meeting in Sacramento, California, in April.

Conferences and Presentations



Will Hueston (front left), Stephan Singleton (second row, third from left), and Linda Valeri (second row, fourth from left) were among 50 people from 15 countries who attended the Salzburg Global Seminar in Austria in September.

Will Hueston, director, **Stephan Singleton**, postdoctoral fellow, and **Linda Valeri**, associate director of the Center for Animal Health and Food Safety, traveled to Austria in September 2007 for the Salzburg Global Seminar, "The New Century, New Challenges, New Dilemmas: The Global Nexus of Animal and Public Health." The conference, which drew more than 50 attendees from 15 countries, addressed the increased mixing of human and animal species, along with the social and environmental conditions that contribute to the proliferation of diseases affecting both humans and animals. The conference was the result of cooperation between the W.K. Kellogg Foundation, the National Food Safety and Toxicology Center at Michigan State University, the Center for Animal Health and Food Safety, and the Institute of the Future in Palo Alto, California.

Several CVM faculty members lectured at the European College of Veterinary Internal Medicine (ECVIM) Congress in Budapest, Hungary, in September:

- **Jane Armstrong** presented lectures on feline inflammatory liver disease and feline diabetes mellitus.
- **Jaime Modiano** presented the lectures "Hematopoietic Cancer: An Inevitable Inheritance of Mammalian Evolution" and "Heritable and Sporadic Factors in the Pathogenesis of Canine Lymphoma and Leukemia."
- **Robert Washabau** presented the State-of-the-Art Address, "Gastrointestinal Motility Disorders," the lecture "Standardization Report: G.I. Histopathology," and the research abstract, "Sensitivity of Endoscopic Biopsy Sampling."



Robert Washabau

Conferences and Presentations

Pat Redig, professor and cofounder of The Raptor Center, was an invited speaker at the international meeting of the Eagle Conservation Alliance in Puebla, Mexico, in September 2007.



Pat Redig

He presented a paper on the infectious diseases of captive and free-ranging eagles and participated on a panel discussing research needs for eagles.

Post-doctoral fellow **Barbara Knust** presented “Drug Residue Avoidance in Cattle: Practitioner and Producer Survey Responses” at the annual convention of the American Association of Bovine Practitioners in Vancouver, British Columbia, in September 2007.

Four CVM radiologists were involved in the American College of Veterinary Radiologists Annual Scientific Meeting in Chicago in November 2007.



Kari Anderson

Kari Anderson was program chair, and **Dan Feeny** was the coordinator of the ACVR resident review session, where he presented a lecture on acute abdomen and collapse. **Laura Crews** presented the abstract, “Ultrasonographic Evaluation of Gall Bladder Disease,” and **Travis Saveraid** presented “Magnetic Resonance Imaging of the Stifle in Anesthetized Horses.”

Mark your calendar

Open House

Sunday, April 6, 2008
11 a.m.-4 p.m.

College of Veterinary Medicine
University of Minnesota St. Paul
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- Visit the **Veterinary Medical Center**, where thousands of dogs, cats, llamas, and other animals are treated each year.
- Learn about educational opportunities offered by the **College of Veterinary Medicine**.
- Visit **The Raptor Center** to see and learn about eagles, hawks, owls, and falcons.
- Visit the **Leatherdale Equine Center**, a new state-of-the-art facility dedicated to the health, well-being, and performance of horses.

Continuing education opportunities

For more information about any of the following continuing education opportunities, visit www.cvm.umn.edu/outreach, call 612-624-3434 or 800-380-8636, or e-mail vop@umn.edu.

DairyCOMP305 Online Training

April 14, 2008

Mather Lecture Series

■ **April 3, 2008:** Film Interpretation Session: Watch the Experts at Work, presented by Dr. Kari Anderson and Dr. Laura Ziegler

■ **May 1, 2008:** Cytology, presented by Dr. Leslie Sharkey

University of Minnesota St. Paul
Campus

Ecosystem Health

Presented by Dr. David Evers
April 24-25, 2008

University of Minnesota St. Paul
Campus

Minnesota Dairy Health Conference

May 20-22, 2008

University of Minnesota St. Paul
Campus

International Symposium on Rehabilitation and Physical Therapy in Veterinary Medicine

August 13-16, 2008

Hyatt Regency Hotel, Minneapolis

Allen D. Lemman Swine Conference

September 20-23, 2008

RiverCentre, St. Paul

In memory

Alphonse Kunkel, class of 1952, died at his Cold Spring, Minn., home on Sept. 17, 2007. Dr. Kunkel was a proponent of organic dairy farming before it was part of the modern agricultural landscape. A few years after graduating from the College, he established a practice in St. Michael, where he became a longtime resident and advocate of more exercise and roughage and less corn for healthier cows. In 1976, he served as president of the Minnesota Veterinary Medical Association. In the early 1980s, Dr. Kunkel left veterinary practice to serve as a nutritional consultant for dairy farmers. His work took him to Guyana, Poland, and Russia. Dr. Kunkel is survived by his wife, Joyce, three daughters, a son, three sisters, three brothers, eight grandchildren, and three great-grandchildren.

John L. Myhrom, owner of Animal Health Care Veterinary Clinic in Rochester, Minn., died March 17, 2007 in an auto accident north of Byron. Dr. Myhrom graduated from the College in 1984, worked in the Twin Cities, practiced with Dr. Larry Predmore for a short period, and opened Animal Health Care Veterinary Clinic in 1987. A small animal specialist, Dr. Myhrom ran his clinic much like a small-town doctor, taking phone calls late into the night and making house calls. He left behind his wife, Cindy, children, and two brothers.

Mary K. (Palm) Schlangen, class of 1998, died Aug. 10, 2007 in Brook Park, Minn., as a result of injuries sustained in a car accident. Mary was a resident of Two Harbors, Minn., and had a husband and two small children. Memorials may be sent to the Mary Schlangen Family Trust Fund, Wells Fargo Bank, 622 1st Avenue, Two Harbors, MN 55616.

Alumni news

Heather Case has joined the American Veterinary Medical Association (AVMA) Scientific Division as assistant director and national coordinator of disaster preparedness and response. Her responsibilities include oversight of the AVMA Veterinary Medical Assistance Teams (VMAT), policy coordination, and education and outreach. She will work with AVMA volunteers, VMAT members, the American Veterinary Medical Foundation, and various government agencies. Heather received her D.V.M. degree in 1998 and was a postdoctoral fellow, clinical instructor, and veterinary public health resident at the Center for Animal Health and Food Safety. Her experience also includes serving as a member of VMAT-5, where she gained firsthand emergency response skills, and as an AVMA science and technology fellow in the office of Congressman Robert E. Andrews from 2006-2007.



Heather Case and a therapy dog at a Veterinary Medical Assistance Team meeting in New Orleans in 2006. Heather is now assistant director and national coordinator of disaster preparedness and response for the Scientific Division of the American Veterinary Medical Association.

Christine N. Hoang has joined the AVMA as assistant director of the Scientific Activities Division. Her responsibilities include working with several AVMA councils and committees on issues relating to public health, zoonoses, and food safety. Christine received her doctor of veterinary medicine degree in 2007 from the University of Minnesota, where she is completing her master's degree in public health.

Kate Knutson, class of 1996, has been elected to serve a two-year term on the American Animal Hospital Association (AAHA) board of directors. Dr. Knutson is the co-owner and lead veterinarian at the Pet Crossing Animal Hospital and Dental Clinic in Bloomington, Minnesota.

Barbara Ault, class of 1997, has joined Alta Veterinary Clinic, Minneapolis, Minn., as lead veterinarian.

Michael Scott, class of 1986, was honored with the inaugural Merial Innovative Partnership in Teaching Award at the College of Veterinary Medicine at Michigan State University. The award was given in recognition of resourceful teaching that is characterized by excellence in innovation, creativity, enthusiasm, and collaboration, with an emphasis on teaching critical thinking skills. Dr. Scott is now an assistant professor of pathobiology and diagnostic investigation at MSU.

Ribbon cut for new Biosafety Level 3 lab

Cutting the ribbon for the Veterinary Diagnostic Laboratory's new Biosafety Level 3 facility on Jan. 10 are Sheryl E-Marshall, an ambassador from the St. Paul Area Chamber of Commerce, Trevor Ames, interim dean, Senator Steve Dille, Gene Hugoson, commissioner of the Minnesota Department of Agriculture, Bill Hartmann, state veterinarian and director of the Minnesota Board of Animal Health, Jim Collins, director of the Veterinary Diagnostic Laboratory, Rep. Alice Hausman, and Blaise Norton, an ambassador from the St. Paul Area Chamber of Commerce.



The lab adds to an arsenal that has made Minnesota one of the most prepared in the nation to respond to outbreaks of diseases that could potentially spread from animals to people—including the highly lethal form of bird flu.

Founding fathers dedicate Ben Pomeroy Student-Alumni Learning Center

The College hosted a grand opening and dedication event for the Ben Pomeroy Student-Alumni Learning Center in October. After a welcome by Trevor Ames, interim dean, Carl Osborne took the stage as master of ceremonies and Walter Mackey, Glen Nelson, Dale Sorensen, and Charles



Paul Cox and Walter Mackey of the class of 1951 were special guests at the dedication event.

Muscoplat reminisced about 60 years of College history.

Other speakers and special guests included former dean Jeffrey Klausner, Minnesota Senator and veterinarian Steve Dille, John Arnold, Carl Jessen, and four generations of the Pomeroy family.

Photos by Sue Kirchoff



Four generations of the Pomeroy family attended the dedication event. Ben Pomeroy is pictured in the photo in the background.

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