

On Call



SCHOOL OF
Veterinary Medicine
UNIVERSITY OF WISCONSIN-MADISON

A NEWSLETTER FOR THE FRIENDS OF THE UNIVERSITY OF WISCONSIN-MADISON SCHOOL OF VETERINARY MEDICINE

WHAT'S INSIDE?



Update on Braveheart

From near death to global glory

Close Attention Pays Off

Observant owners help dog survive



Life and Death Lessons

Police horse dies during a student's rotation and delivers an important lesson

Helping Wounds Heal

Scientists are looking at new ways to help heal chronic wounds

Playing Games to Learn

Professor creates an online game that helps students and veterinarians better understand Johne's Disease

Unexpected Generous Donation

Martha Pavcek leaves part of her estate to help students with their education



Doctor Wins Awards

Dr. Sullivan wins two awards that recognize her achievements to the school

A cat's love of plastic becomes a life threatening experience

Kennedy, an orange tabby cat, is known for his playfulness. When he started to slow down, his owners knew something was wrong. "You need to know this cat," said Tom O'Guinn, one of his owners. "His veterinarian said she has never seen a cat with prey instincts as strong as this one. He stalks everything. He even stalks us, thinking we're gazelles or something."

In addition to slowing down, Kennedy began to vomit and his owners called their local veterinarian, Dr. Tami Strom (DVM '06) at All Pets Vet Clinic. The doctor suggested waiting a day to see if things improved, but Kennedy got worse. The next day an ultrasound was performed and a blockage in his intestines identified. Dr. Strom told them to head to UW Veterinary Care as Kennedy's health was rapidly declining.

"I went to the UW hospital from All Pets, and by the time I got there, the emergency veterinarian knew who Kennedy was and everything that was wrong with him," said O'Guinn. "The communication between Dr. Strom and the UW was outstanding."

According to Dr. Robert Hardie, Clinical Associate Professor of Small Animal Surgery, intestinal blockage is pretty common in dogs and cats and can be life threatening. The longer a foreign object remains in the intestines, the more damage that can occur.

"Surgery to remove something an animal swallowed is one of the most common things we do," said Hardie. "Cats often eat string, floss or something they are playing with, but they are usually more



Kennedy and owner Marilyn Boland.

fastidious than dogs. On the other hand, dogs will eat anything that could be food. The animals have different reasons for what they do, but the outcome is the same." And that outcome is usually a visit to a hospital for emergency surgery. In Kennedy's case, he swallowed the small plastic ring that goes under a bottle cap.

"At first it wasn't clear he was going to survive, which was a shock to us," said O'Guinn. "He was only two-years old at the time. We were heartbroken, but everyone at the hospital was fantastic. They admitted him to emergency service right away and did surgery that evening. That night we received three to four phone calls telling us about his condition. They cared for us too, as they cared for Kennedy. The doctors knew how important he was to us."

Kennedy's condition went from guarded to promising in a few days, but he still wasn't eating. "Someone from the hospital called

and suggested we bring in his favorite food and toys to make him more comfortable," said Marilyn Boland, his other owner. "And when they discharged him, they provided us with a detailed report beyond anything I've ever seen, even for humans."

Before bringing Kennedy home, his owners had to "cat-proof" the house. "You can give this cat sushi grade tuna and he would rather have plastic," said O'Guinn. "We had to buy special pet-proof trash cans and always make sure we never leave any plastic laying around."

Today Kennedy is doing very well. He's back to stalking his owners with his playful spirit. Both O'Guinn and Boland are ecstatic he pulled through and thrilled with the treatment he received at UW Veterinary Care. "I've never experienced service like this," said O'Guinn. "The service was comparable to a five-star hotel."

"The Ritz Carlton," added Boland.

Lori Strelow

DATES TO REMEMBER

September 10, 2011

Tailgate 2011 (Badgers versus Oregon State)

September 18, 2011

Dog Jog

October 4–8, 2011

World Dairy Expo

October 20–23, 2011

WVMA Annual Convention

Need continuing education?

Visit the school's website:

www.vetmed.wisc.edu

PET TIPS

Bladder Stones

Have you noticed your male cat straining when he uses the litter box? Fall is the most common time of the year for a male cat to get a "block" or form small stones in the bladder that block the flow of urine from the bladder to the urethra. If you see your cat attempting to urinate more frequently or if he sounds like he is in pain please have him looked at by your veterinarian immediately.

Skin Reactions to the Sun

If your horse develops inflammation that progresses to painful lesions covered by crusts and scales after it's been exposed to the sun, the horse may be photosensitive. Sometimes this is caused by a lack of pigment in the skin, but more commonly it is due to the horse eating photosensitizing plants, such as St. John's Wort. To prevent or reduce the reaction, eliminate the photosensitizing agent, and keep the horse indoors during the day to avoid sunlight.

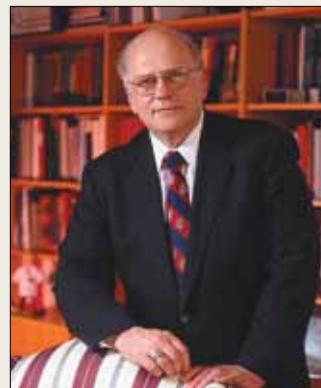
SVM Tidbit:

Yes, the veterinary school's Food Animal Production Medicine group makes farm calls. By identifying herd management bottlenecks, they can help solve nutrition, management, production and disease problems, which in turn improves farm economics. The group is nationally known for its expertise and solutions. www.vetmed.wisc.edu/dms/fapm

A MESSAGE FROM THE DEAN

A veterinarian's commitment to excellence

Veterinary medicine is a profession that offers a remarkably broad range of opportunities, and it is simultaneously rewarding and challenging. However, it carries responsibilities that are not to be undertaken lightly. The commitment of a veterinarian is well illustrated in the Veterinarian's Oath, administered to each of our graduating classes during our Investiture Ceremony: *Being admitted to the profession of veterinary medicine, I solemnly swear to use my scientific knowledge and skills for the benefit of society through the protection of animal health and welfare, the prevention and relief of animal suffering, the conservation of animal resources, the promotion of public health, and the advancement of medical knowledge. I will practice my profession conscientiously, with dignity, and in keeping with the principles of*



Daryl D. Buss

veterinary medical ethics. I accept as a lifelong obligation the continual improvement of my professional knowledge and competence.

Fulfilling that oath demands the best of each veterinarian, regardless of their chosen career goal. The goal of our educational program is to provide our students with the sound base they will need to succeed in any of

the opportunities available to them. That base must include more than scientific and clinical knowledge, since they will also need empathy, excellent communication skills, and emotional resilience in the face of sometimes sad and difficult circumstances. Those characteristics can be, to varying degrees, refined and enhanced in the course of our educational program, but one key factor is solely dependent on the individual. That factor is their level of personal commitment.

The common thread among the articles in this issue is the personal commitment to excellence, whether in clinical medicine, surgery, teaching, or research. That commitment is a key driver for creativity and innovation, but it also creates the quality and compassion of patient care that are hallmarks of veterinary medicine.

■ DEAN'S ANNUAL FUND FOR EXCELLENCE

The Dean's Fund provides flexibility for strategic investments in programs, projects and activities that advance, enhance and expand the mission of the School of Veterinary Medicine. The School's goal is to "Create the future of veterinary medicine through unparalleled excellence in education, clinical service and research for the benefit of animal and human health."

As you may know, state support for the university has waned in recent years. While state tax money does not constitute an overwhelming share of the School's budget, a decrease in funding prevents the School from making investments in strategic priorities like equipment that improves the diagnosis and care of animals with a wide range of diseases and injuries, scholarships that help support the next generation of veterinarians by offsetting our students' \$110,000

average debt load upon graduation and research support that improves the care, diagnosis and treatment of animals, often with applications to human health as well.

Unrestricted funds enable the School of Veterinary Medicine to respond to unexpected opportunities and unforeseen needs, provide ancillary support for faculty and staff enrichment, and make funds available for investment in programs, projects and activities that the Dean finds essential to the School's overall mission. Despite its relative youth, the UW School of Veterinary Medicine has emerged as one of the leading schools of veterinary medicine in the nation, advancing both animal and human health through research, teaching and clinical care.

Groundbreaking research in the areas of influenza and other infectious diseases, neurobiology,

ophthalmology, oncology, orthopedics, and production medicine is internationally recognized. Additionally, our renowned faculty provide a superior education to an exceptional student body.

Treatment of beloved family pets and valued production animals is provided by clinicians, students, and residents with the skill, knowledge, and experience to diagnose and treat these prized animals with genuine care and compassion using advanced technologies.

Together, all of us create the future of veterinary medicine. Says Professor Sheila McGuirk, "Our goal is to marry science with the soul, the head with the heart, and hi-tech with high touch." Invest in excellence for the benefit of both animal and human health. For information on giving: www.vetmed.wisc.edu/deansfund

Dr. Linda Sullivan receives coveted university award

Every year, the University of Wisconsin–Madison makes awards to various faculty, staff, and alumni for their outstanding achievements and positive impacts.

This year, the Wisconsin Alumni Association Award for Excellence in Leadership: College Level, which recognizes academic staff who display leadership at the college or school level, was awarded to UW School of Veterinary Medicine Clinical Instructor Dr. Linda Sullivan for her teaching, academic service, and community service.

Dean Daryl Buss and Associate Dean for Academic Affairs Christopher Olsen nominated Dr. Sullivan for her amazing accomplishments within the School of Veterinary Medicine (SVM). Dean Buss has worked with Dr. Sullivan for 17 years and described her as “a superb educator and committed leader of multiple programs that have enriched the School, the learning environment for students, and the Madison community.”

“She is a naturally gifted teacher, always thinking of what will most effectively help students learn rather than simply being concerned with



Dr. Sullivan helps a student examine a dog from the Pet Pals program.

the delivery of facts,” he said.

One community event Dr. Sullivan helped establish and currently manages is Dog Jog, an annual event that raises funds for local humane societies and the School’s spay/neuter program with shelters. She also uses Dog Jog to teach organizational skills to students as well as to discuss the importance of giving back to the community.

“The first year we had maybe 30 or 40 people,” said Sullivan. “I think we raised maybe \$150 for

the humane society but it was a start. Now it has just grown and grown and there are hundreds of participants. Typically we raise over \$25,000 and that’s really nice.”

“I’ve always thought that community service is really important and that goes back to my parents who were very active,” said Sullivan. “If they can do it as students they can certainly do it when they are out in practice.”

Sullivan emphasized that it isn’t only about her and that veterinary

Sullivan Receives Additional Award

Dr. Linda Sullivan, Clinical Instructor in the school’s Department of Pathobiological Sciences, received the Walter F. Renk Distinguished Professor Award on April 30, at the UW School of Veterinary Medicine’s Celebration of Excellence. This award is given to the faculty member who is voted by faculty colleagues to have made outstanding contributions to the school’s mission and academic programs, having demonstrated exemplary performance within the school.

medical students are also heavily involved. “They do all the work to make it happen and it’s a great opportunity for them to see that community service can be fun.”

Pet Pals, another program that Dr. Sullivan manages, involves volunteer dogs and their owners visiting hospitalized children at the American Family Children’s Hospital. Dr. Sullivan sees a learning opportunity everywhere, so she turned this program into a learning opportunity for students by

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Animal lover makes estate gift to school of veterinary medicine

Martha Pavcek lived a very simple life in a small modest house on 40 wooded acres. According to neighbors, Martha would roam around her property while she fed the birds and animals and picked fruit from the trees.

Martha was a private individual, who shared little of her life with others, but upon passing, shared all of her wealth with the things she cared about. She donated \$2.7 million to UW–Madison, with half of the money designated to stem-cell research because she wanted to spare others from the cruel complications of Alzheimer’s disease, the fate that took her sister’s life. The other half was gifted to the School of Veterinary

Medicine in recognition of her love of wildlife and will be used for scholarship support for professional veterinary medical students.

“The highest priority for the Martha Pavcek Scholarship will be for veterinary medical students who are also pursuing a PhD degree or an MPH degree. We know that Ms. Pavcek had a keen interest in supporting veterinary medical students and in supporting cutting edge research in stem cell biology. Targeting her scholarship toward veterinary medical students who are also pursuing an additional advanced degree is a way to link and connect her priorities,” said Daryl Buss, dean of the UW School of Veterinary Medicine.

Prior to her estate gift, little was known about Martha, and her gift came as a complete surprise to UW–Madison. Martha earned her bachelor’s degree in education and her master’s in both from the UW–Madison, and taught science in the Milwaukee public schools for many years. Her sister was at one time a principal and passed away in 2006 at the age of 93. Her brother was a scientist, who died in 1964 at the young age of 52.

Martha’s generosity will make a remarkable impact, honoring her final request to provide others with the means to continue her care of those things she held dear to her heart.



Martha Pavcek in 1961

Scratching takes owners and doctors on a medical journey

Duke, a two-year-old cocker spaniel, was presented to UW Veterinary Care in January, after his owners, Scott and Colleen Oren, noticed he was constantly scratching his neck.

Duke was inspected for fleas and infections, but nothing was found. Doctors thought his itching was likely due to allergies and started him on cyclosporine—a medication designed to stop the immune system from over-reacting. But the Orens noticed other changes in his behavior and brought him back to Madison.

“We thought it was probably just a reaction to the cyclosporine but the owner was really nervous and said ‘I really want someone to look at him because I think something is not right with him,’” said Dr. Elizabeth Alvarez, who first



Colleen Oren shares her love with Duke.

examined Duke.

Dr. Alvarez’s team performed blood and urine tests to rule out infection and metabolic disease. All test results were normal. However, on the following day, Duke reverted to his lethargic state and wasn’t eating. Back at the hospital, doctors performed more tests to rule out liver disease and pancreatitis. They also took x-rays for evidence of a foreign body and asked the neurology service to examine him.

“Neurology thought he seemed quiet for a two-year-old dog, but otherwise the rest of his examination was normal,” Dr. Alvarez said.

Back at home, Duke collapsed and was brought to the Emergency Room. “We are sitting here with this dog and we just thought ‘what in the world?’ Every single test we have done on

this dog is normal, but he’s just not himself. The owner is very, very astute and knew there was something not right with him.”

At this point, Dr. Helena Rylander and Dr. Lisa Lipitz, the UW Veterinary Care neurology service, became involved. When Duke’s first neurological exam was performed, he was a little lethargic. When he was examined after his collapse, he was very uncoordinated and had abnormal responses to his surroundings. Doctors ordered an MRI, and finally Duke’s strange and frustrating illness was confirmed.

“What they found was a congenital abnormality that started to show up as a clinical problem in a short three days. He had no signs at all of having a disease prior to this, but when clinical signs

became more severe it was obvious that his problem was in his brain and the MRI confirmed this suspicion,” Dr. Alvarez said.

Duke had severe hydrocephalus (a build-up of spinal fluid inside the skull) and also a herniation of the cerebellum (a part of the brain, being pressed outside its normal location). Dr. Rylander performed emergency surgery to buy some time to think about what was best for Duke. She decided to remove part of Duke’s skull to release the pressure on the cerebellum, and in doing so, reduced the risk of herniation.

“After that surgery, Duke improved fairly steadily over the next couple of days,” said Dr. Rylander. “He was still a little uncoordinated but it was very subtle. He went home on some medications that hopefully will reduce the production of the spinal fluid and improve the absorption of the spinal fluid. It is an unusual case. A lot of dogs walk around with hydrocephalus and they never have any problems. They can sometimes have neurologic problems and occasionally show sudden clinical signs like in Duke’s case.”

“It was so important that the owner was so connected to her dog that she was able to say ‘he is not normal, he is not himself’ and that was the main symptom he was showing throughout all of this,” said Dr. Alvarez.



Wisconsin State Fair

Celebrate UW–Madison’s long history of service to the Badger State at the Wisconsin State Fair on Wednesday, August 10, 2011! Join Bucky, the UW Marching Band and alumni from around the world on Central Mall for science demonstrations, musical performances and athletic contests. Visit statefair.wisc.edu to learn more.

Your visit to the State Fair can also help others. To benefit Milwaukee-area children who lack school supplies, UW–Madison is sponsoring a school supplies drive. Simply bring new, unopened school supplies to a State Fair admissions gate, and you’ll receive a voucher for \$5 off a Midway “Ride All Day” wristband (while they last). One discount per item donated.

For more information on the Wisconsin State Fair, visit www.wistatefair.com.

SULLIVAN *continued from page 3* having them participate in medical evaluations and behavior testing of prospective therapy dogs.

“It is a great win-win situation because these dogs are very tolerant—if it takes you two minutes to get the cap off the needle they don’t care, if you are trying to feel a vein they think it’s attention. They are great dogs for our students to practice doing exams and listening to heartbeats and taking cultures,” Sullivan said.

Dr. Sullivan has also worked

to improve the school in other ways by serving on the Faculty–Student Liaison Committee, the Academic Planning Committee, the Curriculum Committee, the Scholarships and Loans Committee, and as the current advisor for the Companion Animal Club.

“In all of these settings, [Dr. Sullivan] is consistently a voice of measured reason and confidence for a positive outcome,” say Deans Buss and Olsen.

“I’m really proud to represent the school because a lot of the

things that have happened—the Dog Jog, Pet Pals, all of our curriculum change, which has been a huge effort, a lot of people have been involved with that,” Dr. Sullivan said. “It’s not just me, it’s a lot of people in this school—faculty, staff, students—that have played huge roles in all of this.”

Dr. Sullivan and her hard work and achievements were celebrated at a Chancellor’s reception in April 2011. Congratulations, Dr. Sullivan!

Kathi Gadow

Police horse delivers a lesson in medicine and sorrow

Along with the science and medicine of their chosen profession, veterinary students must learn that they cannot save every patient. Fourth-year student Brett Darrow recently faced this fact of life while working in UW Veterinary Care's large animal hospital.

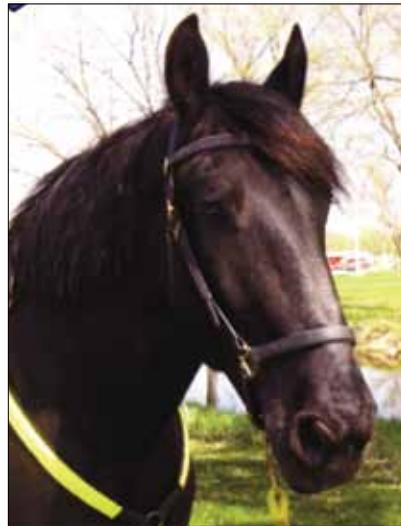
Darrow first met Kandour, a Percheron draft horse and member of the Madison Police Department's Mounted Patrol, in October 2010. The police horse was brought to UW Veterinary Care because he was having trouble standing and difficulty swallowing.

Dr. Sheila McGuirk, professor of large animal medicine and senior clinician on the case, diagnosed Kandour with encephalitis—inflammation of the brain.

Kandour's condition stabilized when he was supported in a sling and hand-fed at the hospital, but there was little chance of a complete recovery.

Darrow knew that death was something he would learn about during his four years of veterinary school. "To me, it's a part of life," explained Darrow. "But it's difficult because every situation is different. You see the people who have invested their lives in caring for these animals and you can't help but feel deep sadness when there is very little hope for a full recovery. On the other hand, I feel good in situations where we are able to do everything we can to help the animal."

"This case was unusually complex because the horse was leased to the police department," McGuirk said. "In addition to his police family, he had an owner and many people who loved him. The officer in charge of the mounted unit was trying to hold all that together, understand the medical condition, and make difficult decisions. It was really important that Kandour's clinical condition was understood so that there was good communication with all of the people who were grieving about



Kandour

the potential loss of this horse."

Unfortunately, Kandour needed to be euthanized. But Darrow remained positive about the learning experience. He knew that providing scientific evidence and facts as well as different options to the people who cared for Kandour were most important. "There's going to be a certain amount of emotional attachment with animals and that is why we get into it, that is why people go to vet school because they care so much for these animals. But at a certain point, you

have to keep your head and make a logical decision and carry on with what's best for the animal and the owner," Darrow said.

McGuirk kept pictures of Kandour and gave several of them to Darrow, signaling to him that she was equally affected by this difficult and emotional case. "In talking to her, I was a little bit taken aback by how attached she was to Kandour and the situation," said Darrow. "Despite the number of patients she's cared for, it's immediately obvious she has not lost her connection to her patients and clients. As a student, I was inspired. I kept reminding myself to hold it together but, after seeing Dr. McGuirk, I almost questioned myself and wondered if I should be showing more outward empathy in this case."

"I was deeply touched by the horse and his attendants—police officers and owner," said McGuirk. "A connection doesn't always happen, but there is usually some thread that makes a client, animal, student or all of the above special."

McGuirk also stresses the importance of slowly and respectfully

answering an owner's questions. "It is another part of the clinical training of students who often come to this level of their training and think that it is all about having a diagnosis and a treatment protocol," she said.

So what kind of advice does Darrow give to other students who may encounter a case like this one? "Don't give up because it's part of what our jobs are. As veterinarians we are going to have to make the decision about when it is best to humanely euthanize an animal or whether we think that we should subject an animal to living in its current condition in hopes that we can reverse a disease," Darrow said. "You can't take it hard because I think eventually you'd lose your mind."

"Losing Kandour was very difficult," said McGuirk. "Experience helps you prepare for your next client. You try to learn everything you can to improve your patient care, your client communication, and your student teaching. It is a part of being a veterinarian, but it will never be easy."

Kathi Gadow

Scientists aim to re-engineer the surface of a wound

For most of us, a cut, a scrape, or a break in the skin means a simple cleansing, a bandage, and the assumption that the wound will heal within a week or two. For others, including those with diabetes, the process of healing is not so simple. Chronic wounds are common and represent a \$15 billion annual cost to the healthcare burden in the U.S.

Now, a group of scientists at the UW School of Veterinary Medicine have begun to investigate healing solutions. Jon McAnulty, Chuck Czuprynski, and Dick Dubielzig, along with Nick Abbott, UW College of Engineering, Ronald Raines, UW Department of Biochemistry, Mike Schurr, UW School of Medicine and Public Health, and Chris Murphy from the University



A biological dressing impregnated with silver nanoparticles is applied to a second degree burn.

of California-Davis, have been awarded a \$4 million dollar RC2 (Recovery Act Grant) to re-engineer the surface of a wound at the molecular level.

When skin does not close around a wound, the area is left open to infection, which can result in a series of medical problems.

People with diabetes often have skin wounds that will not heal and those who are bedridden or wheelchair bound often experience debilitating bed sores. Now, there's new hope.

"Instead of treating a wound that already represents an

continued on page 6

Gaming as teaching strategy: Johne's problem solving on virtual dairies

"Johne's disease" are two words a dairy farmer never wants to hear, and UW School of Veterinary Medicine Professor Michael Collins' goal is to make sure farmers are hearing them less often. According to a 2007 United States Department of Agriculture survey, approximately 68 percent of dairy herds are infected with *Mycobacterium paratuberculosis*—the bacteria that causes Johne's disease. An infectious disease that limits production and increases herd cull rate, it is hard to diagnose because signs and symptoms are usually not noticeable until cows are at least two years old.

Collins' research on paratuberculosis, more commonly known as Johne's disease, inspired him to create JD-Consult, a way for students to learn about Johne's disease control by combining two subjects that SVM students hold dear to their hearts—animals and the Internet. With help from the UW Department of Instructional Technology and the SVM's Teaching for Learning Center, Collins created JD-Consult, a simulation game



students play online to learn more about Johne's disease, its effect on animals, and how to control it. The game is now available for students and practitioners on the SVM Continuing Education (CE) portal (2 CE credits).

Collins' game presents five dairy farms, each a different size and location, with a different Johne's disease prevalence, management style, and business goal. Students must visit each virtual farm, listen to the farmer, explore the operation, and then create cost-effective Johne's control recommendations based on what they

learn about each farm.

If students get stuck or need help, they can always ask for "A Hint from the Boss." But Collins advised that students should be warned and use this option sparingly—two points are deducted per hint. After students give their opinions on each of the five farms, the "Boss" (an avatar) critiques what the students have done, awarding up to 20 points per farm; that makes a total of 100 possible points for the game. If the ideal score isn't reached, students can play the game again in order to improve

their score—if a score of 90 is reached, students become a partner in the virtual practice; Dairy Consultants of America.

"Gaming concepts challenge learners to attain a passing score or improve their score by repeated attempts; in effect, trying to model expert behavior," Collins wrote in his 2010 AABP Proceedings article "Practice Makes Perfect." The "teachable moment" happens when a high achiever, like a veterinary student, gets a low score.

By using an avatar, the game's script can be modified if needed, by none other than Collins himself. While JD-Consult is avatar and computer programming based, once students arrive at one of the virtual farms, real photographs from an existing farm are shown.

"In the end, it's about translating this learning onto Wisconsin dairy farms," Collins said. "For me, if I can't connect the research findings to on-farm applications and then to a teaching mission, I haven't fulfilled my goals. I want to see that continuum happen."

Kathi Gadow

WOUND *continued from page 5* unhealthy cellular environment, we are changing the environment," said McAnulty. "This concept is the big umbrella that we are investigating and under that umbrella, there are several approaches being studied by the many different labs."

McAnulty's and Czuprynski's labs are focused on antimicrobial solutions. "Chronic non-healing wounds are colonized by bacteria and can't be closed," explained McAnulty. "One powerful current approach is to use commercial products that are termed biological dressings since they contain biological components that speed healing, but 20 percent still remain infected."

In order to eliminate infection, McAnulty and Czuprynski are employing silver nanoparticles for their antimicrobial affect.

Collaborating with Abbott and Agarwal from the College of Engineering, they are adhering silver to a nanometer thick film that is constructed away from the wound and then applied to its surface. "This might be considered to be similar to a super thin layer of crinkly cellophane," said McAnulty, "but many times thinner. It is like a see-through membrane that attaches itself to the wound surface."

In a possible commercial application, their lab has adhered a nanometer thick film with silver particles onto a collagen-based product. When applied to a wound, the silver particles help to eliminate the bacterial infection on the surface while the collagen helps repair the skin. For other wound types, they can use a film with different properties to immobilize growth

factors and promote healing.

"These films are biodegradable, which is great because the degradation of the film causes a time release of the characteristics we want," McAnulty said. This product idea has spun into a start-up company, Imbed Biosciences, which will seek opportunities to integrate this technology into other commercial products. Clinical trials may be six to eight months away.

While McAnulty and Czuprynski are working on antimicrobial solutions, additional researchers are investigating other ways to re-engineer the surface of a wound. This large collaborative group manages to meet weekly through an online system to update information and share ideas.

"For the future of wound care, it might look like a system allowing custom therapy for a

wound depending on the desired outcomes," said McAnulty. For example, it may start with an antimicrobial treatment to remove a biofilm but then be modified (or engineered into a single wound treatment with time release characteristics) to reduce scarring (burns, keloids in humans, etc), preferentially promote epithelial cell coverage (chronic ulcers), or increase vascularity (ischemic problems due to poor blood vessel content).

"Eventually, all of the labs' efforts could layer upon one another and become interfaced in a single product or a system of products," said McAnulty. "It is a big cohesive, collaborative group." And hopefully this group will be able to make a positive change in wound environments.

Lori Strelow

UW alumna continues to create her own path

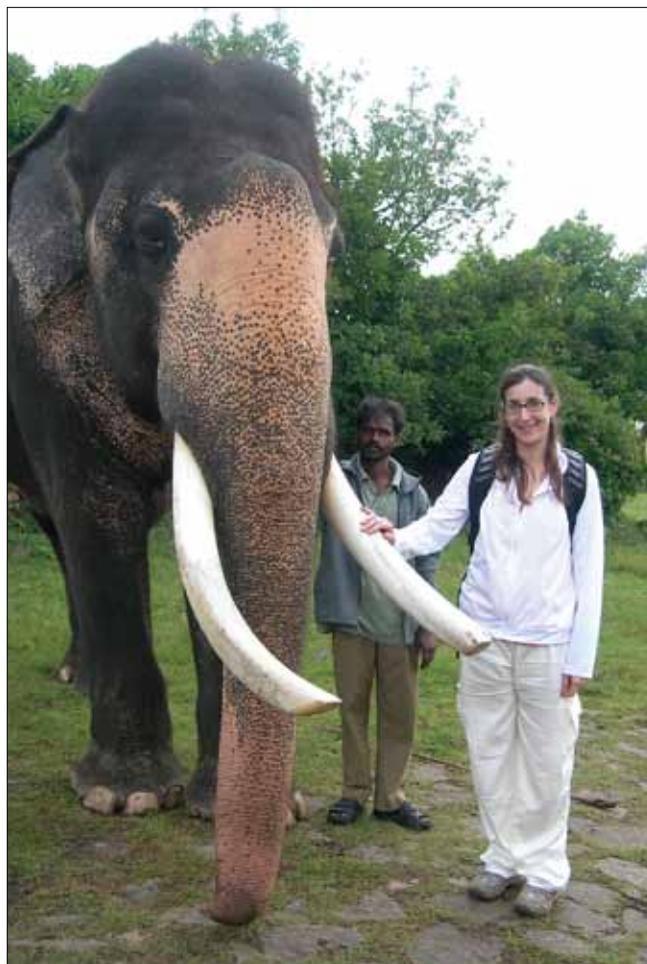
From the West Coast to the East Coast with a stop in between, UW School of Veterinary Medicine alumna Laura Richman discovered happiness in classic detective work fashion.

While a student at the UW School of Veterinary Medicine, Richman fell in love with pathology. “When I took the course, I knew before it ended...,” Richman said. “I loved it. I always enjoyed detailed, investigative work. It was a perfect fit for me and as I turned in my slide box, I said, ‘this is what I want to do.’”

Today Dr. Richman is vice president for research and development for translational sciences at MedImmune in Gaithersburg, Maryland. But the path to her dream career was not a direct route.

After receiving her DVM at Madison and starting her pathology residency at the University of Tennessee, Richman traveled to Washington D.C. with her military husband and joined the pathology residency program at the National Zoo. Her life changed when she met Kumari, a 16-month-old elephant who died mysteriously after a five-day illness. Richman was part of a team that performed a detailed necropsy on Kumari that pointed to an unknown virus as the cause of the illness. Persistent and inquisitive, Richman needed an answer, and so began her investigation leading to an understanding of elephant endotheliotropic herpesvirus (EEHV).

Studying this virus became her passion. “While there is commonality in herpes viruses across the board, the elephant situation is



Dr. Laura Richman with an elephant in Kerala, India.

slightly different,” said Richman. “Why would an elephant carry a virus that kills it?”

Her interest in EEHV took her to Gary Hayward, a molecular virologist at Johns Hopkins School of Medicine who studies herpesviruses in humans and chimpanzees. Richman joined his team. “Being in a medical school, I was exposed to human disease research,” said Richman. “I was the odd ball working on an elephant disease.” While at Johns Hopkins, Richman earned her PhD and was exposed to translational research for human disease and a new branch in her career. She still serves as a consultant to the National Elephant Herpesvirus Laboratory and joins them on field trips around the globe, but most of her energy is spent with human translational medicine.

Because of her desire to have the resources and the opportunities necessary to investigate the problems of interest to her, Richman decided to join MedImmune. In 2002 when she started, MedImmune was a relatively small company. Today Richman oversees the work of more than 200 scientists.

“We’re trying to develop innovative medicines for human diseases with unmet medical need,” Richman said. “Understanding what we can do in animal models helps us predict what will happen in people. Do we need to collect tumor biopsies? Is the drug getting to the tumor? Hitting the target? Killing the right cells?”

“Every day is a ‘wow’ moment for me. When you have a success—

when something we’ve predicted translates to a positive pharmacodynamic or clinical outcome, that is a wonderful feeling.”

Richman’s path from veterinary medicine to human translational medicine may not be a common one, but keeping an open mind and following her passion has led her on an interesting adventure. Richman said “The University of Wisconsin SVM has always been instrumental in creating the optimal environment for career exploration by focusing on the needs of the students and supporting their dreams.” Reflecting back on her career, Richman’s advice to all veterinary students is to undertake all clinical rotation opportunities with an open mind. “You don’t know what is going to strike you,” she said. “Don’t turn down any opportunities.”

Lori Strelow



A warm welcome and congratulations to our new DVM, MS and PhD graduates. This may be your first *On Call* outside of the School of Veterinary

Medicine, I hope you enjoy reading about things happening inside and outside the school.

As I think about how the School serves our new alumni—as well as all of our previous graduates—I am excited to announce Badger DVM Connect, a new mentorship/networking database. Our alumni advisory board surveyed alums and according to the results, creating a database to help us identify mentors for potential and current students, as well as providing a place where you can connect with fellow alumni was a top priority.

Another use for this database is to serve animal clients around the country. Occasionally animal owners call us asking for a UW-trained veterinarian in their area. With your permission, we can provide potential clients with business information for our DVM graduates who “match” what the client needs based on the information in the database. (Consider it free advertising!) For more information and to get started, please visit www.vetmed.wisc.edu/alumni.

It says a lot about you and your advisory board that you wanted to support those interested in joining the profession. But I also hope you will use the database as a networking tool if you are looking for your University of Wisconsin colleagues as a resource.

Our relationship with you does not end at graduation. Think of the School as a place for many resources and this new database is just one. Please let me know if there are other ways we can keep you connected—I always enjoy hearing from you!

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On Call

SUMMER 2011

A NEWSLETTER FOR THE FRIENDS OF THE UNIVERSITY OF WISCONSIN–MADISON SCHOOL OF VETERINARY MEDICINE

Braveheart warms the hearts of many

Back in March 2011 when the doctors and technicians at UW Veterinary Care first met Braveheart, he was an unknown, previously unloved and basically forgotten dog. He was found in a dumpster, where he was left to die. Braveheart was severely malnourished, full of worms and infested with parasites. His hair was spotty at best and open sores covered much of his skin.

The rescue group, One Starfish Rehoming Connections of Columbus, Wisconsin, found him on a “dog death row list” and reached out to him. “I have a soft spot for the fixer uppers,” said rescue owner Marti Houge.

As weeks went by, Braveheart made progress. In the beginning

Dr. Daniel Foy, emergency & critical care fellow at UW Veterinary Care said, “Unfortunately, I do think it is a far cry to say he is going to pull through everything. I’m cautiously optimistic.”

Fast forward to today and Braveheart is a very well known and loved dog. During his stay at UW Veterinary Care, one of his fans created a Facebook page and he acquired 11,633 friends. Both television and newspaper media covered his story that reached out to a caring audience. Over 500 people sent cards, gifts and donations to help Braveheart’s struggle to survive. During his three-week stay in intensive care, Braveheart received over \$20,000 in gifts for his medical bills.



Left, Braveheart struggles to survive. He received constant care from the UW Veterinary staff. Right, Braveheart after his weekly check up and weigh in. He is only four pounds short of his weight goal.

Braveheart is four pounds short of his goal weight and his hair is growing back. “He looks a lot better to us,” said Houge, “Although he would probably look awful to

anyone who hadn’t seen him previously. He is a very sweet, loving guy, and I think the staff at the Vet School have spoiled him a bit. And he certainly deserves to be spoiled.”