'SCOPES

FROM STETHOSCOPES | TO MICROSCOPES | TO THE SCOPE OF THE COLLEGE

News from Cornell University's College of Veterinary Medicine
October 2011

2011 ANNUAL REPORT |

Innovations with Impact

Making today better and building bridges to tomorrow

Cornell University

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CORNELL UNIVERSITY COLLEGE OF VETERINARY MEDICINE

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ON THE COVER: The College is committed to leading the profession through meaningful innovation.

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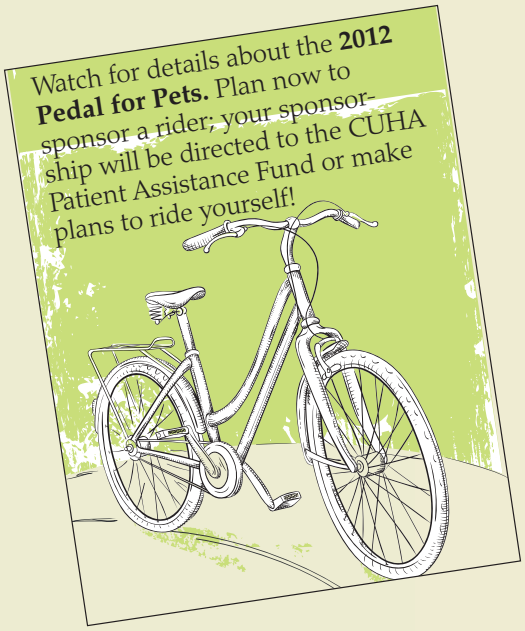

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Innovation with impact…

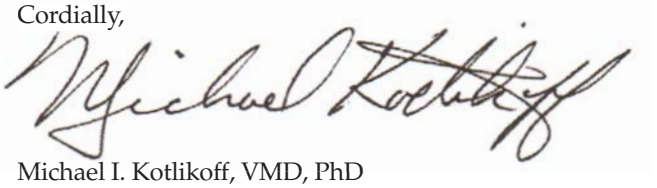
This year celebrates the 250th anniversary of the formal establishment of the veterinary profession with the founding of the first veterinary college in Lyon, France. The effort began with a group of experts disseminating knowledge and pursuing discovery on working and food-producing animals and has grown to one of almost unparalleled breadth. Today veterinary medicine encompasses education, discovery, and patient care covering domestic animals, wildlife, and increasingly the interface between humans and animals in our complex and challenged environment. The range of our activities presents enormous opportunities, but equivalent challenges. On the one hand, as we increasingly understand the vital nature of human-animal interactions and negotiate the tensions of productivity, welfare, and sustainability, our profession becomes increasingly relevant; on the other, the value and consequence of veterinary medicine derives from our ability to produce practical advances and to deliver relevant information that will shape and guide society's choices across the entire landscape of animal disease. Our drive to innovate—to discover, and translate these discoveries into practical advances—is the focus of this issue of *'Scopes*. Cornell takes enormous pride in the innovations that have been forged by our students and our faculty in education, medical delivery, and disease discovery, and in this issue we highlight some of those.

As you'll see on the pages of this issue, in our classrooms, exam rooms, and laboratories, and in our engagement outside of the campus, faculty and students are immersed in development and discovery. From improvements in hands-on training and assessment of that training to development of courses that motivate and educate middle school students about conservation medicine to research that helps elite equine athletes breathe easier and improves our understanding of cellular transformation, our faculty and students are delivering and advancing knowledge. In doing this, we rely enormously on the strength and quality of Cornell, a great university with a unique commitment to practical engagement. We are indeed a small profession and progress requires and is enriched by collaborations with others: chemical biologists, physicists, engineers, computational biologists, and experts in education, to name a few. Similarly, you will read of critical international partnerships that leverage the strength of other institutions, engage effectively with partners in industry, and forge essential connections with the public.

A traditional and ongoing strength of our College has been the commitment to Life Sciences, serving as the foundation for high impact discoveries like a new assay for Lyme disease, insights into the genesis of cardiac arrhythmias, and the unique reliance of cancer cells on a specific energy source that suggests immediate applications. As you will see in the enclosed Annual Report, in a daunting environment for science funding, researchers at the College continue to be enormously successful, driving NIH-funded research at Cornell's Ithaca campus and participating in increasingly collaborative programs with our medical school colleagues. At the same time, Cornell's reputation rests equally on its almost 150 years of educational innovations, which continue to thrive in our classrooms and teaching hospital. At a time of significant discussion within the profession regarding the sustainability of veterinary education, its ability to change to meet societal needs, and the emergence of lower cost, for-profit educational institutions, Cornell is doing what it has since James Law arrived–advancing and setting a standard for veterinary education. I am pleased to report that self-examination, creativity, and yes, innovation, are in fine feather in Ithaca, and that we are actively engaged in improving on a legacy of success.

Working for today, with an eye on tomorrow: innovations and applications. I hope you enjoy this issue of *'Scopes*. As always, I welcome your calls and emails.

Cordially,

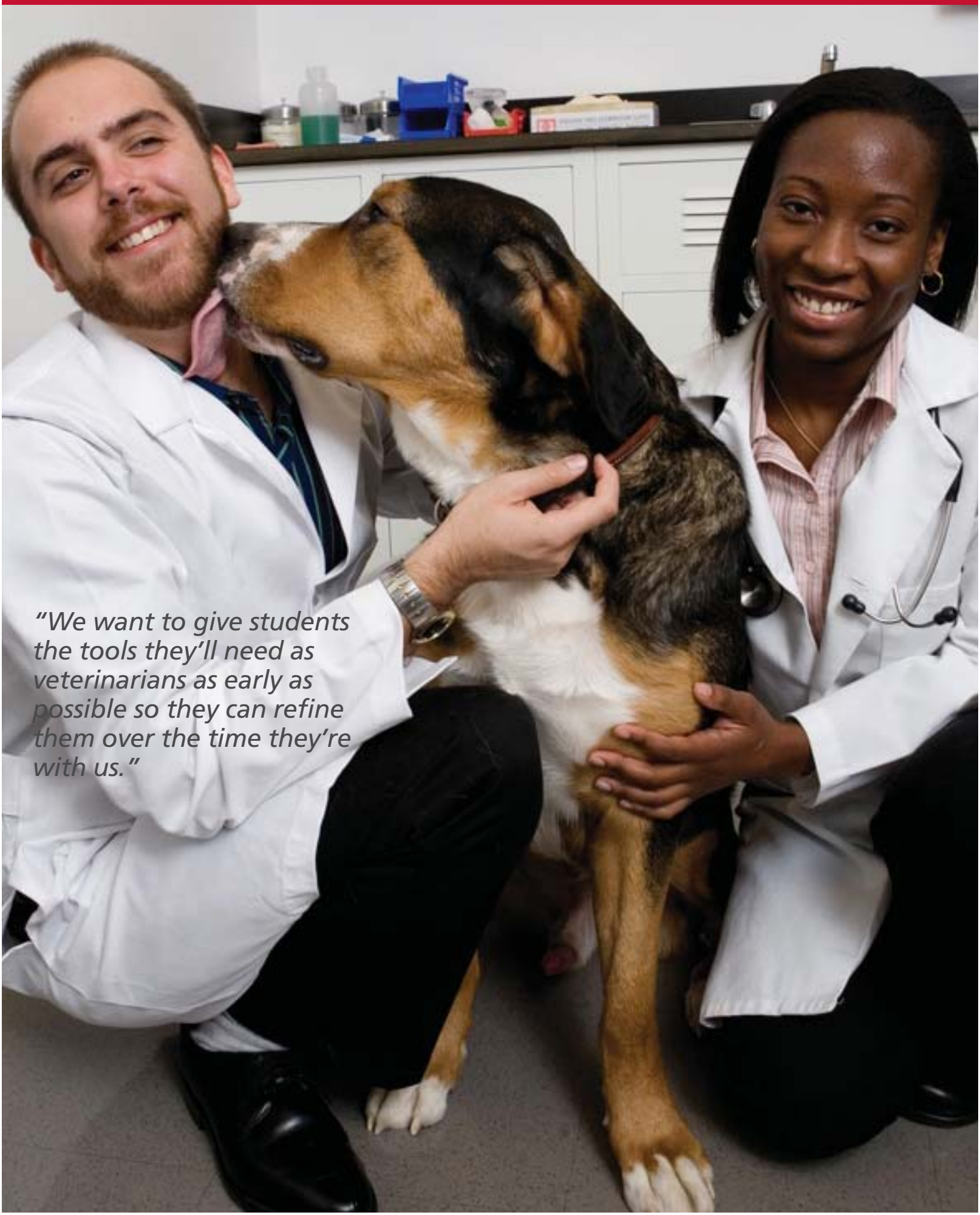


Michael I. Kotlikoff, VMD, PhD
Austin O. Hooey
Dean of Veterinary Medicine

INNOVATION in the CLASSROOM

prepares students for clinics and professional life

Whatever their background, most new veterinary students share one desire: to work with animals as soon as possible. Continuous modifications and improvements to the curriculum—in response to input from faculty, students, alumni, and employers—have resulted in a history of classroom adaptations in Cornell's veterinary curriculum that continually bring students closer to the action sooner.


“We want to give students the tools they’ll need as veterinarians as early as possible so they can refine them over the time they’re with us.”

"We want to give students the tools they'll need as veterinarians as early as possible so they can refine them over the time they're with us," said Dr. Carolyn McDaniel, veterinary curriculum instructor and Foundation Course VII leader.

Last Fall, the College introduced a new set of procedures in which first-year students have opportunities to administer medication under supervision. In addition, other recent changes in Course VII are serving to introduce students earlier to technical skills and instrument and suture handling, which will better prepare them for surgery courses that come later in the curriculum.

"Surgical skills are hard for students; there's a steep learning curve," said Dr. McDaniel. "Past students got their first surgery experience in their third year. Now incoming first-years learn correct instrument handling from surgeons in their first month at Cornell, with subsequent labs providing more practice and confidence."

In response to student suggestions in course evaluations instructors introduced discussion sections to the ethics and animal care module. Small groups of students discuss ethically charged scenarios and share perspectives. The module's latter portion now includes new lectures and discussions on animal nutrition. The Community Practice Service (CPS) began offering underclassmen new opportunities to observe appointments run by fourth-year students and to practice communicating with clients by conducting brief patient-history interviews on camera. Peers and faculty use the recording to offer students constructive feedback on communication skills. In addition, second- and third-year students must navigate new simulated client interactions involving actors playing clients with varied temperaments.

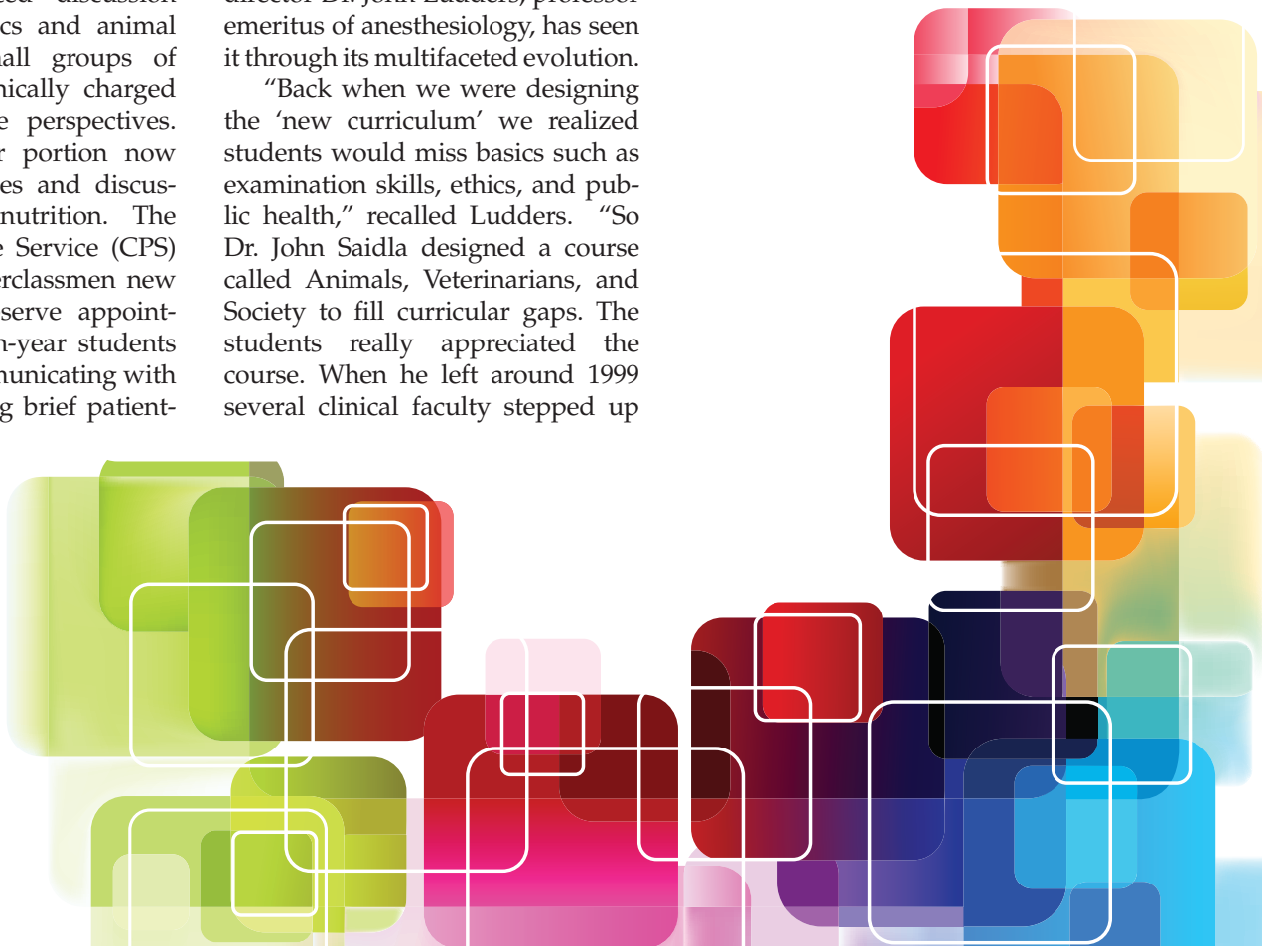
These classroom updates aim to build solid foundations in both the competence and confidence they will need in their next stage of training and professional life.

"In teaching I often ask myself and my students what makes someone a great veterinarian"

Course VII was key to curriculum updates at Cornell nearly 20 years ago. A foundation course, its six sequential sections span students' first 2.5 years. Former course director Dr. John Ludders, professor emeritus of anesthesiology, has seen it through its multifaceted evolution.

"Back when we were designing the 'new curriculum' we realized students would miss basics such as examination skills, ethics, and public health," recalled Ludders. "So Dr. John Saidla designed a course called Animals, Veterinarians, and Society to fill curricular gaps. The students really appreciated the course. When he left around 1999 several clinical faculty stepped up to help lead and refine the course." Course VII continues to offer a flexible way to prepare students for clinical practice by covering essential material not found in other courses. The course has a long history of being responsive to changes in the profession. Course leaders from Dr. Saidla to Dr. Nita Irby have guided the growth of course VII. Last year's developments marked the latest steps in an ongoing evolution.

"In teaching I often ask myself and my students what makes someone a great veterinarian," said Dr. McDaniel. "There has to be a knowledge base, but they also must have technical hand skills, a strong sense of ethics, an appreciation for their role in society, and the ability to communicate effectively. Much of the knowledge base is built in the other courses. We meet students when they first walk in the door and begin equipping them with skills they'll need in the clinics and beyond. This kind of course didn't exist when I was in school. I'm very pleased to be a part of it at Cornell."



south of the Border

Students hone their skills and serve society in a new program launched in Mexico

It's easy to talk about problems that need fixing. It's especially easy to assume that someone else will fix them. Taking responsibility, though, well that's usually a different story, unless you happen to be a Cornell veterinary student passionate about putting a dent in pet overpopulation.

In June, seven Cornell students and one fellow veterinary student from the University of Guelph headed to Mexico through the newly launched ShelterVet program. The result, according to one of the program's founders, Dr. Paul Maza, was a win-win scenario for all involved: students were provided with multiple opportunities to hone their primary care and spay/neuter surgical skills and the pet population in Mexico received a much-needed deterrent.

ShelterVet is an offshoot of MarVet, a program that trains veterinary students in marine animal medicine. Designed to emphasize the significance of companion animal medicine and population control in countries outside the U.S., ShelterVet explores the well-being of the animals themselves, public health, and the health of the ecosystem as exploding feral

populations of companion species threaten surrounding natural ecosystems and the wild species that are native to the environment.

"Under the direction of Dr. Maza, ShelterVet 2011 in Mexico was particularly successful, and represents the first time that this workshop has been conducted independently as a stand-alone initiative," said Dr. Raymond J. Tarpley, a senior associate professor at Texas A&M University and founder of MarVet. "We particularly appreciate the grant support we received from Cornell's Feline Health Center, which permitted an expansion of ShelterVet's impact in Mexico. We look forward to possibilities for conducting ShelterVet in other venues that introduce veterinary students to global conservation medicine and the contribution our profession can make in underserved regions of the world."

This year, ShelterVet collaborated with CoCo's Cat Rescue in Playa Del Carmen, Mexico, to set up and run a spay and neuter clinic. During the five-day experience, students spent two days at Tierra De Animales, a dog rescue facility in Cancun, doing physical examinations, vaccinations, baths, parasite control, and other medical treatments for more than 100 dogs. During the final three days, students ran a surgical clinic at CoCo's, where they treated several animals with life-threatening infected uteri and other animals that were infested with parasites and dehydrated from viruses.

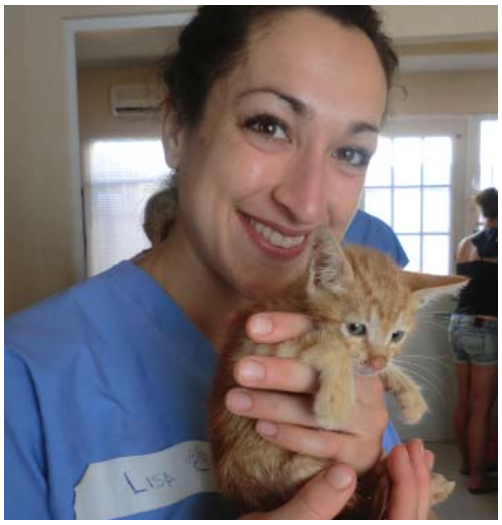
"The interactions between the Cornell team and the medical staffs in Mexico were very important," said Dr. Maza. "This was new territory. We weren't sure what to expect in terms of language barriers and receptiveness. We found genuine enthusiasm and excellent teachers who were impressed with the level of medical and surgical competence, collegiality, and professionalism that the student team demonstrated."

In addition to hands-on work that emphasized proficiency in sterilization surgical techniques, including gentle tissue handling, instrument control, and suture management, students discussed a variety of topics. Through the program, students learned about various aspects of clinical anatomy; sterilization surgeries; clinical pharmacology; physical examinations, fecal testing, vaccinations, infectious disease testing, parasite control, and mild medical treatment of sick animals; and the implications of overpopulation and its effects on the pet population, human population, native wildlife, and the environment.

"There were a lot of 'firsts' on this trip for me as a developing veterinary professional, and I am grateful I got to do so much in so little time," said Lisa Schupak '13. "Beyond refining skills that many of us already had (deworming, vaccination), many of us placed our first catheters, induced patients for surgery for the first time, and got to perform our first spays and neuters alongside Dr. Maza and two dedicated Mexican vets. There is no doubt in my mind that I developed my professional skills during my time there. It is surely refreshing to step out of the classroom and get to get your hands dirty now and then."

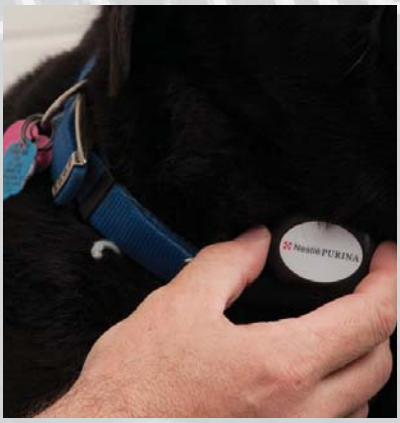
"My trip to Mexico was truly unique. I got to get my hands wet with my first surgery, but more than that I got to see a different version of the human-animal bond outside of my normal American bubble. Initially, I was completely overwhelmed; we were out of our comfort zones in so many ways: standards of medical treatment, the view of companion animals in a foreign country, language barriers, and most of all, trying to make a difference in a way that would be safe for us, the people from Mexico we were working with, and the animals."

—Lisa Schupak '13



Weighing in on Weighing Less

Nutrition research reveals paths to weight loss and the secret life of fat



RESEARCH

Americans are getting fatter and so are their pets.

Following rising trends in human obesity, nearly half of pet dogs and cats weigh too much, and it's taking heavy tolls on their health. Cancer, diabetes, arthritis, and other bone and joint problems disproportionately plague overweight animals. Nutrition clinicians at Cornell's Companion Animal Hospital are helping downsize this growing problem by creating knowledge and solutions that could help humans and pets reach healthy weights.

"Obesity is the number one preventable health problem in veterinary medicine today," said Dr. Joseph Wakshlag, head of Cornell's nutrition and obesity management services. "Food equals love; people give treats; pets get fatter. Education and prevention are the only real tools against obesity."

Dr. Wakshlag's team of two resident trainees and one nutrition technician offers personalized nutritional support and weight-management planning for pets. Their clinical research has attracted sponsorship from Nestle Purina and resulted in three papers this year and several studies in progress.

The first paper proved pedometers attached to bungee cord collars can accurately count a dog's steps and used the technique to show that dogs that walk more stay fitter. The second paper used the pedometer methodology to demonstrate for the first time that exercising dogs could help them lose weight and determined how many calories dogs can eat per 1,000 steps of walking while still trimming down. Dr. Wakshlag uses his findings to develop intervention plans based on dog walking to prevent canine obesity.

Dr. Joseph Wakshlag

The hospital's nutrition residents are expanding on Dr. Wakshlag's third study addressing a new finding that is changing the way veterinarians and human doctors look at fat.

"Historically people saw fat tissue as inert energy deposits," said Dr. Jason Gagne '09, second-year resident in the nutrition service. "Recently we've realized it acts more like endocrine tissue, releasing proteins called adipokines that activate the immune system and cause chronic inflammation. This can exacerbate many disease processes and lower insulin resistance, leading to diabetes. We're trying to learn which cells in fat tissue produce adipokines."

First-year resident Dr. Renee Streeter studies how heavy hounds handle hidden health hazards from pro-inflammatory proteins. Her research compares dogs' adipokine levels to their body conditions and the levels of anti-inflammatory omega three fatty acids in their blood. While most adipokines increase with body score (higher is fatter) and harm the body, one kind does the opposite.

"Adiponectin is the single beneficial thing released from fat," said Dr. Wakshlag. "Unlike other adipokines, it's an anti-inflammatory insulin sensitizer. An injection of adiponectin will make your insulin work better. When you're lean, you release a lot of it; when you're fat, you release a lot less. That's why you have to lose weight to become more sensitive to insulin."

In the nutrition team's clinical trials, inflammatory responses decreased due to lowering levels of bad adipokines after dogs lost weight.

"While most adipokines fell, we were surprised to find that canine adiponectin levels stayed the same. Dogs have much more adiponectin than cats or humans, no matter if they're fat or thin. This may be one reason why dogs are less prone to Type-II diabetes than other species."

Cornell's headway on the obesity battlefront owes its success largely to corporate sponsors investing in the future of healthy pets.

"Nestle Purina has been phenomenally generous," said Dr. Wakshlag. "They funded our pedometer-based weight-loss studies, Renee's study, and Jason's entire two-year residency. Proctor and Gamble, who makes Natura Products, IAMS, and Eukanuba, recently stepped up to fund Renee's three-year residency program, with plans to make this a continual position for the Cornell University Hospital for Animals.

"These partnerships meet the rising demand for nutrition knowledge in the private and corporate sectors. Two Cornell veterinary alumni–Dr. Kurt Venator '03 of Nestle Purina and Dr. Susan Giovengo '91 of Proctor and Gamble–helped make our residencies possible. These pet-food companies know the value of having nutrition experts in hospitals and hope to help fight the obesity epidemic these future clinicians will face."

less painful paddles

NEW METHOD DEFIBRILLATES HEART WITH LESS ELECTRICITY AND PAIN

Cornell scientists, in collaboration with physicists and physician-scientists in Germany, France, and Rochester, N.Y., have developed a new–and much less painful and potentially less damaging–method to end life-threatening heart fibrillations.

The new technique cuts the energy required for defibrillation by 84 percent, compared with conventional methods.

In healthy hearts, electrical pulses propagate across the heart muscle in an orderly fashion to control the heart's contraction and relaxation cycle at regular intervals. However, when the electrical pulses propagate throughout the heart chaotically, they disable the regular heartbeat and prevent the body from getting fresh supplies of blood.

One of these rhythm disturbances, called atrial fibrillation, is the most common sustained cardiac arrhythmia worldwide, affecting about 1 percent of the population, mostly people older than 50 years.

Patients who suffer repeatedly from atrial fibrillation are typically treated with a large electrical pulse (defibrillation), which forces the heart back into its regular beating but is painful and can damage the surrounding tissue. The new method, LEAP (Low-Energy Anti-fibrillation Pacing), developed by a team co-led by Cornell College of Veterinary Medicine researcher Dr. Flavio Fenton, uses a heart catheter to create a sequence of five weak electrical signals in the heart.

"Only a few seconds later, the heart beats regularly again," said the team's other co-leader, Dr. Stefan Luther of the Max Planck Institute for Dynamics and Self-Organization and a Cornell adjunct professor in biomedical sciences.

"The energy applied to the heart per pulse is on average 84 percent less than in conventional methods," added Dr. Fenton.

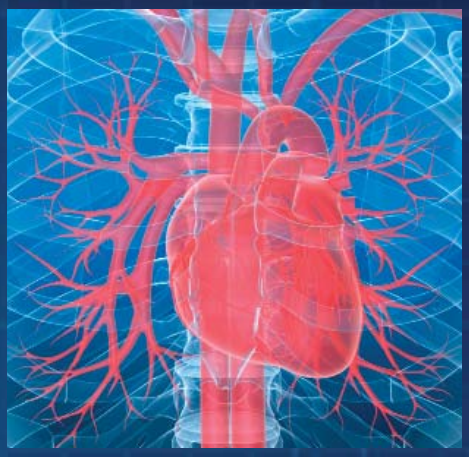
Even though both methods seem to function similarly at first sight, they stimulate completely different processes within the heart, explains co-author Dr. Robert Gilmour, professor of physiology at Cornell. "The classical defibrillator excites all cells of the organ at the same time. For a short moment they can no longer transmit any electrical signals; the life-threatening chaotic activity is terminated. Afterward, the heart resumes its normal, regular beating. The situation can be compared to turning a malfunctioning computer off and on again," said Dr. Gilmour, who is also the Associate Dean for Research and Graduate Education at the College.

The new method terminates the turbulent electrical activity within the heart step by step. In experiments and computer simulations, the researchers showed that natural heterogeneities within the heart, particularly blood vessels, can act as the origins for synchronizing waves. "The weak electrical signals are enough to create 'virtual electrodes' that stimulate the cells in these regions," said Dr. Eberhard Bodenschatz, director at the Max Plank Institute and Cornell adjunct professor of physics and mechanical and aerospace engineering.

With every additional pulse, more heterogeneities in the heart are activated and gradually suppress the chaotic activity and "reprogram" the heart.

Because of its groundbreaking potential, the researchers are working to get it to patients as quickly as possible. Other collaborators include researchers at the Ecole Normale Supérieure de Lyon (France), University Medicine Göttingen (Germany), Rochester Institute of Technology and the Laboratoire Non-Linéaire de Nice (France).

The research was conducted under the umbrella of the MPI/Cornell collaboration on Complex Systems and supported by the Max Planck Society, National Science Foundation, the National Institutes of Health, the Indo-French Center for the Promotion of Advanced Research, Germany's Federal Ministry of Education and Research, the Kavli Institute for Theoretical Physics at the University of California-Santa Barbara, and the European Community's Seventh Framework Programme.



Earlier detection and new treatments for horse racing's number-one performance problem

Reining in roaring

Dr. Jonathan Cheetham

It's a big day at the track. Years of training and thousands of dollars are at stake. The gates open and your horse lunges forward. But his breath comes in gasps. It looks as if he's wearing a heavy mask that is blocking his access to air. Worn nerves signal sluggishly to weakened muscles that barely respond enough to open his airway. He slows and falls to the back of the pack.

This career-limiting problem affects nearly 8 percent of race horses and a higher percentage of sport horses. Officially called recurrent laryngeal neuropathy, the common equine disease is better known as "roaring" for the strained sounds affected horses make when they try to run. It shares similarities with human vocal cord paralysis, a neurological condition causing difficulty breathing and loss of speech and requiring tracheostomy and intensive surgery. Roaring starts early and unseen, slowly wearing down the nerves that stimulate the muscle responsible for opening the larynx.

"Upper airway problems cause poor performance in many race horses," said Dr. Jonathan Cheetham, an equine surgeon and sports medicine practitioner at Cornell's Equine Hospital. "Symptoms often show in a horse's second to fourth year, when a trainer has already invested thousands in its athletic career. The standard treatment, surgery called a laryngeal tie-back together with a 'lazer hobday' procedure to remove the vocal cords, returns 65 to 70 percent of treated horses to racing. But that's after six weeks of recovery and another six weeks to regain fitness. It takes a toll on the horses, their trainers, and the racing economy."

Taking roaring by the reins, Dr. Cheetham and the Equine Performance Clinic team are helping to change how veterinarians look at and treat the disease. The team running the clinic's indoor treadmill offers good client service while researching new methods to diagnose disease earlier and improve treatments.

According to Dr. Cheetham, the horse is a useful preclinical model of human airway disease. Much of what he is learning at Cornell could help restore function in human patients with laryngeal disease. The Equine Performance Clinic pioneered techniques using a transesophageal ultrasound to evaluate airway muscles in horses. Developed at Cornell with support from the Harry M. Zweig Memorial Fund for Equine Research, these techniques could give human doctors a new view of deteriorating laryngeal muscles and let them follow progress after treatment.

The team is developing a novel treatment for roaring using a laryngeal pacemaker to electronically stimulate the muscle and maintain its function: another technology applicable to humans with vocal paralysis.

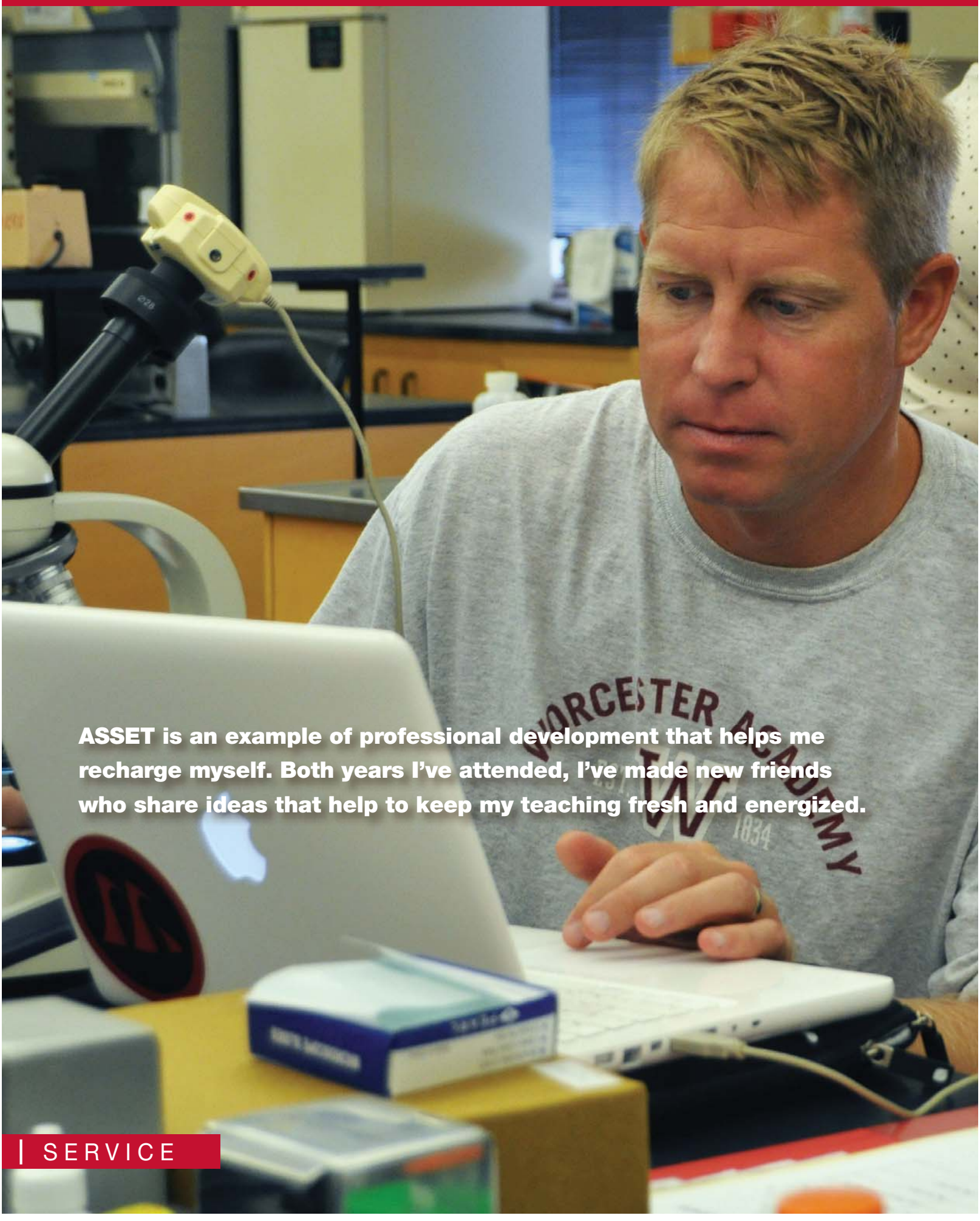
Dr. Cheetham has spent the past year developing new ways of detecting neurological disease earlier, thanks to a grant from the Grayson Jockey-Club Foundation.

"Motor nerves need insulation from myelin sheathes to carry signals quickly," said Dr. Cheetham. "Laryngeal neuropathy works by breaking down myelin in the two major meter-long nerves controlling the horse's airway muscles, slowing their conduction velocity and cutting off the muscles from adequate stimulation. If we can use nerve conduction velocity to detect early myelin breakdown we may be able to catch the disease before the muscle starts shrinking."

Placing tiny needles into the nerves, Dr. Cheetham measured conduction speeds across their length to see how speeds vary across the nerves. Next he will validate a technique that does not use needles and look at how nerve conduction velocity at the weanling stage affects performance of 2-year-old horses with the hope of confirming it as a viable diagnostic and predictive tool. Validating such a test would expand the window of detection, open doors to earlier prevention and treatments, and aid understanding of the disease mechanisms that produce roaring in horses.

"We have also been developing ways of enhancing nerve grafting using tissue engineering techniques," said Dr. Cheetham. "If we can pick up problems early, we might be able to treat without invasive surgery or a permanent implant. It could be safer, cheaper, and faster, and may improve the success of recovery from airway diseases in both horses and humans."

Discuss this work with Dr. Cheetham on Facebook **(https://www.facebook.com/CornellEquine)** or visit the Equine Performance Center website **(http://www.vet.cornell.edu/labs/eptc/intro.htm).**


ASSET is an example of professional development that helps me recharge myself. Both years I've attended, I've made new friends who share ideas that help to keep my teaching fresh and energized.

Single-celled super heroes

College program leverages organism to invigorate science curriculum

Standing on tiptoes to peer down the neck of a microscope, 11-year-old Rita watched *Tetrahymena*, a single-celled super organism, carry out its daily activities.

She watched it control thousands of cilia to propel itself across the slide. She saw it eat and then use those nutrients to reproduce, perfectly replicating its 25,000 genes into offspring that are equally powerful, fresh-water creatures capable of demonstrating some of a body's most basic biological functions: reproduction, digestion, motility, and sensory behavior.

"To let students see a process that is normally invisible and to see it happen in real-time. How much more exact and illustrative could a teaching pedagogy be?" Michael Mallett asked rhetorically. "Often, it's difficult to let students immerse themselves in a concept. With *Tetrahymena*, I can demonstrate a biological function through a living organism and I don't need expensive equipment to facilitate a meaningful experience."

Rita Sayou

This is the basic premise of the ASSET (Advancing Secondary Science Education with *Tetrahymena*) program. Inaugurated in 2009 with a grant from the NIH, ASSET supports workshops for K-12 educators that teach them how to use a safe, easy-to-grow protozoan as the basis for laboratory modules for use in middle school and high school classrooms. Each laboratory module is built around *Tetrahymena thermophila*. In addition, cross-curriculum biology and society modules foster classroom discourse and debate to encourage students to critically evaluate the complex relationship between science and society. The program is offered by faculty and staff in the College's Department of Microbiology and Immunology.

"The workshop will better prepare teachers to stimulate hands-on, inquiry-based learning of fundamental biological concepts and foster critical thinking about the role of basic re-

search in society," said Dr. Donna Cassidy-Hanley, who with Dr. Ted Clark secured funding for the program with a $1.2 million Science Education Partnership Award. "Our work and the exercises that can be taken back to school systems are primarily designed to meet the needs of students in rural and other underserved areas. However, they are absolutely appropriate for classrooms everywhere, and, as they are developed, we are making all of the resources available online."

Mallett has found opportunities to incorporate the modules at both ends of the spectrum. As the head of the science department at Worcester Academy, an independent preparatory school in Worcester, Mass., he has used the organism and what he learned as a workshop participant in 2010 to teach about cell structure and function, osmosis, genetics, taxonomy, cilia function, and the relationship between these functions in a prospering being. This past July, he shared the same opportunities with participants in the inaugural Summer Scholars program in Worcester, Mass., designed to help at-risk neighborhood children avoid the summer slide with options to focus on academics during summer vacation.

"Only two of the 13 students in the summer program had ever used a microscope before," said Mallett, who seeks out professional development opportunities like the ASSET program not only to enhance his skills and find new reasons to love what he does, but also because it helps him role model a very important principle: life-long learning.

"They were thrilled, and frankly so was I. I used *Tetrahymena* to illustrate so many principles. And because I could use the same organism, I could build relationships between bodily functions that are otherwise very hard to explain."

Mallett's programs in Worcester Academy and in the community Summer Scholars program are exactly what program organizers hoped would happen. But Mallett has more in mind. This fall, nearly 30 Danish students will visit his classroom, launching a global classroom program that will use the organism as the basis of scientific collaboration and discovery. With preliminary lesson plans just beginning to take shape, Mallett expects that the group will kick-off a *Tetrahymena* research project in the fall, with the American students pursuing a set of questions, the Danish students pursuing others, and international student pairs conducting research together via the web. Ultimately, Mallett said, the project should result in a joint manuscript that describes the shared learning experiences.

"It's one thing to do lab work when you're held to the expectations of your classmates," said Mallett. "It's quite another to be tied to expectations from across the world."

finding the map

Medical genetics service now being piloted at the Cornell University Hospital for Animals

For centuries, people have plotted their physical course with the help of maps. With the complete genetic mapping of the canine and many other species, "maps" are now available to help us chart courses of action based on our animals' genetic compositions.

The Cornell University Hospital for Animals has begun offering medical genetics counseling to the owners of pediatric dogs/cats and to dog/cat breeders who are looking to make breeding decisions based on the genetic make-up of the animals. Medical genetics is the branch of medicine concerned with the effect of genetic variation on development and health and also with the study, diagnosis, management, and prevention of disease in individuals and communities.

"Scientists, veterinarians, and breeders have long been aware of the common genetic defects seen across species, and various lists of them have been drawn up over the years," said Dr. Rory Todhunter, who is a professor of surgery at the College and is leading the Hospital's efforts in this area. "As one of the fastest growing fields in human and veterinary medicine, medical genetics is already impacting the way we respond to inherited conditions that threaten quality of life. Understanding the predisposition for a condition opens up options for earlier medical and surgical intervention for pets."

To be launched in October 2011, the service will be piloted with guidance from Dr. Margret Casal, associate professor of medical genetics at the University of Pennsylvania who is currently completing a sabbatical at Cornell's College of Veterinary Medicine. Dr. Casal specializes in veterinary genetics, pediatrics, and reproduction. Her research interests are focused on the characterization, genetic basis, and treatment of canine genetic skin disorders that also occur in humans.

Cornell will offer appointments for patients that present with a variety of conditions that may be considered inherited or congenital. Quality breeding practices, onsite genetic counseling, and phone consultations will be offered to breeders. Breed specific genetic testing panels will be offered, so that breeders avoid having to send their samples to multiple institutions. The results of these panels will be discussed with the owners as part of genetic counseling, if desired by the breeder/owner.

"The Cornell University Hospital for Animals is committed to meeting unmet veterinary medical needs," said Dr. William Horne, hospital director. "Through the medical genetics service, we expect to meet the needs of breeders who are dedicated to the health and well-being of the breed as well as to companion animal owners who want to do everything possible to ensure that their pets are happy and well cared for."

If you would like to learn more about the Medical Genetics service, please contact Dr. Marta Castelhano or Dr. Rory Todhunter at (607) 253-3060 or by e-mail at dnabank@cornell.edu.

Creative ways to give

KEEP THE PRESSURE ON

Provide for non-invasive blood pressure monitoring in large animals ($3,800). Equine and Farm Animal Hospitals.

HANDS ON

Help the Community Practice Service at the Cornell University Hospital for Animals implement a surgical service to complement its outpatient practice. The goal is to provide more real-world, hands-on experiences and offer more opportunities to develop vital skills that will benefit veterinary students on any career path. Services offered include sterilization of cats and dogs, lump removal, biopsies, wound treatments, and others. To simulate the private practice experience further, cases will be handled from the original appointment, performing the anesthesia and surgery, and continuing with post-operative management. Essential supplies include a surgery table, a surgery light, a gurney, an anesthesia machine, monitoring equipment (Pulse oximeter), heating pads, hair clippers, and syringe pumps. By attracting a variety of surgical cases and providing the necessary resources we can further train superior future veterinarians as they enter the profession. Equip students with the surgical instruments needed. Heating pads ($1,500). Surgery table ($2,000). Surgical lights ($2,000). Pulse oximeter ($1,500). Gifts of any size. Companion Animal Hospital.

HEALTHY SMILES

Outfit a growing dentistry service that provides routine and specialty care for animals in need. Non-surgical periodontal therapies are safe and effective for our beloved animals. Help your pet and others benefit from our dentistry team. Magnetostrictive ultrasonic scaler ($1,500). Ultrasonic scaler ($2,200). High speed LED hand piece and compressor ($8,033). Cornell University Hospital for Animals.

HEART SMART

Advance the intelligence we are able to collect on patients in the hospital by purchasing a portable ECG system for the Cardiology section. This device enables us to perform measurements of heart electrical activity using smaller equipment that gives access to real-time diagnostic information with a portable and wireless design, benefiting the animal and the clinicians ($109,000). Cornell University Hospital for Animals.

CARING FOR THOSE IN NEED

Ease the financial burden of a costly surgery for an animal. Animals in need of surgery and owners who are desperate to do all they can for their companion rely on access to our Patient Assistance Funds to help make decisions about pursuing potentially life-saving surgeries. Provide assistance for one animal's surgeries by covering a portion of the costs ($1,500). Cornell University Hospital for Animals.

committed to canine care

Devoted dachshund-lover establishes fund to improve the lives of dogs

Relationships with her dachshunds comforted Friedl Summerer throughout her life, from a war-torn childhood to the passing of three husbands, and throughout her golden years in New York City.

Born in Germany in 1918, Friedl Summerer grew up in Austria, where she began life as a budding actress. World War II soon brought her career to a crashing halt, and she narrowly escaped the Holocaust by fleeing to Paris and eventually settling in New York City.

"She had three passions: dogs, children, and public broadcasting," said Imssy Klebe, a close friend of Summerer. "She could not have children, though she always wanted to. She was extremely devoted to her dogs. All through her life she had dachshunds, which she loved in particular. I walked many evenings with her and her dachshund Sissy. She was particularly close with Sissy."

Dr. Lewis Berman '57 served as Sissy's veterinarian, and Summerer left a generous portion of her estate to Cornell's College of Veterinary Medicine, where Berman received his training.

"She knew Cornell conducted research and patient care to help prolong the lives of dogs and wanted to support those efforts," said Klebe.

Summerer passed on April 16, 2010, leaving a bequest in honor of Sissy for more than $2.2 million to the College, to be used for direct canine care.

The Sissy Summerer Canine Care fund will help the College and the Department of Clinical Sciences support lecturer positions that have direct impact on canine patient care and student training. The fund currently supports Dr. Andi Looney '89, an anesthesiologist in the Pain Management Service committed to providing care and comfort to canine companions, and Dr. Brian Collins '94 in the Community Practice Service, part of Cornell's distinctive training program that enables veterinary students to begin practicing their hands-on skills as first-year students.

"This endowment has a very real impact on the delivery of canine patient care, which runs the gamut from routine vaccinations to advanced end-of-life care," said Dr. Margaret McEntee, chair of the Department of Clinical Sciences. "It will also expand our ability to train future veterinarians by providing significant hands-on experience in the Cornell University Hospital for Animals through the Community Practice Service as a core component of the veterinary curriculum. This is a great opportunity for them, and I think is invaluable for their training as future veterinarians."

Breaking the stereotype

Gift underscores reality that all animals are created equal

Wally was getting arthritic before his time. Despite being just a year old, the 600-pound Yorkshire pig limped painfully through his days. With an average life-expectancy of eight years, Wally seemed destined to hobble through much of life. And then he was adopted. Fortunately, new owners George Goldner and Nancy Krieg chose not to ignore Wally's obvious discomfort.

"As a species, pigs are sometimes treated poorly," said Goldner, who currently ensures the care of six pigs, 15 chickens, four cats, a goat, and six rabbits–all rescue animals–on 187 acres just outside of New Kingston, N.Y. "Sometimes, it seems they're written off as undeserving of care. For us, pigs behave similarly to dogs: they're responsive and friendly. When treated well, they respond accordingly."

Goldner brought Wally to Cornell where Dr. Lisa Fortier, Associate Professor of Large Animal Surgery, and her team considered a variety of options. Although they initially thought that standard arthroscopic surgery and cartilage repair would alleviate the pain, a preliminary examination extinguished those hopes–the damage was too widespread. After a regimen of drugs also proved unsuccessful, Dr. Fortier contacted Dr. Scott Rodeo at the Hospital for Special Surgery/Cornell Weill Medical School in New York City where a custom-fit knee replacement was going to be made for Wally. Then, Wally developed a very large abscess on the same leg, putting all plans on hold.

Admitted to Cornell's Hospital for Animals, Wally quickly became one of the favorite patients.

"Wally has a special personality," said Veterinary Technician Margie Vail, who took an instant liking to Wally's people-oriented, friendly demeanor. "Wally seemed to recognize us as individuals. He loved his belly rubbed and was especially partial to strawberries and melons that we picked up for him at the local farmer's market."

Today, with the infection cleared, Wally appears to be strong and is walking much more easily, with only a slight limp.

"Seeing him walking around looking well makes us happy," said Goldner, who has established a charitable annuity at Cornell to ensure that other animals have access to the same level of care. "Everyone at the Cornell veterinary and medical schools was truly a professional. Everyone who dealt with Wally did an excellent job. They were smart, thoughtful, and went to the limit to help Wally. These are the kind of people we want to help to continue their excellent work."

With the charitable annuity, an agreement between Goldner and Cornell ensures that a family member will have lifetime income, significant tax savings, and the satisfaction of providing Cornell University with vital, long-term resources.

"As much as any experience at a hospital can be pleasant, this was it," said Goldner, who has indicated that the College may direct the proceeds from the charitable annuity toward the College's greatest needs. "When you've seen an animal suffering and then see the suffering relieved, it's an exhilarating experience. We made our gift in Wally's honor, but we hope that it serves animals for many years to come."

2011 dean's college report

The College of Veterinary Medicine achieved a number of academic highlights this past year, including a highly successful and rewarding accreditation visit from the Council on Education (COE) of the American Veterinary Medical Association.

The College was awarded full accreditation status, earning strong praise in a number of areas, including extensive preclinical animal exposure, early integration of students in clinics, and recent efforts to critically assess student learning. Among the strengths highlighted by the COE were faculty dedication to student instruction and our "world class" research programs that provide opportunities for DVM and post-DVM involvement. Of course Cornell's designation by *US News & World Report* as the number one veterinary college in the nation, a ranking the College has consistently held since 2000, was extraordinarily gratifying. That ranking is a tribute to the hard work and outstanding reputation of our faculty and staff and these external assessments provide further confidence in our ability to maintain and enhance our leading animal health programs in challenging times.

The demographic profile of our current professorial faculty (57 percent are over 55) emphasizes our need to reinvest in faculty, as it is from the accomplishments of this internationally acclaimed group that our stature derives. With this in mind, it is a great pleasure to describe our success in recruiting over the past year. In 2011 we continued our efforts to renew the critical department chairs' and directors' positions, with Drs. Margaret McEntee and Colin Parrish rising to the top in national searches, with Dr. McEntee becoming the first woman to chair the Department of Clinical Sciences and Dr. Parrish assuming leadership of the Baker Institute for Animal Health and the Feline Health Center. Importantly, the chairs have made excellent progress in renewing the faculty through the recruitment of exceptional junior faculty, including Drs. Toshimitsu Kawate, Adam Boyko, and Brian Rudd. These assistant professors in the departments of Molecular Medicine, Biomedical Sciences, and Microbiology and Immunology, respectively, have big shoes to fill–and they are off to an excellent start. We were also successful in recruiting superb lecturers, including Drs. Brian Collins, Brian Caserto, and Heather Priest, in the Departments of Clinical Sciences, Biomedical Sciences, and Population Medicine and Diagnostic Sciences, respectively.

I look forward to the innovative ideas and collaborative approaches that these newcomers will bring to the College's ongoing efforts to realize the three major elements of our strategic plan:

- Strengthen our premier DVM and postgraduate teaching program through innovative and collaborative initiatives that best prepare our diverse student body to meet the challenges of animal health in the 21st century
- Enhance Cornell's position as the top-ranked veterinary college in biomedical discovery and build on existing and emerging strengths to foster the understanding and treatment of disease, focusing on Infection Biology, Cancer Biology, Genomic and Stem Cell Biology, and Reproduction and Development
- Transition Cornell from a national to a global leader in animal health

These are ambitious goals that will require some investment at a time of contracting state and federal resources. One vital component of our strategic plan is the prioritization of our capital program that will enable a modest class expansion and rejuvenate our Schurman Hall teaching complex.

STUDENT RECRUITMENT

Cornell continues to attract the strongest students and had an exceptionally strong yield of our top-ranked applicants. While increasing the size of the entering class modestly (10 additional students), we achieved a remarkable 79 percent yield of accepted students, including 63 percent of out-of-state students. This is a particularly remarkable achievement, as the strongest out-of-state students usually have multiple options at significantly lower tuition costs. I congratulate the Admissions Director, Jennifer Mailey, Assistant Dean Katherine Edmondson, Emeritus Dean Donald Smith, who chairs the Admissions Committee, and the entire Admissions Committee for their terrific results. The Admissions Committee is also reviewing thoughtful proposals brought forward by Associate Dean Lorin Warnick on enhancing the 7-year BS/DVM program and exploring curriculum changes that would enable transfer acceptances at the beginning of the third year. Finally, through Associate Dean Alfonso Torres' negotiations, we have developed a leveraging agreement with City University of Hong Kong that will bring two students to the College as part of the class of 2017.

TEACHING

In 2011, we made significant progress working toward a College-wide culture that strengthens our commitment to teaching. Among the changes implemented this year are new opportunities for student and peer teaching evaluations to inform curricular content and delivery methods and the establishment of formal departmental infrastructures to encourage and support teaching excellence. In addition to the changes to Course VII (page 3), our collaboration with Shelter Outreach Services, a local nonprofit organization that provides veterinary services to local animal shelters and underserved communities, grew in popularity this year, providing opportunities for 129 students to spay approximately 260 and neuter approximately 390 cats. As all academic accrediting bodies stress assessment of teaching outcomes, a committee of faculty is working hard on implementing an effective, practical, and sustainable system to evaluate clinical competency. Other efforts to promote a culture of teaching include implementing a departmental teaching award, active engagement with departments across campus in teaching undergraduate biology and immunology, and graduate courses aligned with our faculty expertise. Finally, we are enormously pleased to finally be moving forward with the new teaching dairy barn, which will replace the barn eliminated by the Animal Health Diagnostic Center project.

RESEARCH

In 2011, researchers at the College attracted nearly $42 million in research support from a variety of funding agencies. This continues to position the College as a leader in health research, spanning basic biomedical discoveries, high impact clinical innovations, and environmental and epidemiological studies. Many of these programs involve cross-Cornell collaborations, and College faculty members continued to play key roles in strategic initiatives that shape the University's excellence. These roles include leadership of the University Stem Cell and Infection Biology Programs, intense involvement in genome-wide research, and a major role in the Atkinson Sustainability Center. In addition, 2011 saw

- work begin on two University-wide centers: a cancer center and a wildlife conservation center;
- the funding of two training grants that will support work in the areas of reproductive sciences/genomics and developmental biology/genetics;
- the revitalization of the infection and pathobiology program, which spans six departments across three colleges; and
- College faculty involvement with the David R. Atkinson Center for a Sustainable Future and the Ecology and Evolution of Infections and Disease program.

SERVICE

Outreach and public engagement is at the core of the College's mission. Our connections beyond the College range broadly from pet owners to the Great Lakes fishing industry, to dairy farms in the United States and China. Our three largest community engagement activities are the Cornell University Hospital for Animals, our premier teaching hospital; the Animal Health Diagnostic Center; and Cornell University Veterinary Specialists.

The Cornell University Hospital for Animals continued its commitment to innovative patient-centered care in 2011, with a variety of clinical trials designed to meet unmet medical needs and sustain the relationship between people and their pets. With the dedication of the Janet L. Swanson Imaging Suite in the Fall of 2010, which includes a new MRI scanner, a new CT scanner, an array of associated equipment and software, and newly-renovated facilities that accommodate the upgraded equipment, veterinarians can now more clearly see the extent of the disease, which enables them to more accurately diagnose, determine treatment, and prepare for surgery. Restructuring and separation of the Emergency and Critical Care areas are now underway.

The Animal Health Diagnostic Center opened a $70 million structure in October 2010 that finally unified the Center's faculty, staff, and researchers into a single Gold LEED-certified building that supports 21st-century discovery. This joint venture between Cornell and the New York State Department of Agriculture and Markets is the only full-service, multidisciplinary, animal disease, diagnostic operation in the Northeast that is dedicated to surveillance and early disease detection for the State. The new facility is evidence of the enormously valuable and cost effective partnership between New York State and Cornell University that has provided disease surveillance, animal health diagnosis, and extension support for decades.

In the newest embodiment of Cornell outreach and innovation, Cornell University Veterinary Specialists opened for business as scheduled in January 2011, after completing major facility renovations on-time and within budget. The satellite emergency and specialty referral center is currently staffed with six full-time specialists, two part-time specialists, and three emergency doctors. Financial performance in 2011 has exceeded our original projections, with the hospital operating in the black sooner than expected. Most importantly, the hospital has been the source of overwhelming satisfaction on the part of referring veterinarians and clients, and the recruitment of additional specialists and expansion of specialty services are currently planned.

In addition, several other initiatives this year helped us translate bench work and educational activities into meaningful partnerships with our global (human and animal) stakeholders:

- The Southside Healthy Pet Clinic is a collaborative effort between faculty, students, and local veterinarians that has been serving an underprivileged sector of our community since 1996. For FY11, the clinic operated every other Wednesday, serving approximately 40 pets each week.
- The Quality Milk Production Services continued to meet the needs of producers, veterinarians, and the dairy industry, with visits to 800 farms. In addition, diagnosticians conducted tests on 200,000 samples, and faculty spoke with more than 2,500 producers.
- Expanding Horizons, with support from the Lincoln Ellsworth Foundation, funded nine proposals in 2011, with work taking students to Kenya, Zambia, Indonesia, Uganda, Rwanda, Mongolia, Panama, and Brazil.

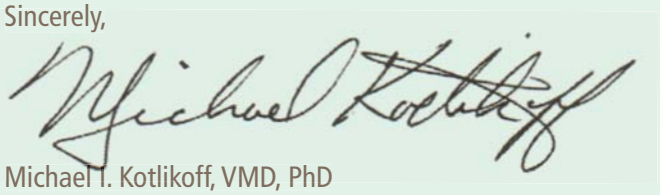
INTERNATIONAL

At the College-level, our international opportunities and pursuits continued to expand. The first Cornell China Dairy Institute was successfully launched as a four-week program in the Fall of 2010 and will be repeated in October 2011. This continuing education program is a collaboration between the College, the innovative Huaxia Dairy located near Beijing, and several industry sponsors. Revenue from this program is helping to support existing programs at the College, including the Ithaca-based Summer Dairy Institute and a food animal medicine externship.

We continue to collaborate with the City University of Hong Kong (CityU) to assist in the establishment of a proposed School of Veterinary Medicine at City University. Given uncertainty regarding funding from Hong Kong for the establishment of a veterinary college, we have concluded an "interim phase" agreement with CityU in which we will continue to advise them, work to build support in Hong Kong, and will also admit two qualified CityU students into the Cornell DVM program. These efforts are generously supported by CityU, and we look forward to crafting a long term program that solidifies Cornell's engagement in China.

The above constitutes a quick and brief, but by no means comprehensive, summary of our activities over the past year. I remain humbled by the efforts and commitment of our faculty, and grateful for the hard work of my colleagues in the Dean's office and the support of our alumni and donors. I believe that we have continued to make strong progress toward realizing the goals outlined in our strategic plan, positioning the College to influence the future of veterinary medicine for generations to come.

Sincerely,

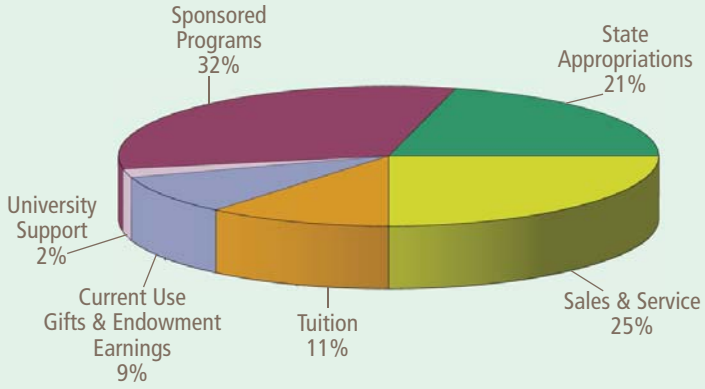


Michael I. Kotlikoff, VMD, PhD
Austin O. Hooey Dean of Veterinary Medicine

financial report

The College ended fiscal 2011 in a positive financial position. Total revenues of $130.3 million were down by $2.3 million from the previous year due primarily to a decrease in New York State support and a decrease in sponsored research grants. Total expenditures of $126.6 million were down by $1.6 million due primarily to a decrease in organized research expenditures associated with the decline in sponsored research funding. The resulting surplus of $3.6 million is attributed largely to the strong financial performance of the hospital, strong gift support, and non-recurring savings from the deferral of planned expenditures associated with vacant faculty positions and faculty start-up activities. The financial projection for fiscal 2012 includes further expenditure reductions and a limited planned use of College reserves to partially offset further reductions in operating support from New York State.

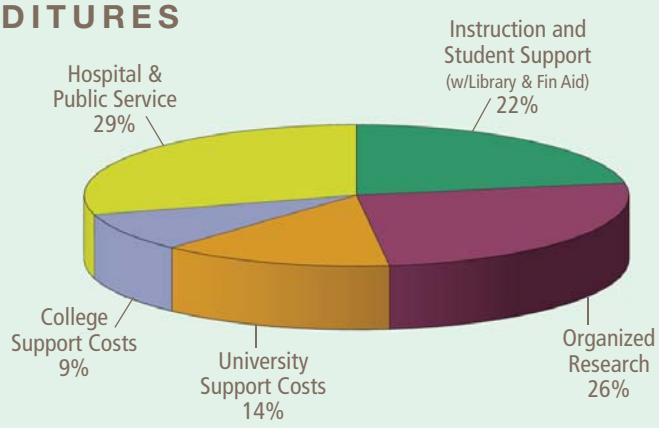
REVENUES



REVENUES

Sponsored Programs	$ 41.3	32%
State Appropriations	$ 28.0	21%
Sales & Service	$ 32.1	25%
Tuition	$ 14.7	11%
Gifts & Endowment Earnings	$ 12.0	9%
University Support	$ 2.2	2%
Fiscal 2011 Revenues	**$130.3**	***million***

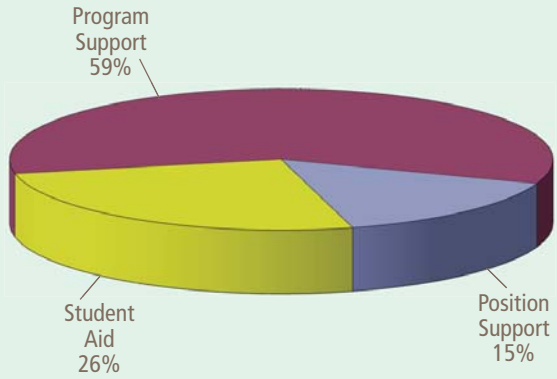
EXPENDITURES



EXPENDITURES

Hospital & Public Service	$ 37.3	29%
Instruction and Student Support (w/Library & Fin Aid)	$ 28.1	22%
Organized Research	$ 32.7	26%
University Support Costs	$ 17.4	14%
College Support Costs	$ 11.1	9%
Fiscal 2011 Expenditures	**$126.6**	***million***

ENDOWMENT MARKET VALUE



ENDOWMENT MARKET VALUE

Program Support*	$100.9	59%
Position Support	$ 26.1	15%
Student Aid	$ 44.6	26%
Fiscal 2011 Endowment Market Value	**$171.6**	***million***

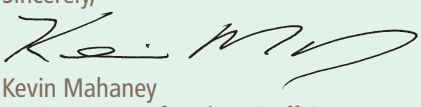
* Includes, but is not limited to, Baker Institute for Animal Health, Feline Health Center, Services and Patient Assistance Funds of the Cornell University Hospital for Animals, Competitive Grants Programs, Lectureships and Seminars, and Faculty Start Up support.

REPORT OF GIVING

Thank you! Through the generosity of more than 5,100 alumni, friends, corporations, and foundations, the College of Veterinary Medicine received $12,554,662 in new gifts and commitments between July 1, 2010, and June 30, 2011. From the $25 gift in memory of a neighbor's pet to a $100,000 scholarship which will assist hundreds of students over time, each gift is an expression of one's passion for making the world a better place through education, teaching, and research. Professorships, scholarships, research funds, and memorial gifts all have an immediate impact upon our ability to improve animal and human health.

To all those who benefited from a Cornell education or from a Cornell veterinarian treating pets, we thank you for your investment in improving the lives of animals and people.

Sincerely,



Kevin Mahaney
Assistant Dean for Alumni Affairs,
Development and Communications

ALLOCATIONS OF FISCAL YEAR 2011 GIFTS

Unrestricted Gifts		**$ 2,138,261**
Includes gifts to the Cornell Fund for the College of Veterinary Medicine; the Annual Funds of the Baker Institute for Animal Health, the Feline Health Center, and the Cornell Hospital for Animals; and gifts designated for departments and the Flower-Sprecher Library without restrictions on use.		
Endowment Gifts		**$ 7,514,969**
Gifts added to the long-term investment pool of Cornell University, with principal maintained in perpetuity and annual payout expended for the purposes designated by the donor. These include:		
Faculty and Program Support	$	5,293,265
Scholarships & Fellowships	$	1,230,006
Unrestricted	$	991,698
Restricted Current Use Gifts		**$ 2,896,602**
Gifts to be used in the near-term for specific purposes designated by the donor. These include:		
Faculty and Program Support	$	1,936,313
Pending Designation	$	735,680
Student Aid	$	224,609
Gifts-in-kind		**$ 4,830**
YOUR TOTAL GIFTS AND COMMITMENTS		**$ 12,554,662**

planning for the future

Endowments Established in 2010-2011

FACULTY SUPPORT
William Kaplan Professorship

STUDENT SUPPORT
Doris Gally Scholarship
Gracie and Margaret Mary Scholarship
Noah H. Walters, Jr. Scholarship

PROGRAM SUPPORT
Karel Schat Expanding Horizons Program Fund
John D. Murray DVM Fund
Sissy Summerer Canine Care Fund

ensuring the future

During the past year, the following individuals established planned gifts which will be received by the College of Veterinary Medicine in the future.

Mr. George R. Goldner and Ms. Nancy Kreig
Dr. Carl Eisenhard '69 and Mrs. Deborah Eisenhard
Dr. Douglas Dedrick '61
Mrs. Dorothy Lakritz
Dr. John D. Murray '39+

+deceased

publications

JULY 2010-JUNE 2011

July 2010

1. Bartlett SL, Imai DM, Trnpkiewicz JG, Garner MM, Ogasawara S, Stokol T, Kiupel M, Abou-Madi N, Kollias GV. Intestinal lymphoma of granular lymphocytes in a fisher (martes pennanti) and a eurasian otter (lutra lutra). J Zoo Wildl Med. 2010 Jun; 41(2): 309-315.
2. Brewer DM, Cerda-Gonzalez S, Dewey CW, Coates JR. Diagnosis and surgical resection of a choroid plexus cyst in a dog. J Small Anim Pract. 2010 Mar; 51(3): 169-172.
3. Bunting EM, Garner MM, Abou-Madi N, Schmidt RE, Kollias GV. Proliferative thyroid lesions and hyperthyroidism in captive fishers (martes pennanti). J Zoo Wildl Med. 2010 Jun; 41(2): 296-308.
4. Cheetham J, Riordan AS, Mohammed HO, McIlwraith CW, Fortier LA. Relationships between race earnings and horse age, sex, gait, track surface and number of race starts for thoroughbred and standardbred racehorses in north america. Equine Vet J. 2010 May; 42(4): 346-350.
5. Cheng L, Zhou Z, Flesken-Nikitin A, Toshkov IA, Wang W, Camps J, Ried T, Nikitin AY. Rb inactivation accelerates neoplastic growth and substitutes for recurrent amplification of cIAP1, cIAP2 and Yap1 in sporadic mammary carcinoma associated with p53 deficiency. Oncogene. 2010 Aug 2.
6. Cherrington BD, Morency E, Struble AM, Coonrod SA, Wakshlag JJ. Potential role for peptidylarginine deiminase 2 (PAD2) in citrullination of canine mammary epithelial cell histones. PLoS One. 2010 Jul 26; 5(7): e11768. PMCID: PMC2909897.
7. Gelzer A, Otani N, Koller M, Enyeart M, Moise N, Gilmour R. Dynamically-induced spatial dispersion of repolarization and the development of VF in an animal model of sudden death. Comput Cardiol. 2009 Sep 13; 2009: 309-312.
8. Gelzer AR, Kraus MS, Rishniw M, Hemsley SA, Moise NS. Combination therapy with mexiletine and sotalol suppresses inherited ventricular arrhythmias in german shepherd dogs better than mexiletine or sotalol monotherapy: A randomized cross-over study. J Vet Cardiol. 2010 Jul 19.
9. Gifford AT, Flanders JA. External splinting for treatment of pectus excavatum in a dog with right ventricular outflow obstruction. J Vet Cardiol. 2010 Apr; 12(1): 53-57.
10. Hollinshead FK, Hanlon DW, Gilbert RO, Verstegen JP, Krekeler N, Volkmann DH. Calcium, parathyroid hormone, oxytocin and pH profiles in the whelping bitch. Theriogenology. 2010 Jun; 73(9): 1276-1283.
11. Hope KM, Casey RN, Groocock GH, Getchell RG, Bowser PR, Casey JW. Comparison of quantitative RT-PCR with cell culture to detect viral hemorrhagic septicemia virus (VHSV) IVb infections in the great lakes. J Aquat Anim Health. 2010 Mar; 22(1): 50-61.
12. Infanger DW, Cao X, Butler SD, Burmeister MA, Zhou Y, Stupinski JA, Sharma RV, Davisson RL. Silencing nox4 in the paraventricular nucleus improves myocardial infarction-induced cardiac dysfunction by attenuating sympathoexcitation and periinfarct apoptosis. Circ Res. 2010 Jun 11; 106(11): 1763-1774. PMCID: PMC2887701.
13. Janvilisri T, Scaria J, Chang YF. Transcriptional profiling of clostridium difficile and caco-2 cells during infection. J Infect Dis. 2010 Jul 15; 202(2): 282-290. PMCID: PMC2891111.
14. Kabithe E, Hillegas J, Stokol T, Moore J, Wagner B. Monoclonal antibodies to equine CD14. Vet Immunol Immunopathol. 2010 Jul 29.
15. Kim MJ, Wainwright HC, Locketz M, Bekker LG, Walther GB, Dittrich C, Visser A, Wang W, Hsu FF, Wiehart U, Tsenova L, Kaplan G, Russell DG. Caseation of human tuberculosis granulomas correlates with elevated host lipid metabolism. EMBO Mol Med. 2010 Jul 1.
16. Krogh-Madsen T, Karma A, Riccio ML, Jordan PN, Christini DJ, Gilmour RF,Jr. Off-site control of repolarization alternans in cardiac fibers. Phys Rev E Stat Nonlin Soft Matter Phys. 2010 Jan; 81(1 Pt 1): 011915.
17. Liu K, Cheng L, Flesken-Nikitin A, Huang L, Nikitin AY, Pauli BU. Conditional knockout of fibronectin abrogates mouse mammary gland lobuloalveolar differentiation. Dev Biol. 2010 Jul 9.
18. Liyanage NP, Manthey KC, Dassanayake RP, Kuszynski CA, Oakley GG, Duhamel GE. Helicobacter hepaticus cytolethal distending toxin causes cell death in intestinal epithelial cells via mitochondrial apoptotic pathway. Helicobacter. 2010 Apr; 15(2): 98-107.
19. Noronha LE, Antczak DF. Maternal immune responses to trophoblast: The contribution of the horse to pregnancy immunology. Am J Reprod Immunol. 2010 Jul 4.
20. Oliveira-Sales EB, Colombari DS, Davisson RL, Kasparov S, Hirata AE, Campos RR, Paton JF. Kidney-induced hypertension depends on superoxide signaling in the rostral ventrolateral medulla. Hypertension. 2010 Jul 6.
21. Ospina PA, Nydam DV, Stokol T, Overton TR. Association between the proportion of sampled transition cows with increased nonesterified fatty acids and beta-hydroxybutyrate and disease incidence, pregnancy rate, and milk production at the herd level. J Dairy Sci. 2010 Aug; 93(8): 3595-3601.
22. Pavlova I, Hume KR, Yazinski SA, Peters RM, Weiss RS, Webb WW. Multiphoton microscopy as a diagnostic imaging modality for lung cancer. Proc Soc Photo Opt Instrum Eng. 2010 Jan 24; 7569: 756918. PMCID: PMC2863148.
23. Place NJ, Cruickshank J. Short photoperiod initiated during adulthood sustains reproductive function in older female siberian hamsters more effectively than short photoperiod initiated before puberty. Biol Reprod. 2010 Apr; 82(4): 778-782. PMCID: PMC2842490.
24. Renshaw RW, Zylich NC, Laverack MA, Glaser AL, Dubovi EJ. Pneumovirus in dogs with acute respiratory disease. Emerg Infect Dis. 2010 Jun; 16(6): 993-995.
25. Sarveswaran S, Liroff J, Zhou Z, Nikitin AY, Ghosh J. Selenite triggers rapid transcriptional activation of p53, and p53-mediated apoptosis in prostate cancer cells: Implication for the treatment of early-stage prostate cancer. Int J Oncol. 2010 Jun; 36(6): 1419-1428.
26. Smith RL, Strawderman RL, Schukken YH, Wells SJ, Pradhan AK, Espejo LA, Whitlock RH, Van Kessel JS, Smith JM, Wolfgang DR, Grohn YT. Effect of johne's disease status on reproduction and culling in dairy cattle. J Dairy Sci. 2010 Aug; 93(8): 3513-3524.
27. Teixeira AG, Machado VS, Caixeta LS, Pereira RV, Bicalho RC. Efficacy of formalin, copper sulfate, and a commercial footbath product in the control of digital dermatitis. J Dairy Sci. 2010 Aug; 93(8): 3628-3634.
28. VanderVen BC, Hermetter A, Huang A, Maxfield FR, Russell DG, Yates RM. Development of a novel, cell-based chemical screen to identify inhibitors of intraphagosomal lipolysis in macrophages. Cytometry A. 2010 Aug; 77(8): 751-760. PMCID: PMC2909615.
29. Yan W, Faisal SM, Divers T, McDonough SP, Akey B, Chang YF. Experimental leptospira interrogans serovar kennewicki infection of horses. J Vet Intern Med. 2010 Jul-Aug; 24(4): 912-917.

August 2010

1. Belouzard S, Madu I, Whittaker GR. Elastase-mediated activation of the severe acute respiratory syndrome coronavirus spike protein at discrete sites within the S2 domain. J Biol Chem. 2010 Jul 23; 285(30): 22758-22763. PMCID: PMC2906266.
2. Brooks SA, Gabreski N, Miller D, Brisbin A, Brown HE, Streeter C, Mezey J, Cook D, Antczak DF. Whole-genome SNP association in the horse: Identification of a deletion in myosin va responsible for lavender foal syndrome. PLoS Genet. 2010 Apr 15; 6(4): e1000909. PMCID: PMC2855325.
3. Cha E, Hertl JA, Bar D, Grohn YT. The cost of different types of lameness in dairy cows calculated by dynamic programming. Prev Vet Med. 2010 Aug 27.
4. Cheng L, Zhou Z, Flesken-Nikitin A, Toshkov IA, Wang W, Camps J, Ried T, Nikitin AY. Rb inactivation accelerates neoplastic growth and substitutes for recurrent amplification of cIAP1, cIAP2 and Yap1 in sporadic mammary carcinoma associated with p53 deficiency. Oncogene. 2010 Aug 2.
5. Ching YH, Wilson LA, Schimenti JC. An allele separating skeletal patterning and spermatogonial renewal functions of PLZF. BMC Dev Biol. 2010 Mar 25; 10(1): 33. PMCID: PMC2859375.
6. Decarlo CH, Clark AB, McGowan KJ, Ziegler PE, Glaser AL, Szonyi B, Mohammed HO. Factors associated with the risk of west nile virus among crows in new york state. Zoonoses Public Health. 2010 Aug 12.
7. Ducharme NG, Cheetham J, Sanders I, Hermanson JW, Hackett RP, Soderholm LV, Mitchell LM. Considerations for pacing of the cricoarytenoid dorsalis muscle by neuroprosthesis in horses. Equine Vet J. 2010 Sep; 42(6): 534-540.
8. Gelzer A, Otani N, Koller M, Enyeart M, Moise N, Gilmour R. Dynamically-induced spatial dispersion of repolarization and the development of VF in an animal model of sudden death. Comput Cardiol. 2009 Sep 13; 2009: 309-312. PMCID: PMC2899698.
9. Goldstein O, Guyon R, Kukekova A, Kuznetsova TN, Pearce-Kelling SE, Johnson J, Aguirre GD, Acland GM. COL9A2 and COL9A3 mutations in canine autosomal recessive oculoskeletal dysplasia. Mamm Genome. 2010 Aug 5.
10. Kornreich B, Enyeart M, Jesty SA, Nydam DV, Divers T. The effects of pentoxifylline on equine platelet aggregation. J Vet Intern Med. 2010 Aug 12.
11. Krogh-Madsen T, Karma A, Riccio ML, Jordan PN, Christini DJ, Gilmour RF,Jr. Off-site control of repolarization alternans in cardiac fibers. Phys Rev E Stat Nonlin Soft Matter Phys. 2010 Jan; 81(1 Pt 1): 011915.
12. Malone EK, Rassnick KM, Wakshlag JJ, Russell DS, Al-Sarraf R, Ruslander DM, Johnson CS, Trump DL. Calcitriol (1,25-dihydroxycholecalciferol) enhances mast cell tumour chemotherapy and receptor tyrosine kinase inhibitor activity in vitro and has single-agent activity against spontaneously occurring canine mast cell tumours. Vet Comp Oncol. 2010 Sep; 8(3): 209-220.
13. Nayak S, Shen M, Bunaciu RP, Bloom SE, Varner JD, Yen A. Arsenic trioxide cooperates with all trans retinoic acid to enhance mitogen-activated protein kinase activation and differentiation in PML-RARalpha negative human myeloblastic leukemia cells. Leuk Lymphoma. 2010 Jul 8.
14. Pujar S, Meyers-Wallen VN. A molecular diagnostic test for persistent mullerian duct syndrome in miniature schnauzer dogs. Sex Dev. 2009; 3(6): 326-328.
15. Reiterer G, Chen L, Tassef R, Varner JD, Chen CY, Yen A. RAF associates with phosphorylated nuclear BubR1 during endoreduplication induced by JAK inhibition. Cell Cycle. 2010 Aug 10; 9(16).
16. Santos LC, Ludders JW, Erb HN, Basher KL, Kirch P, Gleed RD. Sedative and cardiorespiratory effects of dexmedetomidine and buprenorphine administered to cats via oral transmucosal or intramuscular routes. Vet Anaesth Analg. 2010 Sep; 37(5): 417-424.
17. Scaria J, Warnick LD, Kaneene JB, May K, Teng CH, Chang YF. Comparison of phenotypic and genotypic antimicrobial profiles in eschericia coli and salmonella enterica from the same dairy cattle farms. Mol Cell Probes. 2010 Aug 2.
18. Starkey SR, Wood C, de Matos R, Ledbetter EC, Morrisey JK. Central diabetes insipidus in an african grey parrot. J Am Vet Med Assoc. 2010 Aug 15; 237(4): 415-419.

19. Wu W, Huang L, Mendez S. A live leishmania major vaccine containing CpG motifs induces the de novo generation of Th17 cells in C57BL/6 mice. Eur J Immunol. 2010 Jul 9.

September 2010

1. Asano A, Nelson JL, Zhang S, Travis AJ. Characterization of the proteomes associating with three distinct membrane raft sub-types in murine sperm. Proteomics. 2010 Jul 30.
2. Bartlett SL, Peters RM, Lombardino IM, Bowser PR. Bilateral intraocular malignant neuroectodermal tumors in a telescope goldfish (carassius auratus). Vet Ophthalmol. 2010 Sep; 13 Suppl: 3-8.
3. Brosnahan MM, Brooks SA, Antczak DF. Equine clinical genomics: A clinician's primer. Equine Vet J. 2010 Oct; 42(7): 658-670.
4. Choi J, Curtis SJ, Roy DM, Flesken-Nikitin A, Nikitin AY. Local mesenchymal Stem/Progenitor cells are a preferential target for initiation of adult soft tissue sarcomas associated with p53 and rb deficiency. Am J Pathol. 2010 Sep 23.
5. Chuang CH, Wallace MD, Abratte C, Southard T, Schimenti JC. Incremental genetic perturbations to MCM2-7 expression and subcellular distribution reveal exquisite sensitivity of mice to DNA replication stress. PLoS Genet. 2010 Sep 9; 6(9): e1001110.
6. Craven M, Dogan B, Schukken A, Volkman M, Chandler A, McDonough PL, Simpson KW. Antimicrobial resistance impacts clinical outcome of granulomatous colitis in boxer dogs. J Vet Intern Med. 2010 Jul-Aug; 24(4): 819-824.
7. Cummings KJ, Warnick LD, Elton M, Rodriguez-Rivera LD, Siler JD, Wright EM, Grohn YT, Wiedmann M. Salmonella enterica serotype cerro among dairy cattle in new york: An emerging pathogen? Foodborne Pathog Dis. 2010 Jun; 7(6): 659-665.
8. Dietert RR. Role of developmental immunotoxicity and immune dysfunction in chronic disease and cancer. Reprod Toxicol. 2010 Sep 17.
9. Fleis RI, Scott DW. The microanatomy of healthy skin from alpacas (vicugna pacos). J Vet Diagn Invest. 2010 Sep; 22(5): 716-719.
10. Fortier LA, Potter HG, Rickey EJ, Schnabel LV, Foo LF, Chong LR, Stokol T, Cheetham J, Nixon AJ. Concentrated bone marrow aspirate improves full-thickness cartilage repair compared with microfracture in the equine model. J Bone Joint Surg Am. 2010 Oct; 92(10): 1927-1937.
11. Galvao KN, Santos JE. Factors affecting synchronization and conception rate after the ovsynch protocol in lactating holstein cows. Reprod Domest Anim. 2010 Jun; 45(3): 439-446.
12. Garner CD, Starr JK, McDonough PL, Altier C. Molecular identification of veterinary yeast isolates by use of sequence-based analysis of the D1/D2 region of the large ribosomal subunit. J Clin Microbiol. 2010 Jun; 48(6): 2140-2146. PMCID: PMC2884494.
13. Jarosinski KW, Hunt HD, Osterrieder N. Down-regulation of MHC class I by the marek's disease virus (MDV) UL49.5 gene product mildly affects virulence in a haplotype-specific fashion. Virology. 2010 Sep 30; 405(2): 457-463.
14. Kaufer BB, Smejkal B, Osterrieder N. Varicella-zoster virus gene ORFS/L (ORF0) is required for efficient viral replication and contains an element involved in DNA cleavage. J Virol. 2010 Sep 15.
15. Kaufer BB, Trapp S, Jarosinski KW, Osterrieder N. Herpesvirus telomerase RNA(vTR)-dependent lymphoma formation does not require interaction of vTR with telomerase reverse transcriptase (TERT). PLoS Pathog. 2010 Aug 26; 6(8): e1001073. PMCID: PMC2929889.
16. Kim B, Kan R, Anguish L, Nelson LM, Coonrod SA. Potential role for MATER in cytoplasmic lattice formation in murine oocytes. PLoS One. 2010 Sep 7; 5(9): e12587. PMCID: PMC2935378.
17. Latorre AA, Van Kessel JS, Karns JS, Zurakowski MJ, Pradhan AK, Boor KJ, Jayarao BM, Houser BA, Daugherty CS, Schukken YH. Biofilm in milking equipment on a dairy farm as a potential source of bulk tank milk contamination with listeria monocytogenes. J Dairy Sci. 2010 Jun; 93(6): 2792-2802.
18. Li S, Francisco AB, Han C, Pattabiraman S, Foote MR, Giesy SL, Wang C, Schimenti JC, Boisclair YR, Long Q. The full-length isoform of the mouse pleckstrin homology domain-interacting protein (PHIP) is required for postnatal growth. FEBS Lett. 2010 Sep 4.
19. Malone EK, Ledbetter EC, Rassnick KM, Kim SG, Russell D. Disseminated canine herpesvirus-1 infection in an immunocompromised adult dog. J Vet Intern Med. 2010 Jul-Aug; 24(4): 965-968.
20. McArt JA, Caixeta LS, Machado VS, Guard CL, Galvao KN, Sa Filho OG, Bicalho RC. Ovsynch versus ultrasynch: Reproductive efficacy of a dairy cattle synchronization protocol incorporating corpus luteum function. J Dairy Sci. 2010 Jun; 93(6): 2525-2532.
21. Mitchell RM, Gollnick NS, Sreevatsan S, Russell DG, Schukken YH. Quantification of mycobacterium avium subsp. paratuberculosis (MAP) survival in monocyte-derived macrophages. Vet Immunol Immunopathol. 2010 Aug 14.
22. Pavek TJ, Valentine H, Bailey MM. Operation of an air filtration device results in morbidity and mortality in growing chickens (gallus gallus domesticus). J Am Assoc Lab Anim Sci. 2010; 49(5): 578-582.
23. Place NJ, McGowan CM, Lamb SV, Schanbacher BJ, McGowan T, Walsh DM. Seasonal variation in serum concentrations of selected metabolic hormones in horses. J Vet Intern Med. 2010 May-Jun; 24(3): 650-654.
24. Poon K, Nowak LM, Oswald RE. Characterizing single-channel behavior of GluA3 receptors. Biophys J. 2010 Sep 8; 99(5): 1437-1446.
25. Roberts KL, Baines JD. Myosin va enhances secretion of herpes simplex virus 1 virions and cell surface expression of viral glycoproteins. J Virol. 2010 Oct; 84(19): 9889-9896.
26. Santos TM, Bicalho RC. Complete genome sequence of vB_EcoM_ECO1230-10: A coliphage with therapeutic potential for bovine metritis. Vet Microbiol. 2010 Sep 8.
27. Schepel SA, Fox AJ, Miyauchi JT, Sou T, Yang JD, Lau K, Blum AW, Nicholson LK, Tiburcy F, Nachman RJ, Piermarini PM, Beyenbach KW. The single kinin receptor signals to separate and independent physiological pathways in malpighian tubules of the yellow fever mosquito. Am J Physiol Regul Integr Comp Physiol. 2010 Aug; 299(2): R612-22.
28. Scott DW, Vogel JW, Fleis RI, Miller WH,Jr, Smith MC. Skin diseases in the alpaca (vicugna pacos): A literature review and retrospective analysis of 68 cases (cornell university 1997-2006). Vet Dermatol. 2010 Sep 6.
29. Short DM, Seco OM, Jesty SA, Reef VB. Spontaneous closure of a ventricular septal defect in a horse. J Vet Intern Med. 2010 Sep 14.
30. Soyer Y, Alcaine SD, Schoonmaker-Bopp DJ, Root TP, Warnick LD, McDonough PL, Dumas NB, Grohn YT, Wiedmann M. Pulsed-field gel electrophoresis diversity of human and bovine clinical salmonella isolates. Foodborne Pathog Dis. 2010 Jun; 7(6): 707-717.
31. Starkey SR, Wood C, de Matos R, Ledbetter EC, Morrisey JK. Central diabetes insipidus in an african grey parrot. J Am Vet Med Assoc. 2010 Aug 15; 237(4): 415-419.
32. Sun X, Tse LV, Ferguson AD, Whittaker GR. Modifications to the hemagglutinin cleavage site control the virulence of a neurotropic H1N1 influenza virus. J Virol. 2010 Sep; 84(17): 8683-8690. PMCID: PMC2919019.
33. Tranchina MM, Scott DW, McDonough SP. CD3+ and BLA.36+ cells do not occur in the epidermis and adnexal epithelia of normal equine skin. Equine Vet J. 2010 Jul; 42(5): 471-473.
34. Tranchina MM, Scott DW, McDonough SP. CD3+ and BLA.36+ cells do not occur in the epidermis and adnexal epithelia of normal skin from the dorsolateral trunk of cats. J Feline Med Surg. 2010 Sep 2.
35. Vanden Berg-Foels WS, Schwager SJ, Todhunter RJ, Reeves AP. Femoral head bone mineral density patterns may identify hips at risk of degeneration. Ann Biomed Eng. 2010 Sep 16.
36. Wagner B, Burton A, Ainsworth D. Interferon-gamma, interleukin-4 and interleukin-10 production by T helper cells reveals intact Th1 and regulatory TR1 cell activation and a delay of the Th2 cell response in equine neonates and foals. Vet Res. 2010 Jul-Aug; 41(4): 47. PMCID: PMC2865874.
37. Wakshlag JJ, Kraus MS, Gelzer AR, Downey RL, Vacchani P. The influence of high-intensity moderate duration exercise on cardiac troponin I and C-reactive protein in sled dogs. J Vet Intern Med. 2010 Sep 14.
38. Wang JB, Erickson JW, Fuji R, Ramachandran S, Gao P, Dinavahi R, Wilson KF, Ambrosio AL, Dias SM, Dang CV, Cerione RA. Targeting mitochondrial glutaminase activity inhibits oncogenic transformation. Cancer Cell. 2010 Sep 14; 18(3): 207-219.
39. Yan W, Faisal SM, Divers T, McDonough SP, Akey B, Chang YF. Experimental leptospira interrogans serovar kennewicki infection of horses. J Vet Intern Med. 2010 Jul-Aug; 24(4): 912-917.

October 2010

1. Asano A, Nelson JL, Zhang S, Travis AJ. Characterization of the proteomes associating with three distinct membrane raft sub-types in murine sperm. Proteomics. 2010 Oct; 10(19): 3494-3505.
2. Ashrafian H, O'Flaherty L, Adam J, Steeples V, Chung YL, East P, Vanharanta S, Lehtonen H, Nye E, Hatipoglu E, Miranda M, Howarth K, Shukla D, Troy H, Griffiths J, Spencer-Dene B, Yusuf M, Volpi E, Maxwell PH, Stamp G, Poulsom R, Pugh CW, Costa B, Bardella C, Di Renzo MF, Kotlikoff MI, Launonen V, Aaltonen L, El-Bahrawy M, Tomlinson I, Pollard PJ. Expression profiling in progressive stages of fumarate-hydratase deficiency: The contribution of metabolic changes to tumorigenesis. Cancer Res. 2010 Oct 26.
3. Barr SC. Preface. Vet Clin North Am Small Anim Pract. 2010 Nov; 40(6): ix-x.
4. Beyenbach KW, Piermarini PM. Transcellular and paracellular pathways of transepithelial fluid secretion in malpighian (renal) tubules of the yellow fever mosquito aedes aegypti. Acta Physiol (Oxf). 2010 Oct 14.
5. Bischoff K, Priest H, Mount-Long A. Animals as sentinels for human lead exposure: A case report. J Med Toxicol. 2010 Jun; 6(2): 185-189.
6. Burton AJ, Nydam DV, Dearen TK, Mitchell K, Bowman DD, Xiao L. The prevalence of cryptosporidium, and identification of the cryptosporidium horse genotype in foals in new york state. Vet Parasitol. 2010 Aug 24.
7. Burton AJ, Nydam DV, Jones G, Zambriski JA, Linden TC, Cox G, Davis R, Brown A, Bowman DD. Antibody responses following administration of a cryptosporidium parvum rCP15/60 vaccine to pregnant cattle. Vet Parasitol. 2010 Sep 22.
8. Cherrington BD, Morency E, Struble AM, Coonrod SA, Wakshlag JJ. Potential role for peptidylarginine deiminase 2 (PAD2) in citrullination of canine mammary epithelial cell histones. PLoS One. 2010 Jul 26; 5(7): e11768. PMCID: PMC2909897.
9. Daley-Bauer LP, Purdy SR, Smith MC, Gagliardo LF, Davis WC, Appleton JA. Contributions of conventional and heavy-chain IgG to immunity in fetal, neonatal and adult alpacas. Clin Vaccine Immunol. 2010 Oct 6.
10. Dubovi EJ. Canine influenza. Vet Clin North Am Small Anim Pract. 2010 Nov; 40(6): 1063-1071.
11. Erb HN. Changing expectations: Do journals drive methodological changes? should they? Prev Vet Med. 2010 Oct 14.
12. Goldstein O, Kukekova AV, Aguirre GD, Acland GM. Exonic SINE insertion in STK38L causes canine early retinal degeneration (erd). Genomics. 2010 Sep 28.
13. Goldstein RE. Canine leptospirosis. Vet Clin North Am Small Anim Pract. 2010 Nov; 40(6): 1091-1101.
14. Guan F, Uboh CE, Soma LR, Maylin G, Jiang Z, Chen J. Confirmatory analysis

of continuous erythropoietin receptor activator and erythropoietin analogues in equine plasma by LC-MS for doping control. Anal Chem. 2010 Oct 14.

15. Krotscheck U, Merton Boothe D, Little A, Erb H. Pharmacokinetics of buprenorphine in a sodium carboxymethylcellulose gel after buccal transmucosal administration in dogs. Vet Ther. 2010 Fall; 11(3): E1-8.
16. Li S, Francisco AB, Han C, Pattabiraman S, Foote MR, Giesy SL, Wang C, Schimenti JC, Boisclair YR, Long Q. The full-length isoform of the mouse pleckstrin homology domain-interacting protein (PHIP) is required for postnatal growth. FEBS Lett. 2010 Sep 24; 584(18): 4121-4127. PMCID: PMC2965186.
17. Liu K, Cheng L, Flesken-Nikitin A, Huang L, Nikitin AY, Pauli BU. Conditional knockout of fibronectin abrogates mouse mammary gland lobuloalveolar differentiation. Dev Biol. 2010 Oct 1; 346(1): 11-24. PMCID: PMC2937099.
18. Looney A. Oncology pain in veterinary patients. Top Companion Anim Med. 2010 Feb; 25(1): 32-44.
19. Mark-Carew MP, Khan Y, Wade SE, Schaaf S, Mohammed HO. Incidence of and risks associated with giardia infections in herds on dairy farms in the new york city watershed. Acta Vet Scand. 2010 Jun 21; 52: 44. PMCID: PMC2904781.
20. Rassnick KM, Al-Sarraf R, Bailey DB, Chretin JD, Phillips B, Zwhalen CH. Phase II open-label study of single-agent hydroxyurea for treatment of mast cell tumours in dogs. Vet Comp Oncol. 2010 Jun; 8(2): 103-111.
21. Rassnick KM, Bailey DB, Russell DS, Flory AB, Kiselow MA, Intile JL, Malone EK, Balkman CE, Barnard SM. A phase II study to evaluate the toxicity and efficacy of alternating CCNU and high-dose vinblastine and prednisone (CVP) for treatment of dogs with high-grade, metastatic or nonresectable mast cell tumours. Vet Comp Oncol. 2010 Jun; 8(2): 138-152.
22. Russell DG, VanderVen BC, Lee W, Abramovitch RB, Kim MJ, Homolka S, Niemann S, Rohde KH. Mycobacterium tuberculosis wears what it eats. Cell Host Microbe. 2010 Jul 22; 8(1): 68-76. PMCID: PMC2929656.
23. Selvaraj V, Asano A, Page JL, Nelson JL, Kothapalli KS, Foster JA, Brenna JT, Weiss RS, Travis AJ. Mice lacking FABP9/PERF15 develop sperm head abnormalities but are fertile. Dev Biol. 2010 Oct 1.
24. Song IY, Barkley LR, Day TA, Weiss RS, Vaziri C. A novel role for fanconi anemia (FA) pathway effector protein FANCD2 in cell cycle progression of untransformed primary human cells. Cell Cycle. 2010 Jun 25; 9(12).
25. Szonyi B, Bordonaro R, Wade SE, Mohammed HO. Seasonal variation in the prevalence and molecular epidemiology of cryptosporidium infection in dairy cattle in the new york city watershed. Parasitol Res. 2010 Jul; 107(2): 317-325.
26. Tranchina MM, Scott DW, McDonough SP. CD3+ and BLA.36+ cells do not occur in the epidermis and adnexal epithelia of normal skin from the dorsolateral trunk of cats. J Feline Med Surg. 2010 Oct; 12(10): 790-793.
27. VanderVen BC, Hermetter A, Huang A, Maxfield FR, Russell DG, Yates RM. Development of a novel, cell-based chemical screen to identify inhibitors of intraphagosomal lipolysis in macrophages. Cytometry A. 2010 Aug; 77(8): 751-760. PMCID: PMC2909615.
28. Wakshlag JJ, Stokol T, Geske SM, Greger CE, Angle CT, Gillette RL. Evaluation of exercise-induced changes in concentrations of C-reactive protein and serum biochemical values in sled dogs completing a long-distance endurance race. Am J Vet Res. 2010 Oct; 71(10): 1207-1213.
29. Wang JB, Erickson JW, Fuji R, Ramachandran S, Gao P, Dinavahi R, Wilson KF, Ambrosio AL, Dias SM, Dang CV, Cerione RA. Targeting mitochondrial glutaminase activity inhibits oncogenic transformation. Cancer Cell. 2010 Sep 14; 18(3): 207-219.
30. Wisniewski ML, Werner BG, Hom LG, Anguish LJ, Coffey CM, Parker JS. Reovirus infection or ectopic expression of outer-capsid protein {mu}1 induces apoptosis independently of the cellular proapoptotic proteins bax and bak. J Virol. 2010 Oct 27.
31. Yaxley PE, Beal MW, Jutkowitz LA, Hauptman JG, Brooks MB, Hale AS, Parr A. Comparative stability of canine and feline hemostatic proteins in freeze-thaw-cycled fresh frozen plasma. J Vet Emerg Crit Care (San Antonio). 2010 Oct; 20(5): 472-478.

November 2010

1. Albright J. Animal behavior case of the month. J Am Vet Med Assoc. 2010 Nov 15; 237(10): 1147-1148.
2. Bicalho RC, Machado VS, Bicalho ML, Gilbert RO, Teixeira AG, Caixeta LS, Pereira RV. Molecular and epidemiological characterization of bovine intrauterine escherichia coli. J Dairy Sci. 2010 Dec; 93(12): 5818-5830.
3. Bischoff K, Gaskill C, Erb HN, Ebel JG, Hillebrandt J. Comparison of two methods for blood lead analysis in cattle: Graphite-furnace atomic absorption spectrometry and LeadCare(R) II system. J Vet Diagn Invest. 2010 Sep; 22(5): 729-733.
4. Bliss SP, Navratil AM, Xie J, Roberson MS. GnRH signaling, the gonadotrope and endocrine control of fertility. Front Neuroendocrinol. 2010 Jul; 31(3): 322-340. PMCID: PMC2923852.
5. Butkus MA, Hughes KT, Bowman DD, Liotta JL, Jenkins MB, Labare MP. Inactivation of ascaris suum by short-chain fatty acids. Appl Environ Microbiol. 2010 Nov 5.
6. Capone C, Faraco G, Park L, Cao X, Davisson RL, Iadecola C. The cerebrovascular dysfunction induced by slow pressor doses of angiotensin-II precedes the development of hypertension. Am J Physiol Heart Circ Physiol. 2010 Oct 22.
7. Cheng L, Zhou Z, Flesken-Nikitin A, Toshkov IA, Wang W, Camps J, Ried T, Nikitin AY. Rb inactivation accelerates neoplastic growth and substitutes for recurrent amplification of cIAP1, cIAP2 and Yap1 in sporadic mammary carcinoma associated with p53 deficiency. Oncogene. 2010 Oct 21; 29(42): 5700-5711. PMCID: PMC2967730.
8. Concannon PW. Reproductive cycles of the domestic bitch. Anim Reprod Sci. 2010 Oct 8.
9. Cummings KJ, Warnick LD, Elton M, Grohn YT, McDonough PL, Siler JD. The effect of clinical outbreaks of salmonellosis on the prevalence of fecal salmonella shedding among dairy cattle in new york. Foodborne Pathog Dis. 2010 Jul; 7(7): 815-823.
10. Fleis RI, Scott DW. The microanatomy of healthy skin from alpacas (vicugna pacos). J Vet Diagn Invest. 2010 Sep; 22(5): 716-719.
11. Gau P, Rodriguez S, De Leonardis C, Chen P, Lin DM. Air-assisted intranasal instillation enhances adenoviral delivery to the olfactory epithelium and respiratory tract. Gene Ther. 2010 Nov 18.
12. Goldstein O, Mezey JG, Boyko AR, Gao C, Wang W, Bustamante CD, Anguish LJ, Jordan JA, Pearce-Kelling SE, Aguirre GD, Acland GM. An ADAM9 mutation in canine cone-rod dystrophy 3 establishes homology with human cone-rod dystrophy 9. Mol Vis. 2010 Aug 11; 16: 1549-1569. PMCID: PMC2925905.
13. Kamm JL, Nixon AJ, Witte TH. Cytokine and catabolic enzyme expression in synovium, synovial fluid and articular cartilage of naturally osteoarthritic equine carpi. Equine Vet J. 2010 Nov; 42(8): 693-699.
14. Kang HG, Bischoff K, Ebel JG, Cha SH, McCardle J, Choi CU. Comparison of blood lead and blood and plasma {delta}-aminolevulinic acid concentrations as biomarkers for lead poisoning in cattle. J Vet Diagn Invest. 2010 Nov; 22(6): 903-907.
15. Kanu U, Iravanian S, Gilmour RF, Christini DJ. Control of action potential duration alternans in canine ventricular tissue. Conf Proc IEEE Eng Med Biol Soc. 2010; 1: 1997-2000.
16. Kim JW, Lyi SM, Parrish CR, Parker JS. A proapoptotic peptide derived from reovirus outer-capsid protein {mu}1 has membrane-destabilizing activity. J Virol. 2010 Nov 24.
17. Kim MJ, Wainwright HC, Locketz M, Bekker LG, Walther GB, Dittrich C, Visser A, Wang W, Hsu FF, Wiehart U, Tsenova L, Kaplan G, Russell DG. Caseation of human tuberculosis granulomas correlates with elevated host lipid metabolism. EMBO Mol Med. 2010 Jul; 2(7): 258-274. PMCID: PMC2913288.
18. Kornreich B, Enyeart M, Jesty SA, Nydam DV, Divers T. The effects of pentoxifylline on equine platelet aggregation. J Vet Intern Med. 2010 Sep-Oct; 24(5): 1196-1202.
19. Martin-Flores M, Mercure-McKenzie TM, Campoy L, Erb HN, Ludders JW, Gleed RD. Controlled retrospective study of the effects of eyedrops containing phenylephrine hydrochloride and scopolamine hydrobromide on mean arterial blood pressure in anesthetized dogs. Am J Vet Res. 2010 Dec; 71(12): 1407-1412.
20. Moise NS, Gladuli A, Hemsley SA, Otani NF. "Zone of avoidance": RR interval distribution in tachograms, histograms, and poincare plots of a boxer dog. J Vet Cardiol. 2010 Oct 28.
21. Mu W, Munroe RJ, Barker AK, Schimenti JC. PDCD2 is essential for inner cell mass development and embryonic stem cell maintenance. Dev Biol. 2010 Nov 15; 347(2): 279-288. PMCID: PMC2957520.
22. Mulz JM, Kraus MS, Thompson M, Flanders JA. Cranial vena caval syndrome secondary to central venous obstruction associated with a pacemaker lead in a dog. J Vet Cardiol. 2010 Nov 2.
23. Noronha LE, Antczak DF. Maternal immune responses to trophoblast: The contribution of the horse to pregnancy immunology. Am J Reprod Immunol. 2010 Oct; 64(4): 231-244.
24. Ospina PA, Nydam DV, Stokol T, Overton TR. Association between the proportion of sampled transition cows with increased nonesterified fatty acids and beta-hydroxybutyrate and disease incidence, pregnancy rate, and milk production at the herd level. J Dairy Sci. 2010 Aug; 93(8): 3595-3601.
25. Pigott JH, Ducharme NG, Mitchell LM, Soderholm LV, Cheetham J. Incidence of swallowing during exercise in horses with dorsal displacement of the soft palate. Equine Vet J. 2010 Nov; 42(8): 732-737.
26. Qing X, Redecha PB, Burmeister MA, Tomlinson S, D'Agati VD, Davisson RL, Salmon JE. Targeted inhibition of complement activation prevents features of preeclampsia in mice. Kidney Int. 2010 Oct 13.
27. Rassnick KM, Bailey DB, Malone EK, Intile JL, Kiselow MA, Flory AB, Barlow LL, Balkman CE, Barnard SM, Waite AH. Comparison between l-CHOP and an l-CHOP protocol with interposed treatments of CCNU and MOPP (l-CHOP-CCNU-MOPP) for lymphoma in dogs. Vet Comp Oncol. 2010 Dec; 8(4): 243-253.
28. S Sharpe K, A Center S, F Randolph J, B Brooks M, L Warner K, Stokol T, C Barr S, Julia Felippe M. Influence of treatment with ultralow-dose aspirin on platelet aggregation as measured by whole blood impedance aggregometry and platelet P-selectin expression in clinically normal dogs. Am J Vet Res. 2010 Nov; 71(11): 1294-1304.
29. Schukken YH, Bar D, Hertl J, Grohn YT. Correlated time to event data: Modeling repeated clinical mastitis data from dairy cattle in new york state. Prev Vet Med. 2010 Oct 27.
30. Shen C, Ramkumar A, Lal A, Gilmour RF. Wireless transmission of cardiac action potentials with ultrasonically guided insertion of silicon probes. Conf Proc IEEE Eng Med Biol Soc. 2010; 1: 5022-5025.
31. Smith RL, Strawderman RL, Schukken YH, Wells SJ, Pradhan AK, Espejo LA, Whitlock RH, Van Kessel JS, Smith JM, Wolfgang DR, Grohn YT. Effect of johne's disease status on reproduction and culling in dairy cattle. J Dairy Sci. 2010 Aug; 93(8): 3513-3524.
32. Teixeira AG, Machado VS, Caixeta LS, Pereira RV, Bicalho RC. Efficacy of formalin, copper sulfate, and a commercial footbath product in the control of digital dermatitis. J Dairy Sci. 2010 Aug; 93(8): 3628-3634.
33. Tseng CT, Miller D, Cassano J, Bailey E, Antczak DF. Identification of equine

major histocompatibility complex haplotypes using polymorphic microsatellites. Anim Genet. 2010 Dec; 41 Suppl 2: 150-153.

34. Wakshlag JJ, Balkman CE. Effects of lycopene on proliferation and death of canine osteosarcoma cells. Am J Vet Res. 2010 Nov; 71(11): 1362-1370.
35. Witte TH, Cheetham J, Soderholm LV, Mitchell LM, Ducharme NG. Equine laryngoplasty sutures undergo increased loading during coughing and swallowing. Vet Surg. 2010 Nov 2.
36. Woods AK, Hoffmann DS, Weydert CJ, Butler SD, Zhou Y, Sharma RV, Davisson RL. Adenoviral delivery of VEGF121 early in pregnancy prevents spontaneous development of preeclampsia in BPH/5 mice. Hypertension. 2010 Nov 15.
37. Wu W, Huang L, Mendez S. A live leishmania major vaccine containing CpG motifs induces the de novo generation of Th17 cells in C57BL/6 mice. Eur J Immunol. 2010 Sep; 40(9): 2517-2527.

December 2010

1. Abdel-Ghany M, Sharp GW, Straub SG. Glucose stimulation of protein acylation in the pancreatic beta-cell. Life Sci. 2010 Dec 18; 87(23-26): 667-671. PMCID: PMC3004428.
2. Albright J. Animal behavior case of the month. status aggression. J Am Vet Med Assoc. 2010 Nov 15; 237(10): 1147-1148.
3. Brosnahan MM, Brooks SA, Antczak DF. Equine clinical genomics: A clinician's primer. Equine Vet J. 2010 Oct; 42(7): 658-670.
4. Burmeister MA, Young CN, Braga VA, Butler SD, Sharma RV, Davisson RL. In vivo bioluminescence imaging reveals redox-regulated activator protein-1 activation in paraventricular nucleus of mice with renovascular hypertension. Hypertension. 2010 Dec 20.
5. Cha E, Hertl JA, Bar D, Grohn YT. The cost of different types of lameness in dairy cows calculated by dynamic programming. Prev Vet Med. 2010 Oct 1; 97(1): 1-8.
6. Congleton J, Jiang H, Malavasi F, Lin H, Yen A. ATRA-induced HL-60 myeloid leukemia cell differentiation depends on the CD38 cytosolic tail needed for membrane localization, but CD38 enzymatic activity is unnecessary. Exp Cell Res. 2010 Dec 11.
7. Cook JL, Evans R, Conzemius MG, Lascelles BD, McIlwraith CW, Pozzi A, Clegg P, Innes J, Schulz K, Houlton J, Fortier L, Cross AR, Hayashi K, Kapatkin A, Brown DC, Stewart A. Proposed definitions and criteria for reporting time frame, outcome, and complications for clinical orthopedic studies in veterinary medicine. Vet Surg. 2010 Dec; 39(8): 905-908.
8. Dietert RR, DeWitt JC, Germolec DR, Zelikoff JT. Breaking patterns of environmentally influenced disease for health risk reduction: Immune perspectives. Environ Health Perspect. 2010 Aug; 118(8): 1091-1099. PMCID: PMC2920092.
9. Galvao KN, Flaminio MJ, Brittin SB, Sper R, Fraga M, Caixeta L, Ricci A, Guard CL, Butler WR, Gilbert RO. Association between uterine disease and indicators of neutrophil and systemic energy status in lactating holstein cows. J Dairy Sci. 2010 Jul; 93(7): 2926-2937.
10. Gelzer AR, Kraus MS, Rishniw M, Hemsley SA, Moise NS. Combination therapy with mexiletine and sotalol suppresses inherited ventricular arrhythmias in german shepherd dogs better than mexiletine or sotalol monotherapy: A randomized cross-over study. J Vet Cardiol. 2010 Aug; 12(2): 93-106.
11. Gershenson RT, Melidone R, Sutherland-Smith J, Rogers CL. Abdominal aortic aneurysm associated with systemic fungal infection in a german shepherd dog. J Am Anim Hosp Assoc. 2011 Jan-Feb; 47(1): 45-49.
12. Goldstein O, Guyon R, Kukekova A, Kuznetsova TN, Pearce-Kelling SE, Johnson J, Aguirre GD, Acland GM. COL9A2 and COL9A3 mutations in canine autosomal recessive oculoskeletal dysplasia. Mamm Genome. 2010 Aug; 21(7-8): 398-408. PMCID: PMC2954766.
13. Hoelzer K, Soyer Y, Rodriguez-Rivera LD, Cummings KJ, McDonough PL, Schoonmaker-Bopp DJ, Root TP, Dumas NB, Warnick LD, Grohn YT, Wiedmann M, Baker KN, Besser TE, Hancock DD, Davis MA. The prevalence of multidrug resistance is higher among bovine than human salmonella enterica serotype newport, typhimurium, and 4,5,12:I:- isolates in the united states but differs by serotype and geographic region. Appl Environ Microbiol. 2010 Sep; 76(17): 5947-5959. PMCID: PMC2935064.
14. Kamm JL, Nixon AJ, Witte TH. Cytokine and catabolic enzyme expression in synovium, synovial fluid and articular cartilage of naturally osteoarthritic equine carpi. Equine Vet J. 2010 Nov; 42(8): 693-699.
15. Kan R, Yurttas P, Kim B, Jin M, Wo L, Lee B, Gosden R, Coonrod SA. Regulation of mouse oocyte microtubule and organelle dynamics by PADI6 and the cytoplasmic lattices. Dev Biol. 2010 Dec 10.
16. Kaufer BB, Trapp S, Jarosinski KW, Osterrieder N. Herpesvirus telomerase RNA(vTR)-dependent lymphoma formation does not require interaction of vTR with telomerase reverse transcriptase (TERT). PLoS Pathog. 2010 Aug 26; 6(8): e1001073. PMCID: PMC2929889.
17. Kukekova AV, Trut LN, Chase K, Kharlamova AV, Johnson JL, Temnykh SV, Oskina IN, Gulevich RG, Vladimirova AV, Klebanov S, Shepeleva DV, Shikhevich SG, Acland GM, Lark KG. Mapping loci for fox domestication: Deconstruction/Reconstruction of a behavioral phenotype. Behav Genet. 2010 Dec 14.
18. Lee AC, Atkins CE. Understanding feline heartworm infection: Disease, diagnosis, and treatment. Top Companion Anim Med. 2010 Nov; 25(4): 224-230.
19. Lefebure T, Bitar PD, Suzuki H, Stanhope MJ. Evolutionary dynamics of complete campylobacter pan-genomes and the bacterial species concept. Genome Biol Evol. 2010; 2: 646-655. PMCID: PMC2940326.
20. Lu Z, Grohn YT, Smith RL, Wolfgang DR, Van Kessel JA, Schukken YH. Assessing the potential impact of salmonella vaccines in an endemically infected dairy herd. J Theor Biol. 2009 Aug 21; 259(4): 770-784.
21. Machado VS, Caixeta LS, McArt JA, Bicalho RC. The effect of claw horn disruption lesions and body condition score at dry-off on survivability, reproductive performance, and milk production in the subsequent lactation. J Dairy Sci. 2010 Sep; 93(9): 4071-4078.
22. Malone EK, Rassnick KM, Wakshlag JJ, Russell DS, Al-Sarraf R, Ruslander DM, Johnson CS, Trump DL. Calcitriol (1,25-dihydroxycholecalciferol) enhances mast cell tumour chemotherapy and receptor tyrosine kinase inhibitor activity in vitro and has single-agent activity against spontaneously occurring canine mast cell tumours. Vet Comp Oncol. 2010 Sep; 8(3): 209-220.
23. Munoz LM, Stockton JF, Otani NF. Applications of control theory to the dynamics and propagation of cardiac action potentials. Ann Biomed Eng. 2010 Sep; 38(9): 2865-2876.
24. Oliveira-Sales EB, Colombari DS, Davisson RL, Kasparov S, Hirata AE, Campos RR, Paton JF. Kidney-induced hypertension depends on superoxide signaling in the rostral ventrolateral medulla. Hypertension. 2010 Aug; 56(2): 290-296.
25. Otani NF, Luther S, Singh R, Gilmour RF,Jr. Transmural ultrasound-based visualization of patterns of action potential wave propagation in cardiac tissue. Ann Biomed Eng. 2010 Oct; 38(10): 3112-3123. PMCID: PMC2940053.
26. Petitprez S, Zmoos AF, Ogrodnik J, Balse E, Raad N, El-Haou S, Albesa M, Bittihn P, Luther S, Lehnart SE, Hatem SN, Coulombe A, Abriel H. SAP97 and dystrophin macromolecular complexes determine two pools of cardiac sodium channels Nav1.5 in cardiomyocytes. Circ Res. 2010 Dec 16.
27. Pigott JH, Ducharme NG, Mitchell LM, Soderholm LV, Cheetham J. Incidence of swallowing during exercise in horses with dorsal displacement of the soft palate. Equine Vet J. 2010 Nov; 42(8): 732-737.
28. Poon K, Nowak LM, Oswald RE. Characterizing single-channel behavior of GluA3 receptors. Biophys J. 2010 Sep 8; 99(5): 1437-1446. PMCID: PMC2931745.
29. Qing X, Redecha PB, Burmeister MA, Tomlinson S, D'Agati VD, Davisson RL, Salmon JE. Targeted inhibition of complement activation prevents features of preeclampsia in mice. Kidney Int. 2010 Oct 13.
30. Rassnick KM, Moore AS, Russell DS, Northrup NC, Kristal O, Bailey DB, Flory AB, Kiselow MA, Intile JL. Phase II, open-label trial of single-agent CCNU in dogs with previously untreated histiocytic sarcoma. J Vet Intern Med. 2010 Nov-Dec; 24(6): 1528-1531.
31. Russell DS, Rassnick KM, Erb HN, Vaughan MM, McDonough SP. An immunohistochemical study of vitamin D receptor expression in canine cutaneous mast cell tumours. J Comp Pathol. 2010 Aug-Oct; 143(2-3): 223-226.
32. Santos LC, Ludders JW, Erb HN, Basher KL, Kirch P, Gleed RD. Sedative and cardiorespiratory effects of dexmedetomidine and buprenorphine administered to cats via oral transmucosal or intramuscular routes. Vet Anaesth Analg. 2010 Sep; 37(5): 417-424.
33. Santos TM, Caixeta LS, Machado VS, Rauf AK, Gilbert RO, Bicalho RC. Antimicrobial resistance and presence of virulence factor genes in arcanobacterium pyogenes isolated from the uterus of postpartum dairy cows. Vet Microbiol. 2010 Sep 28; 145(1-2): 84-89.
34. Scaria J, Ponnala L, Janvilisri T, Yan W, Mueller LA, Chang YF. Analysis of ultra low genome conservation in clostridium difficile. PLoS One. 2010 Dec 8; 5(12): e15147. PMCID: PMC2999544.
35. Selvaraj V, Asano A, Page JL, Nelson JL, Kothapalli KS, Foster JA, Brenna JT, Weiss RS, Travis AJ. Mice lacking FABP9/PERF15 develop sperm head abnormalities but are fertile. Dev Biol. 2010 Dec 15; 348(2): 177-189. PMCID: PMC2982899.
36. Sharpe KS, Center SA, Randolph JF, Brooks MB, Warner KL, Stokol T, Barr SC, Felippe MJ. Influence of treatment with ultralow-dose aspirin on platelet aggregation as measured by whole blood impedance aggregometry and platelet P-selectin expression in clinically normal dogs. Am J Vet Res. 2010 Nov; 71(11): 1294-1304.
37. Smith DF. 150th anniversary of veterinary education and the veterinary profession in north america. J Vet Med Educ. 2010 Winter; 37(4): 317-327.
38. Sox EM, Chiotti R, Goldstein RE. Use of gadolinium diethylene triamine pentaacetic acid, as measured by ELISA, in the determination of glomerular filtration rates in cats. J Feline Med Surg. 2010 Oct; 12(10): 738-745.
39. Sykes JE, Hartmann K, Lunn KF, Moore GE, Stoddard RA, Goldstein RE. 2010 ACVIM small animal consensus statement on leptospirosis: Diagnosis, epidemiology, treatment, and prevention. J Vet Intern Med. 2010 Dec 13.
40. Tomlinson JE, Divers TJ, McDonough SP, Thompson MS. Hypertrophic osteopathy secondary to nodular pulmonary fibrosis in a horse. J Vet Intern Med. 2010 Dec 13.
41. Tranchina MM, Scott DW, McDonough SP. CD3+ and BLA.36+ cells do not occur in the epidermis and adnexal epithelia of normal skin from the dorsolateral trunk of cats. J Feline Med Surg. 2010 Oct; 12(10): 790-793.
42. Wakshlag JJ, Balkman CE. Effects of lycopene on proliferation and death of canine osteosarcoma cells. Am J Vet Res. 2010 Nov; 71(11): 1362-1370.
43. Wakshlag JJ, Stokol T, Geske SM, Greger CE, Angle CT, Gillette RL. Evaluation of exercise-induced changes in concentrations of C-reactive protein and serum biochemical values in sled dogs completing a long-distance endurance race. Am J Vet Res. 2010 Oct; 71(10): 1207-1213.
44. Woods AK, Hoffmann DS, Weydert CJ, Butler SD, Zhou Y, Sharma RV, Davisson RL. Adenoviral delivery of VEGF121 early in pregnancy prevents spontaneous development of preeclampsia in BPH/5 mice. Hypertension. 2011 Jan; 57(1): 94-102.

January 2011

1. Asano A, Nelson JL, Zhang S, Travis AJ. Characterization of the proteomes associating with three distinct membrane raft sub-types in murine sperm. Proteomics. 2010 Oct; 10(19): 3494-3505. PMCID: PMC2950924.
2. Bartlett SL, Peters RM, Lombardino IM, Bowser PR. Bilateral intraocular malignant neuroectodermal tumors in a telescope goldfish (carassius auratus). Vet Ophthalmol. 2010 Sep; 13 Suppl: 3-8.
3. Beltaire KA, Tanco VM, Bedford-Guaus SJ. Theriogenology question of the month. J Am Vet Med Assoc. 2011 Jan 15; 238(2): 161-164.
4. Bicalho RC, Machado VS, Bicalho ML, Gilbert RO, Teixeira AG, Caixeta LS, Pereira RV. Molecular and epidemiological characterization of bovine intrauterine escherichia coli. J Dairy Sci. 2010 Dec; 93(12): 5818-5830.
5. Bunaciu RP, Yen A. Activation of the aryl hydrocarbon receptor AhR promotes retinoic acid-induced differentiation of myeloblastic leukemia cells by restricting expression of the stem cell transcription factor Oct4. Cancer Res. 2011 Jan 24.
6. Byrnes LJ, Sondermann H. Structural basis for the nucleotide-dependent dimerization of the large G protein atlastin-1/SPG3A. Proc Natl Acad Sci U S A. 2011 Jan 10.
7. Capone C, Faraco G, Park L, Cao X, Davisson RL, Iadecola C. The cerebrovascular dysfunction induced by slow pressor doses of angiotensin II precedes the development of hypertension. Am J Physiol Heart Circ Physiol. 2011 Jan; 300(1): H397-407.
8. Chang H, Suarez SS. Rethinking the relationship between hyperactivation and chemotaxis in mammalian sperm. Biol Reprod. 2010 Oct; 83(4): 507-513. PMCID: PMC2957157.
9. Cheong SH, Nydam DV, Galvao KN, Crosier BM, Gilbert RO. Cow-level and herd-level risk factors for subclinical endometritis in lactating holstein cows. J Dairy Sci. 2011 Feb; 94(2): 762-770.
10. Cherry EM, Fenton FH. Realistic cardiac electrophysiology modelling: Are we just a heartbeat away? J Physiol. 2010 Aug 1; 588(Pt 15): 2689. PMCID: PMC2956893.
11. Chuang CH, Wallace MD, Abratte C, Southard T, Schimenti JC. Incremental genetic perturbations to MCM2-7 expression and subcellular distribution reveal exquisite sensitivity of mice to DNA replication stress. PLoS Genet. 2010 Sep 9; 6(9): e1001110. PMCID: PMC2936539.
12. De N, Navarro MV, Wang Q, Krasteva PV, Sondermann H. Biophysical assays for protein interactions in the wsp sensory system and biofilm formation. Methods Enzymol. 2010; 471: 161-184.
13. Dubberke ER, Haslam DB, Lanzas C, Bobo LD, Burnham CA, Grohn YT, Tarr PI. The ecology and pathobiology of clostridium difficile infections: An interdisciplinary challenge. Zoonoses Public Health. 2011 Feb; 58(1): 4-20.
14. Dubovi EJ. Canine influenza. Vet Clin North Am Small Anim Pract. 2010 Nov; 40(6): 1063-1071.
15. Easton AA, Moghadam HK, Danzmann RG, Ferguson MM. The genetic architecture of embryonic developmental rate and genetic covariation with age at maturation in rainbow trout oncorhynchus mykiss. J Fish Biol. 2011 Feb; 78(2): 602-623.
16. Erb HN. Changing expectations: Do journals drive methodological changes? should they? Prev Vet Med. 2010 Dec 1; 97(3-4): 165-174.
17. Farnum CE, Wilsman NJ. Orientation of primary cilia of articular chondrocytes in three-dimensional space. Anat Rec (Hoboken). 2011 Jan 12.
18. Goldstein RE. Canine leptospirosis. Vet Clin North Am Small Anim Pract. 2010 Nov; 40(6): 1091-1101.
19. Hayward JJ, Dubovi EJ, Scarlett JM, Janeczko S, Holmes EC, Parrish CR. Microevolution of canine influenza virus in shelters and its molecular epidemiology in the united states. J Virol. 2010 Dec; 84(24): 12636-12645. PMCID: PMC3004329.
20. Hoelzer K, Parrish CR. The emergence of parvoviruses of carnivores. Vet Res. 2010 Nov-Dec; 41(6): 39. PMCID: PMC2844231.
21. Ledbetter EC, Irby NL, Kim SG. In vivo confocal microscopy of equine fungal keratitis. Vet Ophthalmol. 2011 Jan; 14(1): 1-9.
22. Lee AC, Bowman DD, Lucio-Forster A, Beall MJ, Liotta JL, Dillon R. Evaluation of a new in-clinic method for the detection of canine heartworm antigen. Vet Parasitol. 2010 Dec 4.
23. Lin YP, McDonough SP, Sharma Y, Chang YF. Leptospira immunoglobulin-like protein B (LigB) binding to the C-terminal fibrinogen alphaC domain inhibits fibrin clot formation, platelet adhesion and aggregation. Mol Microbiol. 2010 Dec 14.
24. Lin YP, McDonough SP, Sharma Y, Chang YF. The terminal immunoglobulin-like repeats of LigA and LigB of leptospira enhance their binding to gelatin binding domain of fibronectin and host cells. PLoS One. 2010 Jun 24; 5(6): e11301. PMCID: PMC2892007.
25. Mann FM, Vanderven BC, Peters RJ. Magnesium depletion triggers production of an immune modulating diterpenoid in mycobacterium tuberculosis. Mol Microbiol. 2011 Jan 19.
26. Parrish CR. Structures and functions of parvovirus capsids and the process of cell infection. Curr Top Microbiol Immunol. 2010; 343: 149-176.
27. Pradhan AK, Mitchell RM, Kramer AJ, Zurakowski MJ, Fyock TL, Whitlock RH, Smith JM, Hovingh E, Van Kessel JA, Karns JS, Schukken YH. Molecular epidemiology of mycobacterium avium subsp. paratuberculosis in a longitudinal study of three dairy herds. J Clin Microbiol. 2011 Jan 5.
28. Rassnick KM, Muindi JR, Johnson CS, Bailey DB, Trump DL. Oral bioavailability of DN101, a concentrated formulation of calcitriol, in tumor-bearing dogs. Cancer Chemother Pharmacol. 2011 Jan; 67(1): 165-171.
29. Reiterer G, Chen L, Tassef R, Varner JD, Chen CY, Yen A. RAF associates with phosphorylated nuclear BubR1 during endoreduplication induced by JAK inhibition. Cell Cycle. 2010 Aug 15; 9(16): 3297-3304.
30. Schukken YH, Bar D, Hertl J, Grohn YT. Correlated time to event data: Modeling repeated clinical mastitis data from dairy cattle in new york state. Prev Vet Med. 2010 Dec 1; 97(3-4): 150-156.
31. Slepkov ER, Pavinski Bitar A, Marquis H. Differentiation of propeptide residues regulating the compartmentalization, maturation and activity of the broad-range phospholipase C of listeria monocytogenes. Biochem J. 2010 Nov 25; 432(3): 557-563.
32. Solomon BD, Mueller C, Chae WJ, Alabanza LM, Bynoe MS. Neuropilin-1 attenuates autoreactivity in experimental autoimmune encephalomyelitis. Proc Natl Acad Sci U S A. 2011 Jan 18.
33. Suzuki H, Lefebure T, Hubisz MJ, Bitar PP, Lang P, Siepel A, Stanhope MJ. Comparative genomic analysis of the streptococcus dysgalactiae species group: Gene content, molecular adaptation, and promoter evolution. Genome Biol Evol. 2011 Jan 31.
34. Turner DE, Daugherity EK, Altier C, Maurer KJ. Efficacy and limitations of an ATP-based monitoring system. J Am Assoc Lab Anim Sci. 2010 Mar; 49(2): 190-195. PMCID: PMC2846007.
35. Wagner B, Freer H, Rollins A, Erb HN. A fluorescent bead-based multiplex assay for the simultaneous detection of antibodies to B. burgdorferi outer surface proteins in canine serum. Vet Immunol Immunopathol. 2010 Dec 10.
36. Wisniewski ML, Werner BG, Hom LG, Anguish LJ, Coffey CM, Parker JS. Reovirus infection or ectopic expression of outer capsid protein micro1 induces apoptosis independently of the cellular proapoptotic proteins bax and bak. J Virol. 2011 Jan; 85(1): 296-304. PMCID: PMC3014156.
37. Witte TH, Cheetham J, Rawlinson JJ, Soderholm LV, Ducharme NG. A transducer for measuring force on surgical sutures. Can J Vet Res. 2010 Oct; 74(4): 299-304. PMCID: PMC2949343.
38. Woods AK, Hoffmann DS, Weydert CJ, Butler SD, Zhou Y, Sharma RV, Davisson RL. Adenoviral delivery of VEGF121 early in pregnancy prevents spontaneous development of preeclampsia in BPH/5 mice. Hypertension. 2011 Jan; 57(1): 94-102.
39. Zadoks RN, Griffiths HM, Munoz MA, Ahlstrom C, Bennett GJ, Thomas E, Schukken YH. Sources of klebsiella and raoultella species on dairy farms: Be careful where you walk. J Dairy Sci. 2011 Feb; 94(2): 1045-1051.
40. Zhao Y, Fang Q, Straub SG, Lindau M, Sharp GW. Noradrenaline inhibits exocytosis via the G protein beta-gamma subunit and refilling of the readily releasable granule pool via the alpha(i1/2) subunit. J Physiol. 2010 Sep 15; 588(Pt 18): 3485-3498. PMCID: PMC2988513.
41. Zhao Y, Fang Q, Straub SG, Lindau M, Sharp GW. Hormonal inhibition of endocytosis: Novel roles for noradrenaline and G protein G(z). J Physiol. 2010 Sep 15; 588(Pt 18): 3499-3509. PMCID: PMC2988514.

February 2011

1. Brooks MB, Stokol T, Catalfamo JL. Comparative hemostasis: Animal models and new hemostasis tests. Clin Lab Med. 2011 Mar; 31(1): 139-159.
2. Burmeister MA, Young CN, Braga VA, Butler SD, Sharma RV, Davisson RL. In vivo bioluminescence imaging reveals redox-regulated activator protein-1 activation in paraventricular nucleus of mice with renovascular hypertension. Hypertension. 2011 Feb; 57(2): 289-297. PMCID: PMC3026319.
3. Byrnes LJ, Sondermann H. From the cover: Structural basis for the nucleotide-dependent dimerization of the large G protein atlastin-1/SPG3A. Proc Natl Acad Sci U S A. 2011 Feb 8; 108(6): 2216-2221. PMCID: PMC3038741.
4. Ching YH, Munroe RJ, Moran JL, Barker AK, Mauceli E, Fennell T, Dipalma F, Lindblad-Toh K, Abcunas LM, Gilmour JF, Harris TP, Kloet SL, Luo Y, McElwee JL, Mu W, Park HK, Rogal DL, Schimenti KJ, Shen L, Shindo M, Shou JY, Stenson EK, Stover PJ, Schimenti JC. High resolution mapping and positional cloning of ENU-induced mutations in the rw region of mouse chromosome 5. BMC Genet. 2010 Nov 30; 11: 106. PMCID: PMC3009607.
5. Faisal SM, Chen JW, McDonough SP, Chang CF, Teng CH, Chang YF. Immunostimulatory and antigen delivery properties of liposomes made up of total polar lipids from non-pathogenic bacteria leads to efficient induction of both innate and adaptive immune responses. Vaccine. 2011 Feb 4.
6. Fortune JE, Yang MY, Muruvi w. In vitro and in vivo regulation of follicular formation and activation in cattle. Reprod Fertil Dev. 2011; 23(1): 15-21.
7. Gladuli A, Moise NS, Hemsley SA, Otani NF. Poincare plots and tachograms reveal beat patterning in sick sinus syndrome with supraventricular tachycardia and varying AV nodal block. J Vet Cardiol. 2011 Jan 31.
8. Grimes JA, Schmiedt CW, Cornell KK, Radlinksy MA. Identification of risk factors for septic peritonitis and failure to survive following gastrointestinal surgery in dogs. J Am Vet Med Assoc. 2011 Feb 15; 238(4): 486-494.
9. Grimmett SG, Chalmers HJ, Wolf JC, Bowser PR. Spinal deformity in triploid grass carp ctenopharyngodon idella (valenciennes). J Fish Dis. 2011 Mar; 34(3): 217-225.
10. Hoelzer K, Cummings KJ, Wright EM, Rodriguez-Rivera LD, Roof SE, Switt AI, Dumas N, Root T, Schoonmaker-Bopp DJ, Grohn YT, Siler JD, Warnick LD, Hancock DD, Davis MA, Wiedmann M. Salmonella cerro isolated over the past twenty years from various sources in the US represent a single predominant pulsed-field gel electrophoresis type. Vet Microbiol. 2011 Feb 1.
11. Kabithe E, Hillegas J, Stokol T, Moore J, Wagner B. Monoclonal antibodies to equine CD14. Vet Immunol Immunopathol. 2010 Nov 15; 138(1-2): 149-153.
12. Kan R, Yurttas P, Kim B, Jin M, Wo L, Lee B, Gosden R, Coonrod SA. Regulation of mouse oocyte microtubule and organelle dynamics by PADI6 and the

cytoplasmic lattices. Dev Biol. 2011 Feb 15; 350(2): 311-322. PMCID: PMC3031771.

13. Kang HG, Bischoff K, Ebel JG, Cha SH, McCardle J, Choi CU. Comparison of blood lead and blood and plasma delta-aminolevulinic acid concentrations as biomarkers for lead poisoning in cattle. J Vet Diagn Invest. 2010 Nov; 22(6): 903-907.
14. Kim JW, Lyi SM, Parrish CR, Parker JS. A proapoptotic peptide derived from reovirus outer capsid protein {micro}1 has membrane-destabilizing activity. J Virol. 2011 Feb; 85(4): 1507-1516.
15. Lee AC, Atkins CE. Understanding feline heartworm infection: Disease, diagnosis, and treatment. Top Companion Anim Med. 2010 Nov; 25(4): 224-230.
16. Lee JA, Herndon WE, Rishniw M. The effect of noncardiac disease on plasma brain natriuretic peptide concentration in dogs. J Vet Emerg Crit Care (San Antonio). 2011 Feb; 21(1): 5-12.
17. Lepherd M, Canfield P, Hunt G, Thomson P, Bosward K. Wound healing after mulesing and other options for controlling breech flystrike in merino lambs: Quantitative and semiquantitative analysis of wound healing and wound bed contraction. Aust Vet J. 2011 Mar; 89(3): 61-69.
18. Lin YP, Kuo CJ, Koleci X, McDonough SP, Chang YF. Manganese binds to clostridium difficile Fbp68 and is essential for fibronectin binding. J Biol Chem. 2011 Feb 4; 286(5): 3957-3969. PMCID: PMC3030396.
19. Lin YP, McDonough SP, Sharma Y, Chang YF. Leptospira immunoglobulin-like protein B (LigB) binding to the C-terminal fibrinogen alphaC domain inhibits fibrin clot formation, platelet adhesion and aggregation. Mol Microbiol. 2011 Feb; 79(4): 1063-1076.
20. Navarro MV, Newell PD, Krasteva PV, Chatterjee D, Madden DR, O'Toole GA, Sondermann H. Structural basis for c-di-GMP-mediated inside-out signaling controlling periplasmic proteolysis. PLoS Biol. 2011 Feb 1; 9(2): e1000588.
21. Nixon AJ, Begum L, Mohammed HO, Huibregtse B, O'Callaghan MM, Matthews GL. Autologous chondrocyte implantation drives early chondrogenesis and organized repair in extensive full- and partial-thickness cartilage defects in an equine model. J Orthop Res. 2011 Feb 11.
22. Rassnick KM, Moore AS, Russell DS, Northrup NC, Kristal O, Bailey DB, Flory AB, Kiselow MA, Intile JL. Phase II, open-label trial of single-agent CCNU in dogs with previously untreated histiocytic sarcoma. J Vet Intern Med. 2010 Nov-Dec; 24(6): 1528-1531.
23. Renshaw R, Laverack M, Zylich N, Glaser A, Dubovi E. Genomic analysis of a pneumovirus isolated from dogs with acute respiratory disease. Vet Microbiol. 2011 Jan 15.
24. Russell DG. Mycobacterium tuberculosis and the intimate discourse of a chronic infection. Immunol Rev. 2011 Mar; 240(1): 252-268.
25. Scaria J, Warnick LD, Kaneene JB, May K, Teng CH, Chang YF. Comparison of phenotypic and genotypic antimicrobial profiles in escherichia coli and salmonella enterica from the same dairy cattle farms. Mol Cell Probes. 2010 Dec; 24(6): 325-345. PMCID: PMC2967584.
26. Scidmore MA. Recent advances in chlamydia subversion of host cytoskeletal and membrane trafficking pathways. Microbes Infect. 2011 Feb 17.
27. Scott DW, Vogel JW, Fleis RI, Miller WH,Jr, Smith MC. Skin diseases in the alpaca (vicugna pacos): A literature review and retrospective analysis of 68 cases (cornell university 1997-2006). Vet Dermatol. 2011 Feb; 22(1): 2-16.
28. Smitz J, Dolmans MM, Donnez J, Fortune JE, Hovatta O, Jewgenow K, Picton HM, Plancha C, Shea LD, Stouffer RL, Telfer EE, Woodruff TK, Zelinski MB. Current achievements and future research directions in ovarian tissue culture, in vitro follicle development and transplantation: Implications for fertility preservation. Hum Reprod Update. 2010 Jul-Aug; 16(4): 395-414. PMCID: PMC2880913.
29. Solomon BD, Mueller C, Chae WJ, Alabanza LM, Bynoe MS. Neuropilin-1 attenuates autoreactivity in experimental autoimmune encephalomyelitis. Proc Natl Acad Sci U S A. 2011 Feb 1; 108(5): 2040-2045. PMCID: PMC3033275.
30. Tan CP, Cipriany BR, Lin DM, Craighead HG. Nanoscale resolution, multicomponent biomolecular arrays generated by aligned printing with parylene peel-off. Nano Lett. 2010 Feb 10; 10(2): 719-725. PMCID: PMC2848997.
31. Tomlinson JE, Divers TJ, McDonough SP, Thompson MS. Hypertrophic osteopathy secondary to nodular pulmonary fibrosis in a horse. J Vet Intern Med. 2011 Jan-Feb; 25(1): 153-157.
32. Wakshlag JJ, Kraus MS, Gelzer AR, Downey RL, Vacchani P. The influence of high-intensity moderate duration exercise on cardiac troponin I and C-reactive protein in sled dogs. J Vet Intern Med. 2010 Nov-Dec; 24(6): 1388-1392.
33. Watts AE, Yeager AE, Kopyov OV, Nixon AJ. Fetal derived embryonic-like stem cells improve healing in a large animal flexor tendonitis model. Stem Cell Res Ther. 2011 Jan 27; 2(1): 4.
34. Wimer CL, Damiani A, Osterrieder N, Wagner B. Equine herpesvirus type-1 modulates CCL2, CCL3, CCL5, CXCL9, and CXCL10 chemokine expression. Vet Immunol Immunopathol. 2011 Jan 26.
35. Wu X, Ramachandran S, Lin MC, Cerione RA, Erickson JW. A minimal rac activation domain in the unconventional guanine nucleotide exchange factor dock180. Biochemistry. 2011 Feb 15; 50(6): 1070-1080.

March 2011

1. Abi Abdallah DS, Egan CE, Butcher BA, Denkers EY. Mouse neutrophils are professional antigen-presenting cells programmed to instruct Th1 and Th17 T-cell differentiation. Int Immunol. 2011 Mar 21.
2. Antonyak MA, Li B, Boroughs LK, Johnson JL, Druso JE, Bryant KL, Holowka DA, Cerione RA. Cancer cell-derived microvesicles induce transformation by transferring tissue transglutaminase and fibronectin to recipient cells. Proc Natl Acad Sci U S A. 2011 Feb 28.
3. Beltaire KA, Tanco VM, Bedford-Guaus SJ. Theriogenology question of the month. trauma-induced paraphimosis. J Am Vet Med Assoc. 2011 Jan 15; 238(2): 161-164.
4. Bezuidenhout A, Mondal SP, Buckles EL. Histopathological and immunohistochemical study of air sac lesions induced by two strains of infectious bronchitis virus. J Comp Pathol. 2011 Mar 19.
5. Brewer DM, Cerda-Gonzalez S, Dewey CW, Diep AN, Van Horne K, McDonough SP. Spinal cord nephroblastoma in dogs: 11 cases (1985-2007). J Am Vet Med Assoc. 2011 Mar 1; 238(5): 618-624.
6. Byrnes LJ, Sondermann H. Structural basis for the nucleotide-dependent dimerization of the large G protein atlastin-1/SPG3A. Proc Natl Acad Sci U S A. 2011 Feb 8; 108(6): 2216-2221. PMCID: PMC3038741.
7. Cheong SH, Nydam DV, Galvao KN, Crosier BM, Gilbert RO. Cow-level and herd-level risk factors for subclinical endometritis in lactating holstein cows. J Dairy Sci. 2011 Feb; 94(2): 762-770.
8. Choi J, Curtis SJ, Roy DM, Flesken-Nikitin A, Nikitin AY. Local mesenchymal stem/progenitor cells are a preferential target for initiation of adult soft tissue sarcomas associated with p53 and rb deficiency. Am J Pathol. 2010 Nov; 177(5): 2645-2658. PMCID: PMC2966819.
9. Daley-Bauer LP, Purdy SR, Smith MC, Gagliardo LF, Davis WC, Appleton JA. Contributions of conventional and heavy-chain IgG to immunity in fetal, neonatal, and adult alpacas. Clin Vaccine Immunol. 2010 Dec; 17(12): 2007-2015. PMCID: PMC3008178.
10. Demas GE, Zysling DA, Beechler BR, Muehlenbein MP, French SS. Beyond phytohaemagglutinin: Assessing vertebrate immune function across ecological contexts. J Anim Ecol. 2011 Mar 14.
11. Dewey CW, Brewer DM, Cautela MA, Talarico LR, Silver GM. Surgical treatment of a meningoencephalocele in a cat. Vet Surg. 2011 Mar 21.
12. Dietert RR. Fractal immunology and immune patterning: Potential tools for immune protection and optimization. J Immunotoxicol. 2011 Mar 23.
13. Fortier LA, Barker JU, Strauss EJ, McCarrel TM, Cole BJ. The role of growth factors in cartilage repair. Clin Orthop Relat Res. 2011 Mar 15.
14. Fortier LA, Travis AJ. Stem cells in veterinary medicine. Stem Cell Res Ther. 2011 Feb 23; 2(1): 9.
15. Fortune JE, Yang MY, Muruvi W. In vitro and in vivo regulation of follicular formation and activation in cattle. Reprod Fertil Dev. 2011; 23(1): 15-22.
16. Goldstein O, Kukekova AV, Aguirre GD, Acland GM. Exonic SINE insertion in STK38L causes canine early retinal degeneration (erd). Genomics. 2010 Dec; 96(6): 362-368. PMCID: PMC2996878.
17. Kan R, Yurttas P, Kim B, Jin M, Wo L, Lee B, Gosden R, Coonrod SA. Regulation of mouse oocyte microtubule and organelle dynamics by PADI6 and the cytoplasmic lattices. Dev Biol. 2011 Feb 15; 350(2): 311-322. PMCID: PMC3031771.
18. Kanu U, Iravanian S, Gilmour RF, Christini DJ. Control of action potential duration alternans in canine ventricular tissue. Conf Proc IEEE Eng Med Biol Soc. 2010; 2010: 1997-2000.
19. Kaufer BB, Jarosinski KW, Osterrieder N. Herpesvirus telomeric repeats facilitate genomic integration into host telomeres and mobilization of viral DNA during reactivation. J Exp Med. 2011 Mar 7.
20. Kim JW, Lyi SM, Parrish CR, Parker JS. A proapoptotic peptide derived from reovirus outer capsid protein {micro}1 has membrane-destabilizing activity. J Virol. 2011 Feb; 85(4): 1507-1516. PMCID: PMC3028920.
21. Knafo SE, Divers SJ, Rivera S, Cayot LJ, Tapia-Aguilera W, Flanagan J. Sterilisation of hybrid galapagos tortoises (geochelone nigra) for island restoration. part 1: Endoscopic oophorectomy of females under ketamine-medetomidine anaesthesia. Vet Rec. 2011 Jan 15; 168(2): 47.
22. Latorre AA, Van Kessel JA, Karns JS, Zurakowski MJ, Pradhan AK, Boor KJ, Adolph E, Sukhnanand S, Schukken YH. Molecular ecology of listeria monocytogenes: Predominant and persistent strains showed increased in-vitro adherence and on-farm persistence in the milking system. Appl Environ Microbiol. 2011 Mar 25.
23. Lin YP, Kuo CJ, Koleci X, McDonough SP, Chang YF. Manganese binds to clostridium difficile Fbp68 and is essential for fibronectin binding. J Biol Chem. 2011 Feb 4; 286(5): 3957-3969. PMCID: PMC3030396.
24. Liu KH, Ascenzi MA, Bellezza CA, Bezuidenhout AJ, Cote PJ, Gonzalez-Aseguinolaza G, Hannaman D, Luxembourg A, Evans CF, Tennant BC, Menne S. Enhanced immunogenicity in woodchucks of a DNA vaccine expressing woodchuck hepatitis virus surface antigen using electroporation. J Virol. 2011 Mar 9.
25. Macfarlane AJ, Perry CA, McEntee MF, Lin DM, Stover PJ. Shmt1 heterozygosity impairs folate-dependent thymidylate synthesis capacity and modifies risk of apcmin-mediated intestinal cancer risk. Cancer Res. 2011 Mar 15; 71(6): 2098-2107. PMCID: PMC3059437.
26. Mann S, Siler JD, Jordan D, Warnick LD. Antimicrobial susceptibility of fecal escherichia coli isolates in dairy cows following systemic treatment with ceftiofur or penicillin. Foodborne Pathog Dis. 2011 Mar 7.
27. Martin-Flores M, Mercure-McKenzie TM, Campoy L, Erb HN, Ludders JW, Gleed RD. Controlled retrospective study of the effects of eyedrops containing phenylephrine hydrochloride and scopolamine hydrobromide on mean arterial blood pressure in anesthetized dogs. Am J Vet Res. 2010 Dec; 71(12): 1407-1412.
28. Mitchell RM, Gollnick NS, Sreevatsan S, Russell DG, Schukken YH. Quantification of mycobacterium avium subsp. paratuberculosis (MAP) survival in monocyte-derived macrophages. Vet Immunol Immunopathol. 2011 Jan; 139(1): 73-78.

29. Moise NS, Gladuli A, Hemsley SA, Otani NF. "Zone of avoidance": RR interval distribution in tachograms, histograms, and poincare plots of a boxer dog. J Vet Cardiol. 2010 Dec; 12(3): 191-196.
30. Morency E, Anguish L, Coonrod S. Subcellular localization of cytoplasmic lattice-associated proteins is dependent upon fixation and processing procedures. PLoS One. 2011 Feb 16; 6(2): e17226.
31. Mulz JM, Kraus MS, Thompson M, Flanders JA. Cranial vena caval syndrome secondary to central venous obstruction associated with a pacemaker lead in a dog. J Vet Cardiol. 2010 Dec; 12(3): 217-223.
32. Navratil AM, Bliss SP, Roberson MS. Membrane rafts and GnRH receptor signaling. Brain Res. 2010 Dec 10; 1364: 53-61. PMCID: PMC3004128.
33. Qi Q, Kannan AK, August A. Tec family kinases: Itk signaling and the development of NKT alphabeta and gammadelta T cells. FEBS J. 2011 Mar 1.
34. Rassnick KM, Bailey DB, Malone EK, Intile JL, Kiselow MA, Flory AB, Barlow LL, Balkman CE, Barnard SM, Waite AH. Comparison between L-CHOP and an L-CHOP protocol with interposed treatments of CCNU and MOPP (L-CHOP-CCNU-MOPP) for lymphoma in dogs. Vet Comp Oncol. 2010 Dec; 8(4): 243-253.
35. Santos TM, Gilbert RO, Bicalho RC. Metagenomic analysis of the uterine bacterial microbiota in healthy and metritic postpartum dairy cows. J Dairy Sci. 2011 Jan; 94(1): 291-302.
36. Schaefer JJ, White HA, Schaaf SL, Mohammed HO, Wade SE. Modification of a commercial toxoplasma gondii immunoglobulin G enzyme-linked immunosorbent assay for use in multiple animal species. J Vet Diagn Invest. 2011 Mar; 23(2): 297-301.
37. Shen C, Ramkumar A, Lal A, Gilmour RF. Wireless transmission of cardiac action potentials with ultrasonically guided insertion of silicon probes. Conf Proc IEEE Eng Med Biol Soc. 2010; 2010: 5022-5025.
38. Solomon BD, Mueller C, Chae WJ, Alabanza LM, Bynoe MS. Neuropilin-1 attenuates autoreactivity in experimental autoimmune encephalomyelitis. Proc Natl Acad Sci U S A. 2011 Feb 1; 108(5): 2040-2045. PMCID: PMC3033275.
39. Sparks HD, Nixon AJ, Bogenrief DS. Reattachment of the articular cartilage component of type 1 subchondral cystic lesions of the medial femoral condyle with polydioxanone pins in 3 horses. J Am Vet Med Assoc. 2011 Mar 1; 238(5): 636-640.
40. Witte TH, Cheetham J, Soderholm LV, Mitchell LM, Ducharme NG. Equine laryngoplasty sutures undergo increased loading during coughing and swallowing. Vet Surg. 2010 Dec; 39(8): 949-956.
41. Zadoks RN, Griffiths HM, Munoz MA, Ahlstrom C, Bennett GJ, Thomas E, Schukken YH. Sources of klebsiella and raoultella species on dairy farms: Be careful where you walk. J Dairy Sci. 2011 Feb; 94(2): 1045-1051.

April 2011

1. Bedenice D, Dubovi E, Kelling CL, Henningson JN, Topliff CL, Parry N. Long-term clinicopathological characteristics of alpacas naturally infected with bovine viral diarrhea virus type ib. J Vet Intern Med. 2011 Apr 12.
2. Bellosa M, Nydam D, Liotta J, Linden T, Zambriski J, Bowman D. A comparison of fecal percent dry matter and number of cryptosporidium parvum oocysts shed to observational fecal consistency scoring in dairy calves. J Parasitol. 2010 Oct 8.
3. Brewer DM, Cerda-Gonzalez S, Dewey CW, Diep AN, Van Horne K, McDonough SP. Spinal cord nephroblastoma in dogs: 11 cases (1985-2007). J Am Vet Med Assoc. 2011 Mar 1; 238(5): 618-624.
4. Brisbin A, Cruickshank J, Moise NS, Gunn T, Bustamante CD, Mezey JG. Fast, exact linkage analysis for categorical traits on arbitrary pedigree designs. Genet Epidemiol. 2011 Apr 25.
5. Burmeister MA, Young CN, Braga VA, Butler SD, Sharma RV, Davisson RL. In vivo bioluminescence imaging reveals redox-regulated activator protein-1 activation in paraventricular nucleus of mice with renovascular hypertension. Hypertension. 2011 Feb; 57(2): 289-297. PMCID: PMC3026319.
6. Burton AJ, Nydam DV, Dearen TK, Mitchell K, Bowman DD, Xiao L. The prevalence of cryptosporidium, and identification of the cryptosporidium horse genotype in foals in new york state. Vet Parasitol. 2010 Nov 24; 174(1-2): 139-144.
7. Burton AJ, Nydam DV, Jones G, Zambriski JA, Linden TC, Cox G, Davis R, Brown A, Bowman DD. Antibody responses following administration of a cryptosporidium parvum rCP15/60 vaccine to pregnant cattle. Vet Parasitol. 2011 Jan 10; 175(1-2): 178-181.
8. Cassidy-Hanley DM, Cordonnier-Pratt MM, Pratt LH, Devine C, Mozammal Hossain M, Dickerson HW, Clark TG. Transcriptional profiling of stage specific gene expression in the parasitic ciliate ichthyophthirius multifiliis. Mol Biochem Parasitol. 2011 Apr 16.
9. Craven M, Mansfield CS, Simpson KW. Granulomatous colitis of boxer dogs. Vet Clin North Am Small Anim Pract. 2011 Mar; 41(2): 433-445.
10. Dauvillier J, Felippe MJ, Lunn DP, Lavoie-Lamoureux A, Leclere M, Beauchamp G, Lavoie JP. Effect of long-term fluticasone treatment on immune function in horses with heaves. J Vet Intern Med. 2011 Apr 12.
11. Fortune JE, Yang MY, Muruvi W. In vitro and in vivo regulation of follicular formation and activation in cattle. Reprod Fertil Dev. 2011; 23(1): 15-22.
12. Galvao KN, Santos NR, Galvao JS, Gilbert RO. Association between endometritis and endometrial cytokine expression in postpartum holstein cows. Theriogenology. 2011 Apr 13.
13. Jinadasa R, Balmus G, Gerwitz L, Roden J, Weiss R, Duhamel G. Derivation of thymic lymphoma T-cell lines from atm-/- and p53-/- mice. J Vis Exp. 2011 Apr 3; (50). pii: 2598. doi(50): 10.3791/2598.
14. Jung S, Silvius D, Nolan KA, Borchert GL, Millet YH, Phang JM, Gunn TM. Developmental cardiac hypertrophy in a mouse model of prolidase deficiency. Birth Defects Res A Clin Mol Teratol. 2011 Apr 6.
15. Kamm JL, Bramlage LR, Schnabel LV, Ruggles AJ, Embertson RM, Hopper SA. Size and geometry of apical sesamoid fracture fragments as a determinant of prognosis in thoroughbred racehorses. Equine Vet J. 2010 Jul 20.
16. Krook L, Whalen JP. Nutritional secondary hyperparathyroidism in the animal kingdom: Report of two cases. Clin Imaging. 2010 Nov-Dec; 34(6): 458-461.
17. Lanzas C, Lu Z, Grohn YT. Mathematical modeling of the transmission and control of foodborne pathogens and antimicrobial resistance at preharvest. Foodborne Pathog Dis. 2011 Jan; 8(1): 1-10.
18. Ledbetter EC, Irby NL, Kim SG. In vivo confocal microscopy of equine fungal keratitis. Vet Ophthalmol. 2011 Jan; 14(1): 1-9.
19. Macfarlane AJ, Perry CA, McEntee MF, Lin DM, Stover PJ. Mthfd1 is a modifier of chemically induced intestinal carcinogenesis. Carcinogenesis. 2011 Mar; 32(3): 427-433. PMCID: PMC3047240.
20. Mills JH, Alabanza L, Weksler BB, Couraud PO, Romero IA, Bynoe MS. Human brain endothelial cells are responsive to adenosine receptor activation. Purinergic Signal. 2011 Feb 17.
21. Mitchell RM, Medley GF, Collins MT, Schukken YH. A meta-analysis of the effect of dose and age at exposure on shedding of mycobacterium avium subspecies paratuberculosis (MAP) in experimentally infected calves and cows. Epidemiol Infect. 2011 Apr 28: 1-16.
22. Pinn TL, Cushing T, Valentino LM, Koch SA. Corneal invasion by hemangiosarcoma in a horse. Vet Ophthalmol. 2011 May; 14(3): 200-204.
23. Place NJ, Coscia EM, Dahl NJ, Drea CM, Holekamp KE, Roser JF, Sisk CL, Weldele ML, Glickman SE. The anti-androgen combination, flutamide plus finasteride, paradoxically suppressed LH and androgen concentrations in pregnant spotted hyenas, but not in males. Gen Comp Endocrinol. 2011 Feb 1; 170(3): 455-459. PMCID: PMC3027151.
24. Rawlinson JE, Goldstein RE, Reiter AM, Attwater DZ, Harvey CE. Association of periodontal disease with systemic health indices in dogs and the systemic response to treatment of periodontal disease. J Am Vet Med Assoc. 2011 Mar 1; 238(5): 601-609.
25. Santos TM, Bicalho RC. Complete genome sequence of vB_EcoM_ECO1230-10: A coliphage with therapeutic potential for bovine metritis. Vet Microbiol. 2011 Mar 24; 148(2-4): 267-275.
26. Schat KA, Martins NR, O'Connell PH, Piepenbrink MS. Immune complex vaccines for chicken infectious anemia virus. Avian Dis. 2011 Mar; 55(1): 90-96.
27. Scrivani PV, Levine JM, Holmes NL, Furr M, Divers TJ, Cohen ND. Observer agreement study of cervical-vertebral ratios in horses. Equine Vet J. 2010 Sep 29.
28. Simpson KW, Jergens AE. Pitfalls and progress in the diagnosis and management of canine inflammatory bowel disease. Vet Clin North Am Small Anim Pract. 2011 Mar; 41(2): 381-398.
29. Sparks HD, Nixon AJ, Boening KJ, Pool RR. Arthroscopic treatment of meniscal cysts in the horse. Equine Vet J. 2011 Mar 15.
30. Sparks HD, Nixon AJ, Bogenrief DS. Reattachment of the articular cartilage component of type 1 subchondral cystic lesions of the medial femoral condyle with polydioxanone pins in 3 horses. J Am Vet Med Assoc. 2011 Mar 1; 238(5): 636-640.
31. Tallmadge RL, Campbell JA, Miller DC, Antczak DF. Analysis of MHC class I genes across horse MHC haplotypes. Immunogenetics. 2010 Mar; 62(3): 159-172. PMCID: PMC2872545.
32. Traslavina RP, King EJ, Loar AS, Riedel ER, Garvey MS, Ricart-Arbona R, Wolf FR, Couto SS. Euthanasia by CO inhalation affects potassium levels in mice. J Am Assoc Lab Anim Sci. 2010 May; 49(3): 316-322. PMCID: PMC2877304.
33. Vanden Berg-Foels WS, Schwager SJ, Todhunter RJ, Reeves AP. Femoral head bone mineral density patterns may identify hips at risk of degeneration. Ann Biomed Eng. 2011 Jan; 39(1): 75-84.
34. Watts AE, Nixon AJ, Reesink HL, Cheetham J, Fubini SL, Looney AL. Continuous peripheral neural blockade to alleviate signs of experimentally induced severe forelimb pain in horses. J Am Vet Med Assoc. 2011 Apr 15; 238(8): 1032-1039.
35. Witte TH, Cheetham J, Rawlinson JJ, Soderholm LV, Ducharme NG. A transducer for measuring force on surgical sutures. Can J Vet Res. 2010 Oct; 74(4): 299-304. PMCID: PMC2949343.

May 2011

1. Bischoff K, Smith MC. Toxic plants of the northeastern united states. Vet Clin North Am Food Anim Pract. 2011 Jul; 27(2): 459-480.
2. Brooks MB, Stokol T, Catalfamo JL. Comparative hemostasis: Animal models and new hemostasis tests. Clin Lab Med. 2011 Mar; 31(1): 139-159.
3. Congleton J, Jiang H, Malavasi F, Lin H, Yen A. ATRA-induced HL-60 myeloid leukemia cell differentiation depends on the CD38 cytosolic tail needed for membrane localization, but CD38 enzymatic activity is unnecessary. Exp Cell Res. 2011 Apr 15; 317(7): 910-919.
4. Dietert RR. Maternal and childhood asthma: Risk factors, interactions, and ramifications. Reprod Toxicol. 2011 May 6.
5. Erb HN. Prior probability (the pretest best guess) affects predictive values of diagnostic tests. Vet Clin Pathol. 2011 May 10.
6. Jinadasa R, Balmus G, Gerwitz L, Roden J, Weiss R, Duhamel G. Derivation of thymic lymphoma T-cell lines from atm(-/-) and p53(-/-) mice. J Vis Exp. 2011 Apr 3; (50). pii: 2598. doi(50): 10.3791/2598.
7. Lanzas C, Dubberke ER, Lu Z, Reske KA, Grohn YT. Epidemiological model for clostridium difficile transmission in

healthcare settings. Infect Control Hosp Epidemiol. 2011 Jun; 32(6): 553-561.

8. Law M, Morales JL, Mottram LF, Iyer A, Peterson BR, August A. Structural requirements for the inhibition of calcium mobilization and mast cell activation by the pyrazole derivative BTP2. Int J Biochem Cell Biol. 2011 May 4.
9. Li H, Wang S, Chuang AY, Cohen BE, Chuang HH. Activity-dependent targeting of TRPV1 with a pore-permeating capsaicin analog. Proc Natl Acad Sci U S A. 2011 May 2.
10. Loftus JP, Morgan SK, Wakshlag JJ. Cloning and antibody recognition analysis of the canine 5-lipoxygenase gene. Vet Immunol Immunopathol. 2011 May 7.
11. Lucio-Forster A, Bowman DD. Prevalence of fecal-borne parasites detected by centrifugal flotation in feline samples from two shelters in upstate new york. J Feline Med Surg. 2011 Apr; 13(4): 300-303.
12. Min IM, Waterfall JJ, Core LJ, Munroe RJ, Schimenti J, Lis JT. Regulating RNA polymerase pausing and transcription elongation in embryonic stem cells. Genes Dev. 2011 Apr 1; 25(7): 742-754. PMCID: PMC3070936.
13. Passman SN, Cheetham J, Bonassar LJ, Ducharme NG, Rawlinson JJ. Biomechanical characterisation of equine laryngeal cartilage. Equine Vet J. 2011 May 5.
14. Patterson J, Rousseau A, Kessler RJ, Giger U. In vitro lysis and acute transfusion reactions with hemolysis caused by inappropriate storage of canine red blood cell products. J Vet Intern Med. 2011 May 25.
15. Pradhan AK, Mitchell RM, Kramer AJ, Zurakowski MJ, Fyock TL, Whitlock RH, Smith JM, Hovingh E, Van Kessel JA, Karns JS, Schukken YH. Molecular epidemiology of mycobacterium avium subsp. paratuberculosis in a longitudinal study of three dairy herds. J Clin Microbiol. 2011 Mar; 49(3): 893-901. PMCID: PMC3067694.
16. Richards VP, Lang P, Pavinski Bitar PD, Lefebure T, Schukken YH, Zadoks RN, Stanhope MJ. Comparative genomics and the role of lateral gene transfer in the evolution of bovine adapted streptococcus agalactiae. Infect Genet Evol. 2011 Apr 22.
17. Roth SL, Whittaker GR. Promotion of vesicular stomatitis virus fusion by the endosome-specific phospholipid bis(monoacylglycero)phosphate (BMP). FEBS Lett. 2011 Mar 23; 585(6): 865-869.
18. Schat KA, Martins NR, O'Connell PH, Piepenbrink MS. Immune complex vaccines for chicken infectious anemia virus. Avian Dis. 2011 Mar; 55(1): 90-96.
19. Scott DW, Vogel JW, Fleis RI, Miller WH,Jr, Smith MC. Skin diseases in the alpaca (vicugna pacos): A literature review and retrospective analysis of 68 cases (cornell university 1997-2006). Vet Dermatol. 2011 Feb; 22(1): 2-16.
20. Sharma A, Thompson MS, Scrivani PV, Dykes NL, Yeager AE, Freer SR, Erb HN. Comparison of radiography and ultrasonography for diagnosing small-intestinal mechanical obstruction in vomiting dogs. Vet Radiol Ultrasound. 2011 May-Jun; 52(3): 248-255.
21. Tomlinson JE, Divers TJ, McDonough SP, Thompson MS. Hypertrophic osteopathy secondary to nodular pulmonary fibrosis in a horse. J Vet Intern Med. 2011 Jan-Feb; 25(1): 153-157.
22. Watts AE, Johnson AL, Felippe MJ, Divers TJ. Recurrent actinobacillus peritonitis in an otherwise healthy thoroughbred horse. Aust Vet J. 2011 Apr; 89(4): 143-146.
23. Watts AE, Nixon AJ, Papich MG, Sparks HD, Schwark WS. In vitro elution of amikacin and ticarcillin from a resorbable, self-setting, fiber reinforced calcium phosphate cement. Vet Surg. 2011 May 4.
24. Xu X, Lee YJ, Holm JB, Terry MD, Oswald RE, Horne WA. The Ca2+ channel beta4c subunit interacts with heterochromatin protein 1 via a PXVXL binding motif. J Biol Chem. 2011 Mar 18; 286(11): 9677-9687. PMCID: PMC3058963.

June 2011

1. Bain MB, Cornwell ER, Hope KM, Eckerlin GE, Casey RN, Groocock GH, Getchell RG, Bowser PR, Winton JR, Batts WN, Cangelosi A, Casey JW. Distribution of an invasive aquatic pathogen (viral hemorrhagic septicemia virus) in the great lakes and its relationship to shipping. PLoS One. 2010 Apr 13; 5(4): e10156. PMCID: PMC2854150.
2. Bellosa ML, Nydam DV, Liotta JL, Zambriski JA, Linden TC, Bowman DD. A comparison of fecal percent dry matter and number of cryptosporidium parvum oocysts shed to observational fecal consistency scoring in dairy calves. J Parasitol. 2011 Apr; 97(2): 349-351.
3. Bischoff K, Jaeger R, Ebel JG. An unusual case of relay pentobarbital toxicosis in a dog. J Med Toxicol. 2011 Jun 10.
4. Bolon B. NIH plan will hinder translational studies. Nature. 2011 Mar 3; 471(7336): 36.
5. Bolon B, Altrock B, Barthold SW, Baumgarth N, Besselsen D, Boivin G, Boyd KL, Brayton C, Cardiff RD, Couto S, Eaton KA, Foreman O, Griffey SM, La Perle K, Lairmore MD, Liu C, Meyerholz DK, Nikitin AY, Schoeb TR, Schwahn D, Sellers RS, Sundberg JP, Tolwani R, Valli VE, Zink MC. Advancing translational research. Science. 2011 Mar 25; 331(6024): 1516-1517.
6. Bowman DD. Response to letter to the editor entitled "comments on lee et al. 177 (2011)...". Vet Parasitol. 2011 May 30.
7. Cornwell ER, Cinelli MJ, McIntosh DM, Blank GS, Wooster GA, Groocock GH, Getchell RG, Bowser PR. Epizootic nocardia infection in cultured weakfish, cynoscion regalis (bloch and schneider). J Fish Dis. 2011 Jul; 34(7): 567-571.
8. Craven M, Mansfield CS, Simpson KW. Granulomatous colitis of boxer dogs. Vet Clin North Am Small Anim Pract. 2011 Mar; 41(2): 433-445.
9. Erickson JW, Cerione RA. Glutaminase: A hot spot for regulation of cancer cell metabolism? Oncotarget. 2010 Dec; 1(8): 734-740. PMCID: PMC3018840.
10. Faisal SM, Chen JW, McDonough SP, Chang CF, Teng CH, Chang YF. Immunostimulatory and antigen delivery properties of liposomes made up of total polar lipids from non-pathogenic bacteria leads to efficient induction of both innate and adaptive immune responses. Vaccine. 2011 Mar 16; 29(13): 2381-2391.
11. Farnum CE, Wilsman NJ. Orientation of primary cilia of articular chondrocytes in three-dimensional space. Anat Rec (Hoboken). 2011 Mar; 294(3): 533-549.
12. Fletcher DJ, Boller M. Letter to the editor. J Vet Emerg Crit Care (San Antonio). 2011 Jun; 21(3): 186.
13. Holloway JK, Mohan S, Balmus G, Sun X, Modzelewski A, Borst PL, Freire R, Weiss RS, Cohen PE. Mammalian BTBD12 (SLX4) protects against genomic instability during mammalian spermatogenesis. PLoS Genet. 2011 Jun; 7(6): e1002094.
14. Jinadasa RN, Bloom SE, Weiss RS, Duhamel GE. Cytolethal distending toxin: A conserved bacterial genotoxin that blocks cell cycle progression leading to apoptosis of a broad range of mammalian cell lineages. Microbiology. 2011 May 12.
15. Kennedy MJ, Stelick SJ, Sayam LG, Yen A, Erickson D, Batt CA. Hydrodynamic optical alignment for microflow cytometry. Lab Chip. 2011 Mar 21; 11(6): 1138-1143.
16. Li H, Wang S, Chuang AY, Cohen BE, Chuang HH. Activity-dependent targeting of TRPV1 with a pore-permeating capsaicin analog. Proc Natl Acad Sci U S A. 2011 May 17; 108(20): 8497-8502. PMCID: PMC3100990.
17. Lin YP, McDonough SP, Sharma Y, Chang YF. Leptospira immunoglobulin-like protein B (LigB) binding to the C-terminal fibrinogen alphaC domain inhibits fibrin clot formation, platelet adhesion and aggregation. Mol Microbiol. 2011 Feb; 79(4): 1063-1076.
18. Liu KH, Ascenzi MA, Bellezza CA, Bezuidenhout AJ, Cote PJ, Gonzalez-Aseguinolaza G, Hannaman D, Luxembourg A, Evans CF, Tennant BC, Menne S. Electroporation enhances immunogenicity of a DNA vaccine expressing woodchuck hepatitis virus surface antigen in woodchucks. J Virol. 2011 May; 85(10): 4853-4862.
19. Martin-Flores M, Boesch J, Campoy L, Gleed RD. Failure to reverse prolonged vecuronium-induced neuromuscular blockade with edrophonium in an anesthetized dog. J Am Anim Hosp Assoc. 2011 Jun 14.
20. Martin-Flores M, Lau EJ, Campoy L, Erb HN, Gleed RD. Twitch potentiation: A potential source of error during neuromuscular monitoring with acceleromyography in anesthetized dogs. Vet Anaesth Analg. 2011 Jun 1.
21. Oxford EM, Danko CG, Kornreich BG, Maass K, Hemsley SA, Raskolnikov D, Fox PR, Delmar M, Moise NS. Ultrastructural changes in cardiac myocytes from boxer dogs with arrhythmogenic right ventricular cardiomyopathy. J Vet Cardiol. 2011 May 31.
22. Pavek TJ, Valentine H, Bailey MM. Operation of an air filtration device results in morbidity and mortality in growing chickens (gallus gallus domesticus). J Am Assoc Lab Anim Sci. 2010 Sep; 49(5): 578-582. PMCID: PMC2949426.
23. Roberts KL, Baines JD. UL31 of herpes simplex virus 1 is necessary for optimal NF-kappaB activation and expression of viral gene products. J Virol. 2011 May; 85(10): 4947-4953.
24. Russell DG. Mycobacterium tuberculosis and the intimate discourse of a chronic infection. Immunol Rev. 2011 Mar; 240(1): 252-268.
25. Santos LC, Ludders JW, Erb HN, Martin-Flores M, Basher KL, Kirch P. A randomized, blinded, controlled trial of the antiemetic effect of ondansetron on dexmedetomidine-induced emesis in cats. Vet Anaesth Analg. 2011 Jun 6.
26. Sharma A, Thompson MS, Scrivani PV, Dykes NL, Yeager AE, Freer SR, Erb HN. Comparison of radiography and ultrasonography for diagnosing small-intestinal mechanical obstruction in vomiting dogs. Vet Radiol Ultrasound. 2011 May-Jun; 52(3): 248-255.
27. Shui B, Wang Q, Lee F, Byrnes LJ, Chudakov DM, Lukyanov SA, Sondermann H, Kotlikoff MI. Circular permutation of red fluorescent proteins. PLoS One. 2011; 6(5): e20505. PMCID: PMC3103546.
28. Simpson KW, Jergens AE. Pitfalls and progress in the diagnosis and management of canine inflammatory bowel disease. Vet Clin North Am Small Anim Pract. 2011 Mar; 41(2): 381-398.
29. Sparks HD, Nixon AJ, Fortier LA, Mohammed HO. Arthroscopic reattachment of osteochondritis dissecans cartilage flaps of the femoropatellar joint: Long-term results. Equine Vet J. 2011 Jun 8.
30. Sun H, Wang Y, Chinnam M, Zhang X, Hayward SW, Foster BA, Nikitin AY, Wills M, Goodrich DW. E2f binding-deficient Rb1 protein suppresses prostate tumor progression in vivo. Proc Natl Acad Sci U S A. 2011 Jan 11; 108(2): 704-709. PMCID: PMC3021049.
31. Suzuki H, Lefebure T, Hubisz MJ, Pavinski Bitar P, Lang P, Siepel A, Stanhope MJ. Comparative genomic analysis of the streptococcus dysgalactiae species group: Gene content, molecular adaptation, and promoter evolution. Genome Biol Evol. 2011; 3: 168-185. PMCID: PMC3056289.
32. Szonyi B, Agudelo-Florez P, Ramirez M, Moreno N, Ko AI. An outbreak of severe leptospirosis in capuchin (cebus) monkeys. Vet J. 2011 May; 188(2): 237-239.
33. Watts AE, Nixon AJ, Reesink HL, Cheetham J, Fubini SL, Looney AL. Continuous peripheral neural blockade to alleviate signs of experimentally induced severe forelimb pain in horses. J Am Vet Med Assoc. 2011 Apr 15; 238(8): 1032-1039.
34. Zhang X, Gamble MJ, Stadler S, Cherrington BD, Causey CP, Thompson PR, Roberson MS, Kraus WL, Coonrod SA. Genome-wide analysis reveals PADI4 cooperates with elk-1 to activate c-fos expression in breast cancer cells. PLoS Genet. 2011 Jun; 7(6): e1002112.

awards and contracts

The College of Veterinary Medicine's Research Office recorded nearly $42 million in sponsored grants and contracts in 2010-2011.

Name	Sponsor	Title	Annual Award
Administration			**$ 228,725**
Robert Gilmour	Merial Limited	Merial Veterinary Scholars Research Program	$ 15,000
	NIH	Cornell University Veterinary Investigator Program	$ 45,684
Robert Gilmour; Colin Parrish	NIH	Veterinary Student Training in Biomedical Research	$ 133,798
Erla Heyns	New York State Department of Education	Coordinated Collection Development Aid	$ 4,243
Jai Sweet	USDA-Higher Education Grants Program	Enhancing Diversity: Multi-Cultural Scholars Program at Cornell	$ 30,000
Animal Health Diagnostic Center			**$ 8,024,570**
Bruce Akey	USDA	National Animal Health Laboratory Network: NY	$ 298,000
	New York State Agriculture and Markets	Animal Health Diagnostic Center and Quality Milk Production Services	$ 6,855,000
	New York State Agriculture and Markets	Avian Influenza Surveillance Testing	$ 216,875
	New York State Department of Environmental Conservation	Zoonotic & Wildlife Disease Diagnostic Testing in New York State for Chronic Wasting Disease (CWD) and Avian Influenza	$ 634,695
Edward Dubovi	USDA-APHIS	Analyze Serum Samples from Raccoons for Virus Neutralizing Antibodies to Canine Distemper	$ 20,000
Baker Institute for Animal Health			**$ 4,941,261**
Gregory Acland	NIH	Models for Therapy of Hereditary Retinal Degenerations	$ 795,114
	Foundation Fighting Blindness	Module I-Medical Therapy Service Facility	$ 270,000
Judith Appleton	NIH	Eosinophils Sustain Chronic Nematode Infection	$ 76,230
Margaret Brosnahan; Douglas Antczak	NIH	Immune Tolerance to Serial Trophoblast Transplants	$ 83,615
Scott Coonrod	NIH	Role of Maternal PAD16 in Embryonic Development	$ 264,637
	DOD-BCRP-Era of Hope	Epigenetic Analysis of Breast Cancer	$ 676,317
Anna Kukekova	NIH	Molecular Mechanisms of Social Behavior	$ 325,800
Leela Noronha; Douglas Antczak	NIH	Characterization of T Lymphocyte Modulation in Pregnancy	$ 67,062
John Parker	BARD (US-Israel)	Development of a plasmid-based reverse genetics system for Bluetongue and Epizootic Hermorrhagic Disease viruses to allow a comparative characterization of the function of the NS3 viroporin in viral egress	$ 51,000
	NIH	Short-Term Training of Students in the Health Professions	$ 74,237
	NIH	Graduate Training Program in Comparative Medicine	$ 400,887
Colin Parrish	NIH	Mechanisms of Parvovirus Infection and Host Range	$ 368,275
	NIH	Structural Controls of Functional Receptor and Antibody Binding to Viral Capsids	$ 399,710
	NIH-The Pennsylvania State University	The Evolutionary and Biological Bases of Host Switching in Viruses	$ 121,897
Alexander Travis	NIH-Director's Pioneer Award Program	Nanoscale Energy Production for Implantable Medical Devices	$ 770,000
	NIH-Fred Hutchinson Cancer Research Center	Towards a Canine Model of Fanconi Anemia	$ 136,480
Xuesen Zhang; Scott Coonrod	Susan G. Komen for the Cure	Role for PAD4 as an Estrogen-regulated Transcription Cofactor During Mammary Development and Breast Cancer	$ 60,000
Biomedical Sciences			**$7,686,179**
Klaus Beyenbach	National Science Foundation	Travel Support for Junior and Underrepresented US Scientists to Present Research at the 2011 SEB Meetings in Glasgow, Scotland	$ 15,000
Christopher Blackwood; Dave Lin	NIH	Regulation of Neurogenesis by Jagged1 in the Embryonic SVZ	$ 34,120
Chen-Hua Chuang	DOD-BCRP-predoc	Role of DNA Replication Defects in Breast Cancer	$ 32,289

Name	Sponsor	Title	Annual Award
Biomedical Sciences *(con't)*			
Huai-hu Chuang; John Schimenti	American Heart Association - Founders	Mechanistic Analysis of Oxidative Modulation of TRPV1	$ 66,000
Paula Cohen	NIH	The MLH1-MLH3 Heterodimer in Mammalian Meiotic Recombination and Gametogenesis	$ 303,700
Robin Davisson	NIH	Role of Redox-Mediated Activation of NF-Kappa B and AP-1 in Neurogenic Hypertension	$ 488,688
	NIH	Menopausal Changes in Hypothalmas and Hypertension Susceptibility	$ 33,653
	NIH-Weill Cornell Medical College	Forebrain Plasticity in Hypertension: Core D	$ 242,672
	NIH-Weill Cornell Medical College	Forebrain Plasticity in Hypertension: Project 1	$ 311,291
	Qatar National Research Fund	Abnormalities in Bone Development Associated with Pre-eclampsia	$ 114,661
	NIH-University of Iowa	Genetic and Signaling Mechanisms in the Central Regulation of Blood Pressure	$ 92,127
Gerald Duhamel	Hoffmann-La Roche Inc.	Veterinary Anatomic Pathology Residency	$ 66,745
	NIH	Contribution of Campylobacter jejuni Nuclease in Animal Models of Acute Infection	$ 183,973
Flavio Fenton	National Science Foundation	Nonlinear Dynamics and Bifurcations in Cardiac Tissue	$ 119,966
	NSF-University of Georgia	CDI-Type II: Collaboration Research: Dynamics and Control of Cardiac	$ 178,273
	NSF-SUNY Stonybrook	Collaborative Research: Next-Generation Model Checking and Abstract Interpretation with a Focus on Embedded Control and Systems Biology	$ 84,950
Joanne Fortune	NIH	Role of Fetal Steroids in Formation and Activation of Bovine Ovarian Follicles	$ 190,575
	USDA-Federal Formula Funds	Effects of Endocrine Disrupting Chemicals (Estrogens) on Bovine Ovaries	$ 30,000
	USDA-Federal Formula Funds	Ovarian Influences on Embryonic Survival in Ruminants	$ 25,000
	USDA	Effects of Fetal Steroids on the Formation of Bovine Ovarian Follicles and on their Competence to Initiate Growth	$ 83,355
Robert Gilmour	DOD-DARPA	Histology for Lifetime Bio-Electronic Interfaces: Active Probes, Imaging, and Quantifications	$ 624,140
John Hermanson	USDA-Federal Formula Funds	Population Dynamics, Habitat Selection, Feeding Behavior and Guano Analysis of Brown Bats in Central New York	$ 29,518
Joanna Holloway	NIH	Functional Analysis of the Dual Specificity Kinase NEK1 in Mammalian Meiosis	$ 145,746
Michael Kotlikoff	NIH	Design of Genetically Encoded Ca2+ Indicators for in Vivo Application	$ 100,100
	NIH-University of Vermont	Calcium Signaling in the Cerebrovascular Unit in Health and Disease	$ 150,164
David Lin	Alzheimer's Association	A novel mouse model of neurodegeneration	$ 80,000
	NIH	A Model for Olfactory Epithelial Neurodegeneration in Alzheimer's Disease	$ 161,990
Kirk Maurer	NIH	The Role of T-cells and Th1 Immunity in Cholesterol Gallstones	$ 144,531
Amy Navratil; Mark Roberson	NIH	The Role of ERK in Pituitary Organogenesis	$ 53,810
Alexander Nikitin	Marsha Rivkin Center for Ovarian Cancer Research	Role of Stem Cells in Ovarian Cancer	$ 75,000
	NIH	Determinants of Metastatic Progression	$ 261,695
Niels Otani	NIH	Dynamical Heterogeneity of Refractoriness and the Induction of Reentry	$ 390,248
	NIH	Dynamical Heterogeneity of Refractoriness and the Induction of Reentry: Research Supplements to Promote Diversity	$ 58,006
Mark Roberson	NIH	Molecular Analysis of GnRH Action	$ 291,581
	NIH	Reproductive Sciences and Genomics Training Program	$ 233,879
John Schimenti	New York State Department of Health-NYSTEM	Cornell Mammalian Cell Reprogramming Core	$ 292,606
	New York State Department of Health-NYSTEM	Genome Maintenance in Germline Stem Cells	$ 176,042
	NIH	Research and Career Training in Vertebrate Developmental Genomics	$ 131,851
	NIH	Genetics of Meiosis and Recombination in Mice	$ 310,910
	NIH-The Jackson Laboratory	Reproductive Genomics: Mutant Models for Infertility	$ 253,823
Susan Suarez	Genex Cooperative, Inc.	The Fate of Bull Sperm Storage Proteins During Capacitation of Frozen-thawed Sperm	$ 7,450
	NIH	Sperm Motility Modulations Crucial to Fertilization	$ 67,559
	USDA-National Research Initiative	Sperm Storage Proteins and their Relationship to Bull Fertility	$ 116,973
Robert Weiss	NIH	Genome Maintenance by the Mouse Hus1 Checkpoint Gene	$ 277,488
	New York State Department of Health-NYSTEM	Investigating How DNA Damage Response Mechanisms Regulate the Tumorigenic Potential of Pluripotent Cell Types Using Mouse Models of Testicular Germ Cell Tumors	$ 164,500
Robert Weiss; Margaret McEntee	Institutional Training Grants Program	Comparative Cancer Biology Training Program	$ 112,500
Andrew Yen	NIH	Nutritional Cell Cycle and Differentiation Control	$ 255,305
Andrew Yen; Michael Shuler	NIH	Center on the Microenvironment and Metastasis-Project 2	$ 21,726

Name	Sponsor	Title	Annual Award
Clinical Sciences			**$ 4,192,163**
Noha Abou-Madi	Morris Animal Foundation - Wildlife Health Studies	Elephant Endothelial Cells: A System to Isolate Elephant Endotheliotropic Herpesvirus	$ 43,998
Gregory Acland	NIH	Tools for Genetic and Genomic Studies in the Dog: ARRA Administrative Supplement	$ 338,962
Dorothy Ainsworth	Harry M. Zweig Memorial Fund for Equine Research	The Genetic Basis of Recurrent Laryngeal Neuropathy (RLN) in Thoroughbreds	$ 82,250
Sharon Center	Winn Feline Foundation	Investigation of the Role of Bacterial Cell Wall components, cytokine Signaling, and Myofibroblastic Fibrosis in Feline Nonsuppurative Cholangitis-Cholangiohepatitis Syndrome (CCHS) as an Aid to Improving Diagnostic Categorization and Treatment Modalitie	$ 24,140
Sharon Center; Sean McDonough; Joseph Wakshlag	Mars Petcare U.K. Ltd.	Multiparameter Analysis of Hepatocellular Injury in Labrador Retrievers	$ 211,942
Sofia Cerda-Gonzalez	American Cavalier King Charles Spaniel Club	Role of Morphology in Clinical Progression and Syringomyelia in Cavalier King Charels Spaniel Chiari-like Malformations	$ 22,943
Sofia Cerda-Gonzalez; Rory Todhunter; Vicki Meyers-Wallen	Collaborative Research Program	Canine Model of Centronuclear Myopathy for Gene and Stem Cell Therapy	$ 20,000
Jon Cheetham	Grayson-Jockey Club	Early Diagnosis of Recurrent Laryngeal Neuropathy	$ 43,328
	Harry M. Zweig Memorial Fund for Equine Research	Diagnosis of Poor Performance in Racehorses	$ 43,914
Mitzi Clark; William Miller	American College of Veterinary Dermatology	Normal Digital Flora from Healthy Alpacas	$ 6,000
Ricardo de Matos	Clinical Research Grants Program	Pharmacokinetics of the Anti-epilepsy Drug Zonisamide in Domestic Chickens	$ 6,270
Thomas Divers	Harry M. Zweig Memorial Fund for Equine Research	Targeting Platelets as a New Treatment Strategy for Endotoxemia	$ 30,000
Normand Ducharme	Med-El World Wide Headquarters	Laryngeal Pacemaker in Horses	$ 512,959
M. Julia Felippe	NIH-NIH Director's New Innovator Award	Epigenetics: A Novel Approach in Primary Immunodeficiencies	$ 462,000
Lisa Fortier	AMIPurdue-BioRegeneration Technologies	Sheep Osteochondral Repair	$ 283,117
	Grayson-Jockey Club	Generation of equine iPS cells for regenerative therapy	$ 51,093
	Harry M. Zweig Memorial Fund for Equine Research	Determining Anti-Nociceptive and Matrix Restorative Mechanisms of Platelet Rich Plasma in Osteoarthritis	$ 44,646
	Harry M. Zweig Memorial Fund for Equine Research	Optimization of Platelet Rich Plasma Components for the Treatment of Tendonitis	$ 57,213
	NIH-Hospital For Special Surgery	Evaluation of an MRI Biomarker for Meniscal Repair	$ 12,708
	NIH-University of Pittsburgh	Multicenter Cartilage Repair Preclinical Trial in Horses: ARRA Funds	$ 81,808
Susan Fubini	Clinical Research Grants Program	Regional Limb Perfusion of Amikacin Alone and in Combination with Ticarcillin	$ 3,550
Robert Gilbert	USDA-Federal Formula Funds	Genetics of Reproduction: Ovulation and Uterine Disease	$ 14,130
Robin Gleed	NIH-Transonic Systems	Large Animal Model of Hydrocephalus	$ 18,956
	USDA-Federal Formula Funds	Genetics of Reproduction: Ovulation and Uterine Disease	$ 11,870
Robin Gleed; Robin Radcliffe	Morris Animal Foundation	Effects of Lateral and Sternal Posture in Anesthesia and Post-capture health in Black Rhinoceros	$ 40,949
Catherine Hackett; Lisa Fortier	NIH	Defining Mesenchymal Progenitor Cell Subpopulations	$ 60,962
George Kollias; Noha Abou-Madi	Clinical Research Grants Program	Investigating the Reproductive Biology of the Endangered Markhor Goat	$ 5,630
Jodi Korich	Department of Education - University of Wisconsin	Veterinary Curricular Cooperative: Reducing Veterinary Student Debt Loads Through Electronic Sharing of Courses and "Textbooks"	$ 10,543
	USDA-APHIS	Foreign Animal Disease Diagnosticians Field Manual	$ 13,075
Ursula Krotscheck	Morris Animal Foundation-Small and Large Companion	Prospective Objective Evaluation of the Surgical Treatment of Fragmented Coronoid Processes in Dogs	$ 46,031
Nathaniel LaHue; Robin Radcliffe	Morris Animal Foundation - Wildlife Health Studies	The Risk of Trypanosoma evansi to Sumatran Rhinoceros in Way Kambas National Park, Sumatra, Indonesia	$ 4,000
Eric Ledbetter; Julia Felippe	Collaborative Research Program	Vaccination to Prevent Recurrent Canine Herpesvirus-1 Disease and Viral Shedding in Mature Dogs	$ 25,400
Alan Nixon	Harry M. Zweig Memorial Fund for Equine Research	Targeted Delivery of Stem Cells for Pro-Inflammatory Cytokine Suppression in Arthritic Joints	$ 101,065
	NIH	Gene Enhanced Cartilage Repair in a Cytokine Permissive Enviroment	$ 316,295
Kyla Ortved; Alan Nixon	Grayson-Jockey Club	Combinatorial Gene Therapy in Equine Chondrocytes	$ 15,000
Germain Rivard; Dave Lin	Johns Hopkins Centr/Alternatives to Animal Testing	Alleviating Human Induced Fear Response in Mice	$ 6,000
Catherine Rogers	Feline Health Center	Evaluation of Coagulation Abnormalities in Feline Patients Using a Point-of-Care Analyzer	$ 8,000

Name	Sponsor	Title	Annual Award
Clinical Sciences *(con't)*			
Kenneth Simpson	ACVIM Foundation	Development of a Novel Amikacin Delivery Method for Treatment of E. coli Associated With Granulomatous Colitis of Boxer Dogs	$ 17,874
	American Kennel Club Canine Health Foundation	Granulomatous Colitis in Boxer Dogs: Fine Mapping of Disease Associated Loci and Functional Analysis of Bacterial Killing	$ 75,000
	Crohn's and Colitis Foundation	Functional Analysis of Crohn's Associated Adherent and Invasive E. coli	$ 128,700
	New York Presbyterian Hospital	IBD Collaboration	$ 100,000
	NIH-University of North Carolina	Colitis Induced by Immune Responses to Luminal Bacteria	$ 144,606
	Royal College of Veterinary Surgeons	Investigation of Protein-losing Enteropathy in Yorkshire Terriers	$ 8,000
Nora Springer; Tracy Stokol	American Society for Veterinary Clinical Pathology	Procoagulant Activity in Horses: Measurement of Platelet-derived Microparticles and Endogenous Thrombin Potential	$ 2,435
Nathaniel Sutter	NIH	Indentifying Genome Wide SINE Retrotransposons Contributing to Dog Size Variation	$ 269,500
Bud Tennant	Gilead Sciences	Antiviral Studies	$ 77,000
Joseph Wakshlag	American Kennel Club Canine Health Foundation	The Effects of Baicalein on Canine Osteosarcoma Cells	$ 12,366
	Auburn University	Influence of Diet on Olfaction Capabilities in Detection Dogs	$ 30,800
	Morris Animal Foundation-Small and Large Companion	Investigation Into the Role of 5-lipoxygenase in Canine Osteosarcoma	$ 16,098
	Nestle Purina	Investigation into the Relationship Between Zoometric Morphometry/body Condition Score, Markers of Insulin Sensitivity and Serum	$ 17,019
Barbour Warren; Carol Devine	USDA-NIFA	Weight Gain Prevention among Breast Cancer Survivors: Beliefs, Behaviors and Social Networks	$ 139,600
Ashlee Watts; Alan Nixon	NIH	Gene Induction of Stem Cell Chondrogenesis	$ 64,418
Molly Yazwinski; Joseph Wakshlag	International Sled Dog Veterinary Medical Associat	Associations Between Kilcalorie Intake and Lean Body Mass in Relationship to Serum Biomarkers of Skeletal Muscle Metabolism	$ 4,000
Eric Zager; Daniel Fletcher	Morris Animal Foundation - Veterinary Scholar Program	Muscle Tissue Oxygen Saturation as a Marker of Oxygen Delivery in Hospitalized Cats	$ 4,000
Microbiology and Immunology			**$ 9,241,322**
Robert Abramovitch; David Russell	NIH	Genetics of Mycobacterium tuberculosis Adaptation to the Macrophage Phagosome	$ 52,154
Avery August	NIH	ITK Mast Cells and Allergic Airway Responses	$ 530,709
	NIH	Role of the Tyrosine Kinase ITK in Experimental Allergic Asthma	$ 363,012
	NIH	Eosinophils and Allergic Airway Responses	$ 372,563
	NIH	Eosinophils and Allergic Airway Responses ARRA Supplement	$ 78,627
	Ono Pharmaceutical	Anaysis of Kinase Inhibitors	$ 165,185
Joel Baines	NIH	Nucleocapsid Envelopment Herpes Simplex Virus-1	$ 375,462
Dwight Bowman	Merial Limited	Isolation of Ancylostoma braziliense	$ 18,357
	USDA-AFRI	Current Knowledge of Sources, Fate and Transport of Rural and Agricultural Watershed Pathogens: A National Synthesis Workshop	$ 299,370
Paul Bowser	New York Sea Grant Institute - Stony Brook	Assessment of Viral Hemorrhagic Septicemia Virus Egg Transmission	$ 0
	New York Sea Grant Institute	Management of Risk from VHSV in Bait Minnows	$ 100,134
	Saint Regis Mohawk Tribe	Fish Tumor Study, Lab Analysis - Histopathology	$ 40,635
	USDA	Minor Use Animal Drug Program: Northeast Region (NRSP No. 7)	$ 24,135
	USDA-Federal Formula Funds	Aquatic Invasions in the Great Lakes: Presaging Pathogen Outbreaks	$ 25,000
	USDA-Special Grants Program	Minor Use Drug Program: Northeast Region (NRSP No. 7)	$ 56,457
Margaret Bynoe	Center for Advanced Technology	Modulation of Endothelial Cell Permeability by Adenosine	$ 40,365
	NIH	CD-73 Adenosine Signaling in the Central Nervous System in Disease and Health: Research Supplements to Promote Diversity	$ 47,136
	NIH	CD-73-Adenosine Signaling in the Central Nervous System in Disease and Health	$ 333,506
James Casey	NIH-Colorado State University	Retroviral Cyclin Effects Oncogenic Cyclin-dependent Kinases	$ 16,096
Theodore Clark	NIH	ASSET: Advancing Secondary Science Education with Tetrahymena	$ 229,257
	NIH	A Resource Center for Tetrahymena thermophila	$ 336,034
Eric Denkers	NIH	Signal Transduction During Toxoplasma Infection	$ 371,365
Rodney Getchell	USDA-APHIS	Viral Hemorraghic Septicemia Surveillance	$ 76,516
Keith Jarosinski	NIH	Herpesvirus-Induced Telomerase Dysregulation and Tumor Formation	$ 221,505
	USDA	Determining the Role of Marek's Disease Virus (MDV) Glycoprotein C in Horizontal Transmission	$ 124,907
Alice Lee; Dwight Bowman	Novartis	Development of Non-Terminal Methods for Determining Efficacy of Antihelminthics -- Postdoctoral Fellowship	$ 85,533
Cynthia Leifer	NIH	Toll-like Receptor 9: Trafficking and Signaling	$ 339,605
	NIH-Fox Chase Cancer Center	Immune Mechanisms that Control Ectromelia Virus Infection	$ 17,072
Deeqa Mahamed; Margaret Bynoe	NIH	CD-73 Adenosine Signaling in the Central Nervous System in Disease and Health: Research Supplements to Promote Diversity	$ 47,136

Name	Sponsor	Title	Annual Award
Microbiology and Immunology *(con't)*			
Helene Marquis	USDA-Federal Formula Funds	Modulation of Innate Immunity by a Bacterial Phospholipase	$ 50,000
Helene Marquis; Kirk Maurer	Collaborative Research Program	Modulation of Innate Immunity by a Bacterial Phospholipase	$ 45,000
Helene Marquis; Susana Mendez	DOD-PRMRP	Listeria-based Vaccine for Cutaneous Leishmaniasis	$ 355,032
Jeff Mills; Margaret Bynoe	NIH	Adenosine Receptor A2A Regulation of EAE and CNS Lymphocyte Infiltration	$ 52,154
David Russell	Bill & Melinda Gates Foundation-Univ of Pittsburgh	In vivo Imaging of Tuberculosis and its Response to Chemotherapy	$ 118,576
	NIH	The Role of the Granuloma in M. tuberculosis Infection	$ 409,863
	NIH	Development of a Cell-Based HTS for Compounds with Activity Against Tuberculosis	$ 266,495
	NIH	Restoration of Alveolar Macrophage Function in HIV Patients: A Clinical Study	$ 479,534
	NIH	Environmental Cues and Responses in Tuberculosis	$ 449,865
	Vertex	Development and Validation of Cell Based Assays for Assessing Mycobacterium tuberculosis (Mtb) Fitness in Macrophage Infection	$ 311,949
	NIH	Development of a Cell-Based HTS for Inhibitors of Inflammatory Macrophages	$ 380,317
Marci Scidmore	NIH	The Role of Rab GTPases in Chlamydia-Infected Cells	$ 370,171
Gary Whittaker	Feline Health Center	Activation of the Feline Coronavirus Spike Protein and its Role in Viral Pathogenesis	$ 30,000
	NIH	Endocytosis of Influenza Virus	$ 367,130
	NIH-University of Rochester	NIAID Centers for Excellence for Influenza Research and Surveillance	$ 742,417
	Winn Feline Foundation	Evolution of Feline Infectious Peritonitis Virus within FIP Cats and Tissue-specific Adaptation of the Virus to Activating Proteases	$ 24,986
Molecular Medicine			**$ 2,942,656**
Richard Cerione	NIH	Roles of Cdc42 and its Signaling Partners in Cell Growth and Differentiation	$ 316,964
	NIH	Role of GTP-Binding/Transglutaminase in Cell Survival and Migration	$ 277,169
	NIH	Characterization of Growth Factor-Coupled Signaling	$ 338,000
	Susan G. Komen for the Cure	Examining a Novel Link Between Rho GTPases and the Metabolic Machinery of Human Breast Cancer Cells	$ 200,000
Ruth Collins	NIH	Molecular Analysis of Elp complex Function in Health and Disease	$ 276,297
William Katt; Richard Cerione	American Cancer Society	Glutaminase Inhibition as a Method of Breast Cancer Control	$ 44,000
Natasza Kurpios	March of Dimes Birth Defects Foundation	The Mechanism of Intestinal Coiling	$ 147,026
Robert Oswald	NIH	Training in Molecular Physics of Biological Systems	$ 481,078
	NIH	Dynamic Properties of a Glutamate Binding Domain	$ 289,674
	NIH	Allosteric Modulators of Glutamate Receptors	$ 190,575
Kinning Poon; Robert Oswald	NIH	Functional Characterization of an AMPA receptor: GluR3	$ 37,860
Holger Sondermann	NIH	Mechanism and Regulation of c-di-GMP Signaling in Bacterial Biofilm Formation	$ 284,013
	Pew Scholars	Mechanistic Studies of Cyclic di-GMP Signaling in Bacterial Pathogenesis	$ 60,000
Population Medicine and Diagnostic Sciences			**$ 4,593,531**
Alfonso Torres	USDA-APHIS	Foreign Animal Disease Diagnosticians Field Manual	$ 13,075
Craig Altier	USDA-Federal Formula Fudns	Improved Diagnosis of Bacterial Diseases in Production Animals	$ 3,800
	USDA-Federal Formula Funds	Improved Diagnosis of Bacterial Diseases of Cattle	$ 27,000
	USDA-NIFA	Pathogen and Host Mechanisms Involved in Salmonella Infection of Tomato	$ 169,912
Craig Altier; Karyn Bischoff; Yung-Fu Chang; Amy Glaser	USDA-Pennsylvania State University	Serum ELISA, Milk ELISA, and Organism Detection Test Laboratories	$ 43,125
Rodrigo Bicalho	Cornell Center for a Sustainable Future	Replacing Antibiotic Therapy in the Food Animal Industry With Bacteriophage Therapy	$ 60,001
	USDA-Federal Formula Funds	Mastitis Resistance to Enhance Dairy Food Safety/Assemblin and Evaluating an Environmental Bacteriophage Cocktail for Treatment of Bacterial Mastitits of Dairy Cattle	$ 40,000
Karyn Bischoff	National Veterinary Research & Quarantine Service	Development of the Identification Strategy for the Animal Poisoning and Feed Contamininants and Rapid Detection Method for Mycotoxins, Phytotoxins, and Heavy Metals	$ 58,380
	USDA-Federal Formula Funds	Assessing the Fate of Drugs in Livestock Mortality and Manures	$ 31,000

Name	Sponsor	Title	Annual Award
Population Medicine and Diagnostic Sciences *(con't)*			
Yung-Fu Chang	Biotechnology Research and Development Corp.	Construction of M. avium subsp. Paratuberculosis Mutants as Vaccine Candidates	$ 118,723
	Biotechnology Research and Development Corp.	Development of a Vaccine Delivery System Against Bovine Leptospirosis	$ 315,300
	NIH-Virginia Polytech Inst. & State University	Comparative Transcriptome Analysis of Clostridium Difficile Strains	$ 292,608
	Penn State University	Vaccine Trial Against Johne's Disease in a Mouse Model	$ 30,400
	Pfizer Animal Health	Development of an Equine Leptospiral Challenge Model	$ 127,323
	USDA-AFRI	Protective Efficacy of Genetically Engineered Salmonella Strains Against Mycobacterium avium subsp. paratuberculosis	$ 185,000
	USDA-Federal Formula Funds	Development of a Luminex Serologic Test for Diagnosis of Mycobacterium avium subsp. paratuberculosis Infection in Cattle	$ 30,000
	USDA-Federal Formula Funds	Development of a Vaccine Against Mycobacterium avium susp. Paratuberculosis Infection in Sheep/Goats	$ 30,000
Yrjo Grohn	USDA-Kansas State University	Practical Interventions to Effectively Manage Antibiotic Resistance in Beef and Dairy Cattle Systems: A Fully Integrated Approach	$ 106,441
	USDA-National Research Initiative	Cost Effective Control Strategies for the Reduction of Johne's Disease on Dairy Farms	$ 130,783
	USDA-NIFA	Optimal Clinical Mastitis Management in Dairy Cows	$ 158,956
Yrjo Grohn; Ynte Schukken	USDA-University of Pennsylvania	JDIP: Epidemiology and Biostatistics	$ 20,000
	USDA-University of Pennsylvania	JDIP: Epidemiology and Transmission Project	$ 25,000
Hussni Mohammed	Qatar National Research Fund	Investigating the Risk Associated With Foodborne Pathogens and the Potential Relation to Inflammatory Bowel Disease in Qatar	$ 105,367
	USDA-Federal Formula Funds	Factors Led to Evolution of Endemic Foci for West Nile Virus in New York State	$ 8,564
	USDA-Federal Formula Funds	The Risk of Escherichia coli and Campylobactor spp in New York City Watershed	$ 30,000
Daryl Nydam	Immucell Inc	Bovine Rotavirus Vaccine Efficacy Study	$ 138,422
	USDA-Federal Formula Funds	Management Systems to Improve the Economic and Environmental Sustainability of Dairy Enterprises (Rev. NC-1119)	$ 30,000
	USDA-Federal Formula Funds	Periparturient Energy Balance and Endometritis in Dairy Cows: An Integrated Approach to Epidemiology, Immunology and Management (aka Transition Dairy Cow.... Management)	$ 18,000
	USDA-National Research Initiative	Periparturient Energy Balance and Endometritis in Dairy Cows: An Integrated Approach to Epidemiology, Immunology, and Management	$ 155,570
Ned Place	NSF	Integrated Analyses of the Seasonally Quiescent Ovary and Female Reproductive Aging	$ 125,013
	USDA-Federal Formula Funds	Ovarian Influences on Embryonic Survival in Ruminants/Genomic Investigation of Ovaries Unresponsive to Gonadotropin Stimulation	$ 28,000
Ned Place; Janet Scarlett	Morris Animal Foundation-Small and Large Companion	Development of a New Diagnostic Test (anti-Mullerian hormone) for Non-Surgical Evaluation of Spay Status and Ovarian Remnant Syndrome	$ 33,381
Ynte Schukken	BARD (US-Israel)	Identification of genes involved in virulence of Escherichia coli mastitis by Signature Tagged Mutagenesis	$ 31,000
	Boehringer Ingelheim Vetmedica, Inc.	Clinical Mastitis in Dairy Cows	$ 160,000
	Intervet-Merial	Prednisolone Studies	$ 93,699
	USDA-ARS	Pilot Study of Factors Affecting Maintenance of Mycobacterium, Salmonella, E. coli and Listeria on Dairy Farms	$ 45,882
	USDA-Federal Formula Funds	Food Safety in NY - Food Safety Awareness on New York Dairy Farms	$ 30,000
	USDA-Federal Formula Funds	Mastitis Resistance to Enhance Dairy Food Safety	$ 35,000
	USDA-University of Wisconsin-Madison	Impact of Organic Management on Dairy Animal Health and Well-being	$ 146,939
	Pfizer Animal Health	Mastitis Field Studies	$ 31,060
	New York State Agricultural and Markets	Monitoring Animal Health and Food Food Safety in Diary Herds Using Bulk Milk	$ 50,000
	Pfizer Animal Health	Towards Resolving Infections in the Dry Period	$ 89,359
Rebecca Smith; Yrjo Grohn	NIH	Mathematical and Statistical Modeling of Mycobacterial Disease Control	$ 74,303
Michael Stanhope	NIH	Evolutionary Genomics and Population Genetics of Pathogenic Streptococci	$ 514,387
Tracy Stokol; Michael Shuler	NIH	Is a Tissue Invasive Phenotype Conferred on Malignant Breast Cancer Cells After Adherence to Lung Microvascular Endothelial Cells?	$ 92,577
	Clinical Research Grants Program	Procoagulant Properties of Canine Hemangiosarcoma	$ 8,000
	Morris Animal Foundation	Leukocyte and Neural Endothelial Cell Interactions with the Coagulation Cascade: Role in the Pathogenesis of Equine Herpes Virus Myeloencephalopathy	$ 80,920
Bettina Wagner	Harry M. Zweig Memorial Fund for Equine Research	Innate Immune Mechanisms and T-Cell Responses to Equine Herpesvirus Type 1 in Latently Infected and Naive Horses	$ 63,271
	Morris Animal Foundation-Small and Large Companion	Novel Immune Reagents for Cytokines to Advance the Analysis of the Cellular Immune Response in Horses	$ 68,484
	USDA-University of Massachusetts	Development of High Priority Immune Reagents for Food Security	$ 79,101
Lorin Warnick	USDA-Washington State University	Minimizing Antimicrobial Resistance Transmission: The Dairy Farm as the Model System	$ 210,405
		Total	**$41,850,407**

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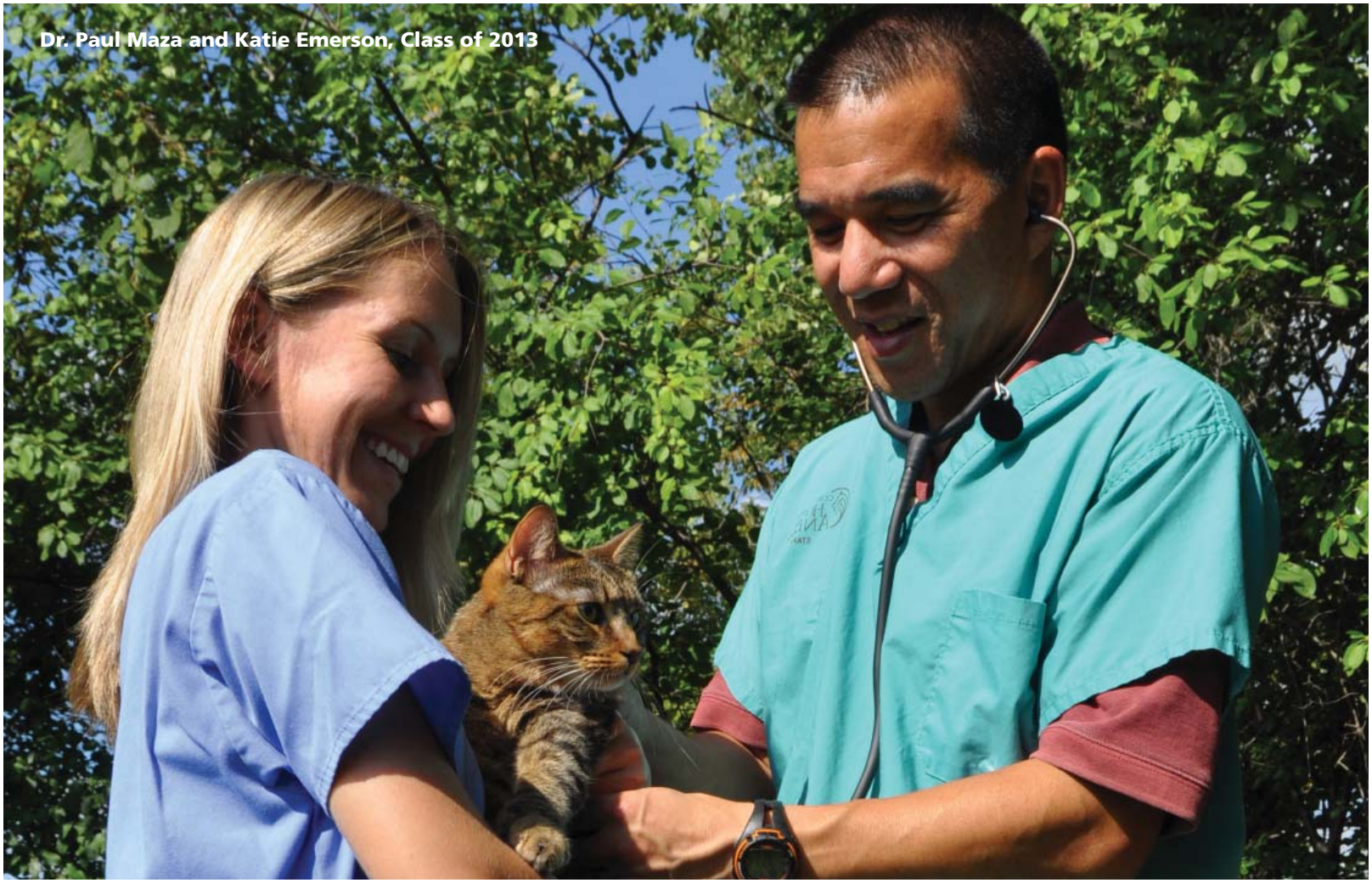
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