Global Matters: Teaching, Research, and Service

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From stethoscopes to microscopes to the scope of the College, ‘Scopes is your source for news from the College of Veterinary Medicine at Cornell University. Last published in October 2006, the magazine is published twice yearly and complements the College’s annual report published every fall. To change your address, please contact Kim Carlisle at kac43@cornell.edu or 607-253-3745.
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PICTURED ON THE COVER: Through the Expanding Horizons program, student Missy Turner '10 was able to help promote the conservation of the habitat of the mountain gorilla. For the whole story, turn to page 14.
I recently spoke with a news reporter about the shortage of regulatory and food animal veterinarians in our state and region, and the importance of this issue for New York State agriculture and for our collective health and safety. Veterinarians form the first line of defense against the spread of disease within agricultural and wildlife populations, and almost inevitably from animal to human populations. Today there is an increasing awareness of the link between human health, environmental health, and animal health, and of the essential role that veterinary surveillance plays in the health and well being of domestic animals, the protection of our food supply, the health of wildlife, and in human disease prevention. This concept of “One Medicine” captures in abbreviated form what we as veterinarians have known and practiced for decades—that domestic and wild animal health is critical to human industry and public health.

At Cornell, we are stewards of this concept in several ways. First, we are committed to training the leading regulatory and food animal veterinarians of the future and to pursue research that keeps pace with emerging diseases. Our recent strategic plan has articulated the goal of doubling the number of regulatory and food animal graduates from Cornell through an expansion in class size and critical partnerships with Cornell’s College of Agriculture and Life Sciences, and the New York State Department of Agriculture & Markets. Achievement of this goal will require a modest increase in our annual budget and capital funds required to expand the size of our classrooms and laboratories, but this investment in the nation’s top ranked veterinary college will yield dividends for New York State agriculture and public health for decades to come.

Second, Cornell’s Animal Health Diagnostic Center plays a vital role as New York State’s diagnostic laboratory that insures that one of the primary points of entry to the United States is kept free of disease of potentially devastating consequences to the United States. This historic partnership between New York State and Cornell University is the essence of what Ezra Cornell envisioned when he founded a University with a unique public/private partnership at its core, harnessing the scientific and technological advances of an elite University to the service of the public good. Today the Animal Health Diagnostic Center provides roughly $2 in income for every $1 invested by New York State, leveraging the State’s resources in a highly efficient manner, and attracting business and jobs to upstate New York. The lab conducts more than one million tests annually, from dairy cows to chickens, from wild deer to exotic pet birds, from fish in our lakes and streams to sheep and goats, from dolphins at Sea World to
samples from imported mares, the health of animals and humans and of New York State agriculture is well served by the AHDC, a founding member of US labs that form a network of disease surveillance.

This partnership and the College’s public service is also reflected in our community. At the student-run Southside Community Well Pet Clinic low-income Ithaca residents can come to provide their animals with high quality, primary medical care. The clinic opened its doors in 1996, at the urging of Cornell faculty members, who wanted to study the effects of improved pet care on disease transmission between pets and humans, and quickly developed into a training program for beginning veterinary students. One evening per month the clinic, held in the historic Ithaca Southside Community Center, is set up by students who unfold exam tables, stock a mobile pharmacy, and examine, vaccinate, and treat or refer patients under the supervision of volunteer faculty and community veterinarians. The innovative clinic was recognized with the Merck Award for Creativity in Teaching, and it is a place of great camaraderie and volunteer spirit.

This spirit extends beyond our borders and is beginning to address the world’s enormous need for advanced animal medical care. Through the Expanding Horizons program (story on page 14), our students spend their summers in developing nations conducting research with the capacity to shed new light on important issues like zoonotic disease, wildlife conservation, and public health. Our graduates, thoroughly trained in infectious disease, are leaders in global health. Robert Kahrs DVM ’54, who is highlighted on page 12, is an outstanding example of the role Cornellians are playing in global public health. And research conducted by faculty members like David Russell, Yung-Fu Chang, and Robert Gilmour (stories on pages 6-11) seek to prevent animal and human diseases that have plagued our world for centuries, continuing the legacy of William A. Hagan, Dorsey W. Bruner, James A. Baker, James H. Gillespie, George G. Poppensiek, Fredric W. Scott, John F. Timoney, Leroy Coggings, Neil L. Norcross, Max J. Appel, Leland E. “Skip” Carmichael, and many others.

These are but a few examples of the way that the College is actively engaged in stewarding public health on a global scale. There are many more examples, including our partnership with the Wildlife Conservation Society, our partnership with the USDA-APHIS to provide the Smith-Kilborne Foreign Animal Disease Program and Summer Dairy Institute programs, and faculty research programs too numerous to describe here. Despite these accomplishments and superb programs, the opportunities to do more still exist, and it is up to us to seek them out and to make them real. We are currently engaged in discussions with the Qatar Foundation, led by Professor Alfonso Torres, to establish a full veterinary program based in Doha, Qatar, with clinical, research, teaching, outreach, and diagnostic laboratory elements. I am excited about this international effort mostly because I believe that it can elevate the level of veterinary medicine, and veterinarians, in regions of the world where our contributions to animal and public health are sorely needed.

I look forward to sharing more news with you in future issues of ’Scopes and hope that you enjoy the stories that follow in this issue.

Sincerely, 

Mike Kotlikoff
Michael I. Kotlikoff, VMD, PhD
Austin O. Hooey
Dean of Veterinary Medicine
Global health is becoming increasingly important, according to Kevin Cummings DVM ’96, because of our ever-shrinking world. “Maintaining a global perspective and collaborating with other disciplines will enable us to address today’s health challenges in a manner that best serves people, animals, and the environment.”

Veterinarians are often on the forefront of the struggle to contain infections in people, because animals are frequently the initial reservoir for infectious diseases. Cornell’s veterinary program prepares students, like Dr. Cummings who is currently completing his PhD in epidemiology at Cornell’s College of Veterinary Medicine, to serve as leaders in public health initiatives.

In addition to his research that focuses on the link between Salmonella in dairy cattle and in humans, Dr. Cummings is a member of the Global Health Advisory Board—a Cornell task force that includes representatives from many colleges, including Weill Cornell Medical College—charged with providing guidance in the areas of research, education, and outreach for the University’s global health program. In particular, the advisory board facilitates and encourages student involvement across the University in both didactic learning and hands-on field experiences designed to raise their awareness and comfort with issues that affect the health of humans and animals.

Dr. Cummings also coordinates the College’s Public Health and Preventive Medicine course, also known as Course VIID. A required course for second-year students, the material is presented by a combination of College and guest lecturers.

This course, though, is just one of the methods Cornell uses to prepare students for a leadership role in securing public health on an international level.
Whether it is protection against parvovirus in dogs, a feline leukemia virus outbreak in a cattery, herpes virus-induced abortions in horses, rabies spread among wildlife, the increasing prevalence of multi-drug resistant bacteria, or bird-flu zoonosis, Cornell's future veterinarians are receiving the integrated education and training in infectious diseases needed to address tomorrow's health risks.

Host, Agent and Defense, referred to as Foundation Course IV, walks students through the characteristics of pathogenic organisms and introduces clinical signs, prevention strategies, treatment options, and diagnostic tests for infectious disease in animals.

“The courses we had this semester were intense,” said Karen Lopez ’11, who described Course IV and Course VIID as complementary. “We learned about animals and infectious disease in Course IV (for instance avian influenza) and then we learned how that disease is relevant to humans in Course VIID. With this information, I feel prepared.”

Lopez believes that public health veterinary medicine is frequently overlooked as a career option and an excellent way to make a difference on a global scale. She supplemented her classroom training last summer with a six-week paid position as a student-trainee at the USDA. She worked in the nation's second-largest pork slaughter house and processing plant, monitoring for infectious disease. A typical day would include trips to the barns to watch animals at rest and in motion.

In addition, Lopez helped with quality control. In the areas where meat is processed, she assisted with residue testing for antimicrobial residues and inspections for compliance in areas identified as possible contamination sites.

“To prepare students to serve the best interests of the global community, our curriculum must leverage every opportunity for understanding infectious and zoonotic diseases,” said Dr. Lorin Warnick, associate dean for veterinary curriculum. “We emphasize this training in the DVM curriculum and post-graduate education, but we also encourage students to gain hands-on opportunities in the real world. This is an excellent way to ensure understanding and build confidence.”

**Infectious Disease Education: Preparing for Today and Tomorrow**

The most significant feature of the course is that it not only trains students in the infectious diseases they must be prepared to engage across the range of their DVM occupations, but also it does this in a holistic context where students acquire the necessary knowledge base in host defense, pathology, treatment approaches, and population disease control to successfully engage the challenges of tomorrow's emerging diseases.
“THIS ORGANISM HAS BEEN SUSPECTED TO BE ONE OF SEVERAL POSSIBLE CONTRIBUTING AGENTS TO CROHN’S DISEASE THAT HAS SIMILAR PATHOLOGIC LESIONS IN PEOPLE.”

- DR. YUNG-FU CHANG
AN OUNCE OF PREVENTION...

Vaccine averts Johne’s Disease

Scientists at the College of Veterinary Medicine have discovered a vaccine that prevents the infection of Johne’s disease, a condition blamed for financial losses that total $220-$250 million annually among the dairy community in the US. The breakthrough was published in the January 2009 issue of Vaccine and is currently available at [http://www.ncbi.nlm.nih.gov/pubmed/18955101](http://www.ncbi.nlm.nih.gov/pubmed/18955101).

Johne’s disease is a contagious, chronic, and usually fatal infection that affects primarily the small intestine of ruminants and many non-domestic ruminants such as farm-raised deer, elk, llamas, alpacas, bison, and zoological wildlife. All ruminants are susceptible to Johne’s disease, which is caused by *Mycobacterium avium* subspecies *paratuberculosis*, a hardy bacterium related to the agents of leprosy and tuberculosis. Found worldwide, Johne’s disease causes a thickening of the intestinal wall, which blocks the normal absorption of food. The animal feels hunger and does eat, but cannot absorb any nutrients. This results in wasting and finally death.

“Johne’s disease is one of the most important infectious diseases that threatens farmers,” said Dr. Yung-Fu Chang, professor of microbiology and principal investigator. “Equally important, though, this organism has been suspected to be one of several possible contributing agents to Crohn’s disease that has similar pathologic lesions in people. The results of our research may offer useful information to those working with Crohn’s disease.”

Funded by grants from the Biotechnology Research and Development Corporation (BRDC) and a contract through a cooperative agreement between the NYS Department of Agriculture and Markets and the USDA-APHIS, the research project was led by Dr. Chang, who coordinated a team of post-doctoral associates and colleagues to identify and prepare the antigen necessary for the vaccine development. Currently, this invention is licensed to the Biotechnology Research and Development Corporation.

Johne’s disease is spread when infected animals shed the bacteria in their manure. Animals of all ages, but primarily calves, ingest the bacteria through feed or water contaminated with manure from infected animals. Feed troughs, hay bunks, water tanks, ponds, stagnant water, maternity pens, and group pens, for example, can be contaminated directly from an infected animal or indirectly from equipment used to feed or spread manure. Newborns and young animals can ingest the organism located on manure-laden teats or directly from colostrum or milk from infected cows. Calves are also at risk of infection while in the uterus of an infected cow.

Until now, the only way to prevent the disease was to identify and cull infected animals and then make management changes to prevent the spread of the disease.

“It’s difficult for a farmer to protect grazing animals from coming in contact with Johne’s disease,” said Dr. Chang. “While the barn area may be spotless, the pasture can be contaminated, and this is not easily addressed. The bacteria have been found to survive for up to a year in the outside environment.”

Dr. Chang and his team are now working on improving the delivery system for the vaccine. “An oral vaccine will be more economical for farmers,” said Dr. Chang. “This is our new goal.”
In research that spans three continents, Dr. David Russell is searching for the seeds that will grow new drugs. Specifically, he wants to discover drugs with the capacity to prevent respiratory infections in people with human immunodeficiency virus (HIV) and pulmonary tuberculosis.

This work has taken him to Malawi, where he happily sits at the research bench, heart and hands hard at work conducting scientific experiments that have the potential to significantly improve life for people who are dying from tuberculosis and HIV. Working with collaborators from the University of Massachusetts, the College of Medicine in Malawi, and the Liverpool School of Tropical Medicine, Dr. Russell believes one of the clues to understanding how to treat these diseases lies inside macrophages, white blood cells within tissues that eat bacteria and cellular waste.

As such, Dr. Russell’s research team has focused on the functional capacity of macrophages found in the lungs of patients infected with HIV and pulmonary tuberculosis. While most cell biologists use immunofluorescence, a technique that labels antibodies with fluorescent dyes to demonstrate the presence of a particular antibody in a tissue preparation or smear, Dr. Russell’s team developed a new technique...
that uses fluorescence to measure different enzyme activities in situ and in real time.

“The phagosome (compartment created when the macrophage ‘eats’ particles), functions like our stomach, it digests material and kills microbes,” said Dr. Russell, explaining that a better understanding of the environment is particularly useful when studying pathogens that can live within macrophages. “We have developed a recorder system that measures enzyme activity, acidity or alkalinity, the level of reactive oxygen ions, and other characteristics key to killing microbes.”

With this information, the team can explore whether the functionality of alveolar macrophages—those tasked with cleaning the surface of the lungs—is impaired by the presence of HIV or whether the macrophages are still able to mediate protective responses. Early indicators, according to Dr. Russell, suggest that HIV does directly affect the function of macrophages, and as such, is a driving force for the development of respiratory infections in patients infected with HIV and tuberculosis.

A recent grant from the NIH, supplemented by resources from Cornell University, will propel his research to the next level. The acquisition of a high-throughput screening device will allow his team to identify small molecules that have the potential to be developed into drugs. In addition, he has secured access to a new library of compounds from a biotechnology company.

“Nowadays, few companies are pursuing novel drug discovery for antimicrobials” said Dr. Russell, explaining that it is far more common for scientists to modify drugs already in use. “Scientists are trying to improve a drug that already exists, which means there are no new drugs in the pipeline—just variations. This is a big mistake. Our work aims to discover new drugs. Drugs that we hope will reverse the effects that HIV has on macrophage function and drugs that will fight tuberculosis.

“This is a shift in my program—from basic science to applied. We have the technology now, and I am determined to understand disease process. I interface on a very personal level with people who suffer from these diseases and spend a great deal of time in areas where they are endemic. I feel an obligation to use my scientific knowledge to fight these infections.”
Experimental set-up for recording electrical signals from heart muscle using a voltage-sensitive dye. Illumination of the preparation (lower right) causes the dye to fluoresce. The fluorescent signal is recorded by multiple cameras (above the preparation) and converted to an electrical signal (as shown on the LCD screens).
Across the world, 30 percent of all deaths are attributed to cardiovascular disease (CVD). Every 37 seconds, an American dies from heart failure. Estimates predict that by 2015, China will lose $558 billion in foregone national income due to the combination of heart disease, stroke, and diabetes, and CVD is blamed for 49 percent of all deaths in Europe. The World Health Organization predicts 11.1 million deaths from coronary heart disease in 2020. Many of the risk factors are clear, and lifestyle changes can often improve a person’s odds of avoiding or beating the disease. For millions of people, though, we bury the disease with our loved ones.

An international team of researchers, led by Dr. Robert Gilmour and his colleagues Eberhard Bodenschatz and Amit Lal, aims to change this. They are exploring technology with the potential to prevent the onset of cardiac arrhythmia or terminate an attack in progress. When complete, their work will provide options for people at risk of ventricular fibrillation, which affects the bottom two heart chambers, and atrial fibrillation, which affects the upper two heart chambers.

“We’re studying the most common type of arrhythmia [atrial fibrillation] and the most deadly [ventricular fibrillation],” said Dr. Gilmour, whose role, in addition to being an electrophysiologist, is to frame the problem by asking questions: How do we do x? What’s the math behind y? What’s the engineering that can prevent the unthinkable from happening? “The only option to treat sudden cardiac death at the moment is an implantable cardioverter-defibrillator. It can work, but it’s expensive, and it’s a dumb device. It waits for fibrillation to happen, and then it delivers a big shock—to jump start the heart. Unfortunately, the shock is very painful and damages the heart tissue.”

While most researchers are looking for abnormal functions at the cellular level with the goal of finding a drug or gene therapy to “fix” the abnormality, Dr. Gilmour and his team of engineers, physicists, and mathematicians are taking a different approach to the problem. “We don’t necessarily need to know all the details about why the heart failed,” said Dr. Gilmour. “Diseased hearts will fibrillate for a variety of reasons. We need a generic tool to make them start beating normally again.”

The road to this discovery involves two technologies. Dr. Gilmour’s team is testing a prototype of a microfabricated multi-electrode probe that will record electrical activity of the heart.

“Computer models indicate that important events are occurring within the walls of the heart,” said Dr. Gilmour. “Of course we can’t see between the walls, so we insert an electrical fork (a very small one) into the heart muscle. Recordings from this device will help us understand where arrhythmias originate.”

But telling activity also occurs on the surface of the heart. After staining the heart with a special dye, the team uses optical imaging to watch for changes in dye fluorescence, which indicates electrical activity.

“We can sample 20 different sites in the heart with the probe,” said Dr. Gilmour, “but we want to sample thousands, and we want to image every heart cell. To do this, we need to combine both technologies.”

The goal is to create a smart device, one that will anticipate a cardiac arrhythmia and avert it. If, however, an arrhythmia is already in progress, the device will deliver five small shocks that people can’t feel and will not damage heart tissue. As a precautionary measure, Dr. Gilmour explained that the device will also be capable of delivering a seismic shock, to be administered when all else has failed.

“Hopefully, the situation will be well under control before this shock is needed.”

Dr. Gilmour’s research is funded by the National Institutes of Health and is done in collaboration with researchers at the Max Planck Institute in Goettingen, Germany.
Speaking to Bob Kahrs DVM ’54, you might initially find it hard to imagine his extensive involvement in international affairs. He is a soft-spoken gentleman, with a deliberate tone of voice, and a clearly declared passion for animals. At first glance, he hardly seems to be a likely candidate to head any sort of trade negotiations or to prevent an epidemic. What can a veterinarian possibly do to affect the global community?

The world is full of animal-borne diseases, of that there is no doubt. The United States is very fortunate to be spared the brunt of them. However, if they were to be introduced into the US, the cost of food would rise dramatically. In addition, the damage these infectious diseases could do to the livestock and poultry populations is hard to estimate, and the possibility of the disease being transmitted to humans may exist. “And nobody knows anything about these diseases except for veterinarians,” said Dr. Kahrs, a smile coloring his voice.
If an animal-borne disease, like bird flu for instance, were to appear in the United States, the front line of defense would be an army of...veterinarians. As the most likely to recognize and report any occurrences from the outset, veterinarians are actually key to keeping the nation healthy, for both people and pets.

There are three classes of diseases with which veterinarians are involved: exotic animal diseases like Foot and Mouth disease and Newcastle disease; zoonotic diseases, which are infections that can be transferred from man to animal and animal to man like rabies; and emerging diseases that appear to be new discoveries, like Bovine Spongiform Encephalopathy (BSE), otherwise known as Mad Cow disease.

Ten years ago, many of these diseases were not known to physicians in their human form, nor was it well known that a large portion of headline-making human diseases originated in animals. This makes veterinarians a key piece of the diagnosis and prevention puzzle. “When issues like rabies are involved, the patient is best served when physicians and veterinarians collaborate,” said Dr. Kahrs, who is serving as the reunion chair for the College’s Class of 1954.

Veterinarians like Dr. Kahrs attempt to prevent these diseases from arriving in the country in the first place by stopping the problem at its source. They begin by working with government agencies to keep the recognized diseases out. Working with the US Department of Agriculture, Kahrs negotiated international trade agreements and also served as Director of the USDA’s National Center for Import and Export.

Veterinarians like him work with these agencies to inspect livestock arriving from abroad. Offering food safety inspection services, they form an important part of the importation process, as they can refuse requests to bring items into the country.

Even the everyday applications of veterinary knowledge are intrinsically important to the environmental climate of the United States. For instance, if people were to choose not to spay or neuter cats, “There simply wouldn’t be any birds left in this country,” warned Dr. Kahrs. “Cats have no natural predators.” The prevention of feral animals, which were originally domesticated and then established wild colonies, also essentially prevents a dramatic alteration in our ecological systems.

Today, Dr. Kahrs has committed himself to helping others develop a deeper understanding of the veterinary profession. He is currently in the throes of writing So You Want to be a Veterinarian, offering tips on preparing for veterinary school and the application/admission processes, and The Versatile Veterinarian, an autobiography that relates his experiences as a student, practitioner, professor, and government veterinarian. In addition, he recently agreed to serve on an AAVMC task force charged with exploring opportunities to address the needs of veterinary education over the next two decades.

“I expect that the role and hazards of the international movement of animals and animal products will come to the forefront and concern will grow with this awareness,” said Dr. Kahrs. “Vet schools around the world must to be prepared to address these needs.”

Bob Kahrs DVM ’54 interned in Interlaken, NY, in 1955 and then practiced in Attica, NY. In 1961 he returned to Cornell to conduct research on combined vaccines for dairy cattle at the Veterinary Virus Research Institute (now the Baker Institute for Animal Health) and received a PhD in 1965. Until 1977, he taught required courses in both Infectious Diseases and Epidemiology at Cornell and offered an elective on Viral Diseases of Cattle.

He then served on the faculties at the University of Florida and the University of Missouri where he was dean for 10 years. After departing academe, he negotiated international trade agreements for the US Department of Agriculture and served as director of the USDA’s National Center for Import and Export for seven years.

He later worked part time in Washington, DC, as Director of International Affairs for the American Association of Veterinary Medical Colleges (AAVMC). During the 2002-2003 California exotic Newcastle disease outbreak, he served six weeks as a field operations volunteer.

He is currently serving on the AAVMC Consortium to develop a national plan to address the challenges facing veterinary medicine in the next ten years.

In 2004 Dr. Kahrs received the Daniel Elmer Salmon Award for distinguished service to Cornell. He has published books on Viral Diseases of Cattle (2nd Edition 2003), Global Livestock Health Policy (2005), Mastering Scientific Writing (2008), and The Highway to Writing Success (in press 2009). He has books in progress called So You Want To Be a Veterinarian and The Versatile Veterinarian.
HELPING HANDS-ON

Vet students bring ideas to developing nations

By Jennifer Wholey, CALS ’10

This past summer, vet student John Cooley didn’t have his own ride to get to work. In fact, a car would have been quite useless to him. Instead, he hitched a ride, often on the local milk truck, thumbing his way from dairy farm to dairy farm. That’s just the way it is in Ecuador, where Cooley stayed for two months living out of an adobe hut south of the Columbian border. He weekended in a Quito apartment, but most of his time was spent in a place where a car was rare and a horse commonplace, where he had to filter his own water from a hole in the ground, and where the local farmers were enthralled with his electronic thermometer.

Cooley was one of ten students to participate in the 2008 Expanding Horizons program offered through Cornell’s College of Veterinary Medicine. The competitive program, supported by the Lincoln Ellsworth Foundation, provides grants to vet students who crave additional real-world experience. Through the program, students apply their knowledge, passion, and talent to solve some of society’s most devastating animal and public health issues. Most often in

Jen Harrison ’10 in Mozambique
developing countries, students spend between six and 10 weeks during the summer completing assignments that they have conceived of and designed themselves. From Ghana to Vietnam, wildlife rehabilitation to artificial insemination, the program provides students with unique opportunities to translate knowledge into practice and transcend cultural borders.

“The Expanding Horizons program is an opportunity for Cornell students to impact the world and be impacted themselves,” said Dr. Michael I. Kotlikoff, Austin O. Hooey Dean of the College of Veterinary Medicine. “The research these students conduct onsite—in the field or the jungle or a village where chickens roam free—has the potential to improve the lives of animals and people in nations that are struggling to survive. The experience of conducting these investigations in nations where even the smallest tasks are difficult to accomplish is also a powerful educational experience that can be life-defining. Expanding Horizons raises the awareness of the importance of animal health in regions where this concept can be critical for public health.” For example, Jennifer Harrison ’10 spent nine weeks in Mozambique. She primarily performed survey work, interviewing households and speaking about the importance of vaccinating chickens against Newcastle disease, a highly contagious bird disease affecting many domestic and wild avian species. Based on the surveys, she prepared a manual about chicken husbandry and ran her own education programs (two-hour sessions in three different areas). Her initial aim was to go Zambia to aid in wildlife conservation efforts, but she was not at all disappointed with her ultimate decision.

“Although it might not be how you expect, you will learn to appreciate another culture if you go in with an open mind,” she said.

The cultural experience was also eye-opening for Annie Li ’10, who volunteered at the Food and Agriculture Organization (FAO) of the United Nations at the main headquarters in Rome, Italy.

“The FAO was especially a great place to meet the leaders in public health who come from many different parts of the world,” said Li. “The plethora of languages and accents could always be heard in meetings or even a stroll through the hallways. I found this to be the most stimulating environment and learned to work with people from many different backgrounds and ethnicities.”

While not stationed in a developing nation, Li’s work will directly benefit those in countries that struggle to compete—often because disease runs rampant. She created disease cards for African horse sickness and porcine reproductive and respiratory syndrome, which will be edited and posted on the FAO website for general public use. She created a user manual for an animal health information system that tracks priority animal diseases for analysis, mapping, and support of early warning and risk assessment. And, she designed animal-health country profiles that serve as a quick resource for use by FAO members needing agro-ecological maps, livestock statistics, contact information for potential FAO collaborators, and available documents on a country. After graduation, Li expects to pursue a career in public health and specifically hopes to work on an avian influenza surveillance project in Taiwan.

Across the board, program participants agree that the experience is worthwhile and multi-faceted.
“It’s extremely rewarding, but also challenging,” said Cooley, who gave his entire bag of veterinary equipment to the farmers that he worked with on colostrum studies that were designed to improve the health of calves. He parted ways with his stethoscope, a few refractometers and other items, including the ever-popular electronic thermometer. A small price to pay, he says, for an experience that will last him a lifetime.

Leslie Diaz ’10 in Bolivia

Latoya Schultz ’09 in Indonesia

2008 EXPANDING HORIZONS PARTICIPANTS
(One participant requested anonymity.)

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Species</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leslie Diaz</td>
<td>Bolivia</td>
<td>Cattle</td>
<td>Worked with USDA APHIS IS and primarily helped with an epidemiological evaluation of the recent Foot and Mouth Disease outbreak that occurred in January of 2007 (Santa Cruz, Bolivia). Diaz also helped with other projects and worked at the main veterinary diagnostic lab and within the veterinary hospital.</td>
</tr>
<tr>
<td>John Cooley</td>
<td>Ecuador</td>
<td>Cattle</td>
<td>Studied colostrum, the first milk that is given to calves, which is full of important antibiotics. Cooley looked at the system of calf-management, as calves were getting sick because their immune systems were compromised. He took blood samples to look at their antibodies and ran calf-care workshops.</td>
</tr>
<tr>
<td>Annie Li</td>
<td>Italy</td>
<td>--</td>
<td>Worked with the Food and Agriculture Organization of the United Nations developing resources to improve public health situations in developing nations.</td>
</tr>
<tr>
<td>Missy Turner</td>
<td>Uganda</td>
<td>Mountain Gorilla</td>
<td>Promoted conservation and public health by improving primary health care to people and animals in and around protected areas of Africa, with a particular focus on mountain gorillas. Brought new laboratory equipment and techniques, advising, and retraining as appropriate.</td>
</tr>
<tr>
<td>Elisha Blond</td>
<td>India</td>
<td>Deccani Sheep</td>
<td>Researched internal parasite load, counting and classifying three groups of parasites that cause malnutrition, diarrhea, anemia, and liver disease.</td>
</tr>
<tr>
<td>Anya Solodow</td>
<td>India</td>
<td>Deccani Sheep</td>
<td>Researched internal parasite load, counting and classifying three groups of parasites that cause malnutrition, diarrhea, anemia, and liver disease.</td>
</tr>
<tr>
<td>Lisa Bazzle</td>
<td>Ghana</td>
<td>Dogs</td>
<td>Introduced a CDC-developed technique for controlling rabies and collected samples for analysis at the CDC.</td>
</tr>
<tr>
<td>Jennifer Harrison</td>
<td>Mozambique</td>
<td>Poultry</td>
<td>Conducted surveys to evaluate the success of a vaccination program for Newcastle disease as well as husbandry practices, marketing efforts, flock size and management, health, and mortality rates of poultry.</td>
</tr>
<tr>
<td>Latoya Schultz</td>
<td>Indonesia</td>
<td>Sumatran rhino, Asian elephants, Zebu cattle and water buffalo</td>
<td>Researched parasite type and prevalence in the endangered Sumatran rhino and sympatric species as a part of a health surveillance program.</td>
</tr>
</tbody>
</table>
MAKE LEARNING CONTAGIOUS

Awards recognize excellence at the head of the class

In recognition of those who have helped thus far to prepare members of the Class of 2010, SCAVMA (Student Chapter of the American Veterinary Medical Association) presented two awards at the annual White Coat Ceremony in December. Both awards paid tribute to professors who show extraordinary dedication to teaching. According to SCAVMA representative Cherese Sullivan ’10, these professors often go beyond the call of duty when it comes to reaching out to students.

TEACHING EXCELLENCE AWARD IN BASIC SCIENCES

Dr. Carolyn McDaniel was recognized for her skillful ability to facilitate discussion and encourage interaction. Dr. McDaniel makes an exceptional effort to make herself available to students, whether it is by staying a few minutes to help students after labs, assisting with student-run vaccination clinics, or supporting student extracurricular events.

Dr. McDaniel was recognized for her skillful ability to facilitate discussion and encourage interaction. Dr. McDaniel makes an exceptional effort to make herself available to students, whether it is by staying a few minutes to help students after labs, assisting with student-run vaccination clinics, or supporting student extracurricular events.

After graduation from the University of Pennsylvania School of Veterinary Medicine in 1981, Dr. McDaniel worked in a rural mixed animal practice in Northern California before completing a small animal internship program in Sacramento. She remained on staff at the Sacramento Animal Medical Group until returning to Pennsylvania in 1984, where she worked in private practice for two years. In 1986 she established the Chestnut Hill Cat Clinic, a feline-only practice in Philadelphia, and continued as owner and head veterinarian of the clinic, growing the practice to four veterinarians. In 2001 she sold the practice and moved to Ithaca, where she is a consultant for the Cornell Feline Health Center and an instructor at the College of Veterinary Medicine.

TEACHING EXCELLENCE AWARD IN CLINICAL SCIENCES

Dr. James Flanders was recognized for his ability to inspire and build confidence. As a professor of small animal surgery, he has trained many future veterinarians during his time at Cornell. Students find his kind and calm demeanor comforting as he reassures them that they are prepared and competent for any and all challenges that they will face.

Dr. Flanders graduated from the School of Veterinary Medicine at the University of California, Davis in 1980, earning specialty certification in surgery in 1989. In 2008, he became the medical director at the Cornell University Hospital for Animals and has been a professor of surgery at Cornell since 1985. Dr. Flanders was named the Outstanding Educator, Merrill Presidential Scholar program, in 1997, was a Fogarty International Fellow in 1999, and a visiting scientist at the Marie and Pierre Curie College of Medicine in Paris in 2006. He has published 18 book chapters and 58 papers in peer-reviewed journals.
Despite the sometimes overwhelming academic curriculum that the veterinary students at Cornell University College of Veterinary Medicine have to fulfill, they all make the time to join extracurricular clubs. Is it simply because these professional and social groups help to further their career? Or could it be that participation in these groups enriches the College experience by building a sense of community among people who must be skilled collaborators to succeed in their chosen profession?

“VOICE, Veterinary Students One in Ethnicity and Color, is a group on campus that strives to promote a sense of community,” said Dr. Jai Sweet, Director of Student Services and Multicultural Affairs for the College. “Through their work to support the needs of our diverse and multicultural student body, these club members build a bond with each other. This bond undoubtedly helps them get through the rough patches that they might face while in veterinary school.”

There are other groups at the College that not only strive to promote community within the College, but with the City of Ithaca as well. SCAVMA, the Student Chapter of the American Veterinary Medical Association, holds a semi-annual dog wash for members of the Ithaca community to bring their dog to be groomed. People who attend the event are also encouraged to discuss healthy weight maintenance for their pet with the veterinary students. In addition, the group is currently planning a bike-a-thon fundraising event for the teaching hospital that serves pet needs for people from Ithaca and across the nation. The Pedal for Pets Bike-A-Thon will take place on May 2, 2009, and offers a 30-mile or a 50-mile ride around Ithaca as well as a children’s bike ride.

The Veterinary Public Health Association (VPHA), a new group, works to promote community by encouraging interaction among peers at the College and promoting networking with professionals around the world who are also interested in veterinary public health.

It is true that the great diversity of student organizations and the sheer number of options at the College of Veterinary Medicine is noteworthy: Students can participate with more than 20 organized groups that cater to species large, small, domestic, and wild.

“Student organizations are an important part of our lives in vet school,” said Annie Li ’09, co-president and co-founder of VPHA. “Through them, we can form a common vision to promote education and community service.”
Tax-free gift from an IRA

“I’m thankful for everything Cornell has given me. Using a tax-free IRA distribution made it easier to give back.”

–Richard Drumm, DVM ’51

Dr. Drumm examines “Aladdin” while visiting with his granddaughter Lindsey.

Consider joining other alumni and friends who are taking advantage of this unique opportunity to meet their charitable goals. Please note the following:

- You must be 70½ years of age or older
- Tax benefits apply to gifts up to $100,000 from an IRA—401(k) plans do not qualify
- The provision expires December 31, 2009
- The gift must be outright to the College

Read more about Dr. Drumm’s gift and discover the benefits of the many gift options like the charitable IRA rollover online at alumni.cornell.edu/gift_planning/rollover

1-800-481-1865 One of Cornell’s gift planning specialists can explain the benefits.

Image photo provided by Alexis Wenski-Roberts, East Campus Research Facility by Jason Koski, University Photography.
NEWS BRIEFS
Faculty, staff, and students at the College of Veterinary Medicine make news every day. The following entries highlight just a few of the ways that the College is advancing the health and welfare of animals and people.

CORNELL RESEARCHERS PURSUE THE DOG’S ANCESTOR
Dr. Marta Castelhano spent most of December in Portugal, traveling from village to village in a car equipped with a centrifuge and clipboard. On the lookout for village dogs, Dr. Castelhano encouraged these semi-feral to completely feral dogs to cooperate long enough for her to draw four to five milliliters of blood. Halfway around the world, Dr. Patricia Arrais and Dr. Natalia Santos worked with spay and neuter programs in Brazil to capture similar data from indigenous dogs that are anesthetized for the procedure. This will be their first time collecting samples, but Dr. Castelhano has been involved with the project since early 2007. A research associate at the College of Veterinary Medicine, she is engaged in a collaborative partnership with Dr. Adam Boyko, a research associate in Dr. Carlos Bustamante’s laboratory in biological statistics and computational biology. Together, they are looking for the roots of canine domestication by studying the DNA of dogs that one would only find in those regions of the world. Since launching the initiative, 500 DNA samples have been collected from animals in countries around the globe: Egypt, Uganda, Namibia, the Azores Islands in Portugal, Indonesia, Mexico, and the Commonwealth of Puerto Rico. Plans to collect samples in Honduras, France, Taiwan, and the Solomon Islands are in discussion.

Samantha the Sheep Gets a Leg Up, Thanks to the Work of CU Vets and Farm Sanctuary
Several disabled goats and sheep—rescued by the Farm Sanctuary in Watkins Glen, NY—have a new lease on life: They have been given artificial legs, thanks to the work of Cornell veterinarians working with Ithaca’s Hangar Orthotics and Prosthetics. Samantha, a sheep, and two goats, Zoop and Juniper, came to the Farm Sanctuary with injuries that prevented them from walking normally. “Prosthetics are not commonly developed for companion or farm animals due to economics, utility, and difficult fitting arrangements,” said Dr. Andrea Looney, a Cornell veterinarian with the pain management service.

Excellence in Research Recognized: Robert Weiss Earns 2008 Pfizer Animal Health Award
Robert S. Weiss, PhD, associate professor for molecular genetics, earned the 2008 Pfizer Animal Health Award for Research Excellence, which comes with $1,000 prize. He presented his research findings at a College of Veterinary Medicine seminar in December. The award has been provided to schools of veterinary medicine since 1985, promoting the accomplishments and research productivity of faculty in the early stages of their career. Weiss’s long-term goal is to improve cancer prevention, detection, and treatment in animals and humans. His particular research interest focuses on genome maintenance mechanisms and how the cells behave to preserve the DNA sequence.

Preserving a Future for All Living Things
The College of Veterinary Medicine and the Cornell Center for a Sustainable Future (NYS-VC), held in a one-day symposium on research related to wildlife conservation at Cornell. The keynote speaker was David Wilc...
Passionate about education, healthcare, animal health, and the research that binds these all together, Judy Wilpon recently established the Judy Wilpon Professor of Cancer Biology at the Baker Institute for Animal Health. It is funded through the Judy and Fred Wilpon Family Foundation, with the hope of advancing the search for a cure to the cancers that have cost too many friends, both animal and human, their lives.

“Ideally, no one should have to endure the pain and devastation caused by cancer,” said Judy, who has lost five Golden Retrievers to this disease. “Losing a pet to cancer is awful, and it is my hope that by supporting the research of the Baker Institute, fewer people and animals will suffer this fate. The answer may be in genetic research or in prophylactic care, but scientists are getting closer and closer to achieving this goal. It is my hope this gift will expedite this research and the eventual discovery of a cure.”

The Wilpons’ gift sets the stage to permanently guarantee the professorship.

“The Wilpons are true supporters of the Baker Institute, but more importantly, of the vital research that happens here,” said Dr. Doug Anczak, director of the Baker Institute and Dorothy Havemeyer McConville Professor of Equine Medicine. “We hope their gift serves as inspiration to others who will help the Institute raise additional funds to permanently guarantee the position and the good work that the incumbent will do.”

Treatment for cancer and cancer research initiatives are widespread at the College of Veterinary Medicine. For example:

- Dr. Scott Coonrod, at the Baker Institute, is investigating a protein that may have the power to modify genes that are normally activated by estrogen, thereby suppressing their activity. Given the strong link between estrogen and some types of breast cancer, his findings suggest that the enzyme PADI4 may play an important role in breast cancer. Dr. Coonrod hopes to identify molecules that can block PADI4 activity and then test whether these inhibitors could be used as drugs to treat breast cancer in humans and companion animals.
- Margaret McEntee DVM ’86, oncology section chief at the Cornell University Hospital for Animals, specializes in treating oncology patients for three reasons: every patient presents a new experience, the experiences are challenging, and she has the opportunity to form lasting relationships with very special pet owners.
- The Sprecher Institute for Comparative Cancer Research seeks to control cancer in all species, by identifying and developing new discoveries for clinical application, providing treatment for animals with cancer, and producing educational materials about cancer and our environment for professional and non-professional audiences.

The Wilpons’ most recent gift has also provided the Sprecher Institute with funds for programmatic support for the Institute and will match dollar for dollar (up to $1 million) other gifts to the Sprecher Institute for endowment of two oncology residencies. The Sprecher Institute is directed by Dr. Rod Page who is also the Alexander de Lahunta Chair of the College’s Department of Clinical Sciences and professor of medicine.

“It was an aligning of the stars for us,” said Judy, who has been a member of the advisory council at the Baker Institute since 1994. “We have wanted to do something for a long time, and the time is now right. Dr. Coonrod’s work is inspirational. Dr. McEntee, has spoken to our Long Island Golden Retriever Club, in a manner both educational and thought-provoking. Doug [Antczak] has led the Baker Institute into exciting and hope-filled areas of discovery. This gift is our way of expressing our concern for (and love of) people and animals. We look forward to the day when cancer is only a memory, a disease that used to kill people and animals.”
When Mac Donald Holmes DVM ’61 started veterinary practice in rural upstate New York, he knew that relationships would play a vital role in his success.

“From a professional perspective, you want to continually strengthen your relationships with clients,” said Dr. Holmes, who operated a mixed animal practice for many years in a farming community. “Repeat service to clients is especially important when you live in a small community. But building relationships was about more than this. One of the reasons I wanted to become a veterinarian was to work with the clients. The friendships I formed were important to me.”

For Dr. Holmes, these client relationships were personally rewarding. One of them, though, will also advance companion animal research at the College.

Byron Hipple, owner of a Dandy Dinmont Terrier, was one of Dr. Holmes’ regular clients. Recalling him as “sincere, humorous, and a very genuine person,” Dr. Holmes was overwhelmed upon learning that Hipple had used his estate to augment an endowed fund to support small animal research in Dr. Holmes’ name. According to the will, Hipple did this to honor the “veterinarian who acquainted him with the capabilities of the Cornell University Hospital for Animals to care for his terrier.”

“It is particularly gratifying because I was a general practitioner,” said Dr. Holmes, who encourages aspiring veterinarians to learn about all species. “Being a veterinarian is rarely a one-species profession.”

The endowment earnings for the Small Animal Research Fund will help support the Collaborative Research Program administered by the College’s Research Office. If the earnings are not fully used by that program in any given year, the residual funds help support new faculty research activities to assist in their startup at Cornell.

As part of the Collaborative Research Program, post doctoral research awards have been funded to support several researchers, including Drs. Teresa Gunn, Sydney Moise, Lisa Fortier, Ruth Collins, and Tracy Stokol for the past several years. The residual funding has been used in recent years for faculty startup for departmental research activities conducted by faculty, including Drs. Dan Fletcher, Jennifer Rawlinson, Peter Scrivani, Anna Gelzer, and Ursula Krotscheck.
The McClelland family of veterinarians could aptly be described as “joiners.” It would be equally true to describe them as pioneers and compassionate caregivers.

Frank McClelland Sr. led the way—joining an established Buffalo area veterinary hospital after graduating from the New York State College of Veterinary Medicine at Cornell in 1909. He was followed by his younger brother, Alfred, and then two sons, Robert B. McClelland and Frank McClelland Jr. All practiced in the McClelland Veterinary Hospital, which was formerly the Buffalo area veterinary hospital.

Frank Sr. also helped establish the Buffalo Zoo. This senior veterinarian was a charter member and second president of the American Animal Hospital Association and was a pioneer member of the New York State Veterinary Medical Society and the Western New York Society.

Throughout the following decades, Robert and Frank Jr. continued to be active in organizational affairs. All three served as president of the local and state societies and all three were honored as Veterinarians of the Year and received the Distinguished Life Service Award.

“Joining, just like care of animals, is in our blood,” said Frank Jr. “We are particularly interested in the profession and in other veterinarians.”

In recognition of this spirit and generosity and as a tribute to his family of dedicated veterinarians, Robert M. McClelland, son of Robert B. McClelland, has created an endowed scholarship at Cornell University’s College of Veterinary Medicine.

“The endowed scholarship will guarantee future generations of Cornell-trained veterinarians will be ready to serve with this same spirit and compassion,” said Robert M. McClelland. Designated for students who are either in their third or fourth year of study, MS, PhD candidates, or clinical fellows, the McClelland Family Graduate Scholarship will assist students who are firmly committed to the profession.
HONORING PASSIONS

In life, Gigi Szollosy followed her passions. She was a volunteer firefighter with the capacity to be her company’s first female chief. She was devoted to improving animal welfare and personally rescued two greyhounds. She was a loyal friend who took it upon herself to help, shampooing carpets for neighbors and building ramps for elderly dogs in her community. In short, Szollosy was dedicated to the underdog—where there was someone or some animal in need, Szollosy could be found.

With Szollosy’s passing, friend Jo Ann Bieksha looked hard for an opportunity to continue this legacy. Directed to the College of Veterinary Medicine by her veterinarian, Marc Levine BS ’75, DVM ’78, Bieksha has found her answer: she will endow the Gigi Szollosy Graduate Scholarship, which will provide financial assistance to students enrolled in the Cornell University College of Veterinary Medicine. Preference will be given to students in the dual degree DVM/PhD program or to those with fellowships engaged in post-DVM programs. In addition, all recipients of the Gigi Szollosy Graduate Scholarship will have demonstrated a commitment to volunteerism.

“I believe Gigi would approve of this decision,” said Bieksha, who is married and has one son. “I believe this will make her happy. Gigi’s scholarship will go on forever—much longer than any of us.”

THE SEEDS OF SUCCESS

In 2004, Dr. Rory Todhunter and a research team including Drs. John Schimenti, Nate Sutter, Jason Mezey, Carlos Bustamante, Wei Wang, Marta Castelhano, and Liz Corey, surmised that an animal’s DNA may contain precious clues capable of unveiling the mystery that surrounds life-changing conditions: cancer, osteoarthritis, cardiovascular diseases, and degenerative eye disorders, just to name a few. They believed that DNA could offer a window through which they could see complex traits that have eluded every previous effort to understand, to prevent, and to cure. But, just believing is not enough for the National Institutes of Health (NIH) to fund research. They, along with other funding agencies, require solid evidence before they will support a new project.

With this requirement in mind, the College of Veterinary Medicine’s dean—then Donald Smith—decided to use some of the College’s discretionary funds to seed the research. These funds came from gifts to the Annual Fund. Inherently flexible and often used in aggregate to seize unexpected opportunities like life-changing research, the collective power of Annual Fund gifts often puts otherwise unattainable goals within reach.

Today, the DNA Bank is supported by the College of Veterinary Medicine (including the Baker Institute for Animal Health), the Center for Vertebrate Genomics, and has secured more than $1 million in funding (direct and indirect funds) from the NIH. The NIH is very interested in the genetic cause of canine inherited disease, because many are very similar to human diseases. Understanding the genetic basis of canine disease will lead to improved understanding of the equivalent human condition.

Established in 2006, the DNA bank currently contains over 4,000 DNA samples collected from animals visiting the Cornell University Hospital for Animals for diagnosis and treatment of diseases. In particular, the NIH grant is being used to establish a DNA archive of control (unaffected) and diseased purebred dogs; to genotype diseased and control purebred dogs; and to encourage multi-institutional mapping collaborations and share genotypes with the genetics community. Thanks to the initial generosity of Cornell Annual Fund supporters who allowed researchers to capture the attention of the NIH, the Cornell Medical Genetic Archive (DNA Bank) can effectively provide clinicians and pre-clinical scientists with the basics of genetic investigation: the DNA and medical information that accurately defines inherited diseases.
CREATIVE WAYS TO GIVE
Take your love of animals further: your gift might be just what the doctor ordered.

At the College of Veterinary Medicine, people who care deeply about animals are working for the health and welfare of animals and people everywhere. Each year our veterinarians treat tens of thousands of animals—pets, farm animals, wildlife, zoo animals, and exotic species. To ensure the best health care for all of our animal patients, our medical staff must have access to the newest technologies and advanced techniques in medicine and surgery. Our work depends, in large part, on private donations from people just like you, in order to purchase equipment, such as the items listed below.

<table>
<thead>
<tr>
<th>Laser Therapy</th>
<th>Convergent Laser for the Companion Animal Hospital</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>This equipment allows for non-invasive ablation of urethral and bladder stones, as well as non-invasive efforts for urethral and bladder tumors. These stones are an extremely common problem in small animals, frequently requiring invasive surgery. With this equipment we can perform non-invasive procedures enabling the patient to go home the same day and recover in a much better fashion than patients who undergo invasive surgery.</td>
<td>$56,000</td>
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<table>
<thead>
<tr>
<th>On the Go</th>
<th>Portable ultrasound for isolation facility</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Equine and farm animal patients with contagious diseases are housed in a separate location from our general population. Currently, cases requiring ultrasound for diagnostic purposes require staff to transport a very expensive ultrasound unit outdoors to the isolation housing unit. The ultrasound then must be thoroughly disinfected before being transported back to the main facility. A permanent ultrasound dedicated to this facility would allow for safer and more efficient operations.</td>
<td>$35,000</td>
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<table>
<thead>
<tr>
<th>Going Digital</th>
<th>Digitizing historic publications of the College of Veterinary Medicine</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>We have a big collection of historic publications in the College that are not easily available for scholars and students to use in their work. Digitizing this material will make a significant contribution to the field.</td>
<td>$30,000</td>
<td></td>
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<table>
<thead>
<tr>
<th>Going Wireless</th>
<th>Battery-operated drill system for companion animal surgery</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>We would like to replace our current air-powered surgery drill system with a battery-operated unit. It would allow faster interchange of drill bits, saws, and wires than our current system, thereby decreasing the operative and anesthetic time for patients. It also improves functions in the surgery areas, eliminating the air hoses required to power our current drills, which allows the surgeons and techs to maneuver more freely. Elimination of the air hoses also will increase sterility of the surgery areas.</td>
<td>$20,000</td>
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<thead>
<tr>
<th>All-in-One</th>
<th>Multi-parameter EKG monitor for radiation oncology</th>
<th>Cost</th>
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<tbody>
<tr>
<td>This equipment would be used to monitor all vital signs of patients who are under anesthesia while receiving radiation treatments. Currently different monitors are used to track different types of vital signs: we would like to move to an all-in-one monitor. Same equipment is needed for several other services in the hospital, to monitor anesthetized patients in general.</td>
<td>$12,000</td>
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<thead>
<tr>
<th>Opening Their Eyes</th>
<th>Digital camera for real-time processing of microscope images for companion animals</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>The current five-headed microscope in the Companion Animal Hospital enables four students and one instructor to view samples being examined as part of diagnostic efforts. Often more than four students are on the clinical rotation, requiring the instructor to revisit the sample and diagnostics up to three times. This camera and LCD screen monitor will enable a room full of students and clinicians to view the sample at one time, speeding and improving the quality of teaching and service functions.</td>
<td>$10,000</td>
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<thead>
<tr>
<th>Keeping the Beat</th>
<th>Pulse oximeter</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Specifically for the Equine Farm Animal Hospital ICU, this equipment is especially critical as foaling season approaches. It is used to monitor critically ill patients, usually neonatals, in our Equine and Farm Animal hospitals. The unit monitors heart rate, inspired and expired CO2 levels, and oxygen saturation. The information captured by the monitor is used to make decisions on fluid, medications, and other forms of therapy available for treatment. We estimate this monitor would be used on 60-75% of our cases in ICU—over 100 patients per year.</td>
<td>$5,000</td>
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<table>
<thead>
<tr>
<th>Further Knowledge</th>
<th>Purchase books for collections that are housed in clinics and elsewhere in the College of Veterinary Medicine</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students and faculty are able to refer to these reference materials that are housed at point of need in the clinic or work area. Currently the Flower-Sprecher Veterinary Library is supporting 11 such satellite collections.</td>
<td>$5,000</td>
<td></td>
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<thead>
<tr>
<th>Seeing it Through</th>
<th>Arthroscope for companion animal surgery</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>This piece of equipment is a tiny camera system that is inserted into a joint for pre-surgical diagnosis, allowing the surgeon to determine the best surgical course of action.</td>
<td>$3,000</td>
<td></td>
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For more information on gift opportunities, please contact the Office of Alumni Affairs, Development, and Communications: 607-253-3742, alr74@cornell.edu.
IN THE NEWS

Reporters from local, regional, national, and international news outlets frequently look to the College of Veterinary Medicine for expert commentary. For example:

In “Structure and Plasticity of Endophilin and Sorting Nexin 9,” published in the October issue of *Structure*, Dr. Holger Sondermann and his co-workers provide insight into the molecular mechanism of a fascinating class of proteins that regulate endocytosis, a cellular program for membrane and cargo trafficking, receptor recycling, and nutrient uptake.

*Voice of America* news reported on how researchers at Cornell University’s College of Veterinary Medicine are working with dairy farmers to keep the milk supply safe. *Voice of America* also filed a story on the role Cornell is taking in solving the crisis of large animal veterinary practice in the US. This story was also covered in several regional newspapers, including the *Finger Lakes Times* and the *Corning Leader*.

In speaking about the DNA Bank, Dr. Rory Todhunter, a professor of surgery who studies the genetics of canine hip dysplasia, was quoted as follows in the *Syracuse Post-Standard*: “The reason the dog is so important is that inherited diseases are similar to those in humans. They are not exactly the same, but they are very similar.”

*Veterinary Practice News* recently spotlighted the College of Veterinary Medicine, commenting on the College’s problem-based approach to teaching and sharing a slideshow of images that captured the College’s depth and breadth.

In an *Associated Press* article released in January and titled “Health-conscious shoppers seek the same for their pets,” Dr. Joe Wakshlag, assistant professor of clinical nutrition, encourages people to read the labels: Pet food manufacturers are only required to have a few basic ingredients; the rest can vary widely.
Helen and the family are all well and prospering.

Robert Nelson, Westtown, NY, retired in April '06 and keeps busy with a hobby farm of hens to horses, and classic toys, such as tractors and boats.

Theodore N. Hoch, Port St. Lucie, FL, and his wife, Janet, are happily retired in Florida. They celebrate their 50th wedding anniversary in June 2009.

Don Mielke says that he "had a great time at the 50th Reunion—was good to see some of the old group."

Richard O. Davies, Gladwyne, PA, has been appointed Chair of Department of Clinical Studies for the Philadelphia School of Veterinary Medicine at the University of Pennsylvania.


Dan Sickmiller, Westtown, NY, retired in April '06 and keeps busy with a hobby farm of hens to horses, and classic toys, such as tractors and boats.

Bob Lynk, Delmar, NY, would like to note that Stuart Lyman '74, along with Stanton Farms, conducted the "Miracle of Birth" for 6 consecutive days at Altamont, NY, Tri County Fair (Albany, Schenectady, and Greene counties) in August 2008. Inducing labor, he succeeded with the birth of a calf on 6 consecutive days. It was a tremendous success, well-planned, well attended. He did the profession and agriculture proud.

Martin Gruber, Sarasota, FL, sold his hospital 3 years ago to younger vets (MSU, OSU, and Florida DVMs). He and Betty spend their winters in Florida (where they see Martha and Jo Goobnns who live nearby) and their summers in Massachusetts. He's looking forward to his 50th Reunion in 2012.

Edward Christensen, Manlius, NY, has been retired since 1993 after 27 years in the pharmaceutical research area, primarily as a laboratory animal veterinarian. He and his wife, Rose, have enjoyed several vacations in Switzerland over the years. While at home, she enjoys her ¼ acre hosta garden and he enjoys his "G" scale model train.

David Kradel was an accomplished avian veterinarian at Penn State University whose contributions to the poultry industry have been applauded. After he passed away in October 2006, scholarships were established at Penn State and the College of Veterinary Medicine at Cornell. The Dr. David C. Kradel Memorial Scholarship will be given to a Penn State undergraduate. Dr. Kradel also established the Mary Sue Kradel Memorial Scholarship at Cornell for students studying food animal medicine.

Peter A. Huyler, Walton, NY, married Nina M. Pfeffer on May 24, 2008.

Stanley Weissman, Scarsdale, NY, is still around, still practicing (hours much reduced). He says that he was "sorry to hear of the deaths of Wes Linquist and Forrest (Tex) Davis. They were two fine human beings."

Neil Burgler, Linden, PA, wants to let those of you who were not at the 50th reunion that you missed a great get-together.

Don Mielke says that he "had a great time at the 50th Reunion—was good to see some of the old group."

Joanne M. Bicknese, Walton, NY, sold his practice in March 2000 and is now retired. He continues to be active in many community organizations.

Vicky McCaffrey, Schoharie, NY, wants her fellow classmates to know “You should have all been at Reunion! How about in 5 years?” She’s still raising and showing Shire (draft) horses, working 3 days a week and enjoying it – just getting stiff and tired more quickly.

Paul Kennett, Middlebury, CT, sold his practice in June '07 to George Nashe '78 and now does relief work for Dr. Nashe and Jeff Miller '72. He is enjoying lots of trout and striped bass fishing and pheasant and deer hunting.

Paul C. Mountain, Rhinebeck, NY, is still working hard playing with the horses in Rhinebeck. But he goes to Florida to work for three months in the winter - following the horses.

Herbert R. Holden, Seneca Falls, NY, sold his practice in March 2006 and is now retired. He continues to be active in many community organizations.

Gregory J. Melkonian, MD, Hopkinton, NH, is an instructor in Pediatric Orthopaedic Surgery at Harvard University Children's Hospital. His wife, Jennifer, is an administrator at a private school, and they have been married for 41 years.

Clifford G. Cummings, Easton, PA, built a new practice four years ago – still working 12-hour days and loving practice. Having 2 sons in Marine Corps on active duty has given him a lot of grey hair. He and his wife, Jane, recently celebrated their 42nd wedding anniversary.

Tom Damura, Arlington, TX, was recently hired at the Banfield Pet Hospital in Arlington, Texas.

Steven M. Schultz, East Amherst, NY, had a great time seeing old friends at his 30th reunion in June '08. Reliving old times with Marty Siegel, Peter King, and Roger Thompson was an absolute riot.

Joanne M. Bicknese, Cream Ridge, NJ, had the second and third indexing Boer goats at the Pennsylvania Livestock Evaluation Performance Test and the highest-selling goat in the sale. She also bred the supreme champion at the NJ State 4H Meat Goat Show for the 3rd year in a row!

After 13 years in the Himalayas, Karen Lafky, Seattle, WA, has been director of training for Christian Veterinary Mission since 2003. Her eldest daughter, Kathryn, married last December and Lisa is a senior pre-med in Seattle. Ron and Karen now have 3 Bhutanese-Nepali orphan girls as foster daughters to raise. They are ages 12-17.

Christine L. Johnston, Bedford, MA, has been at the same practice (Lexington-Bedford Veterinary Hospital) since graduation and has been Chief of Staff since 2001.
Bud Gerstman, Aptos, CA, wishes "cheers" to the class of 1980, probably the most unique Cornell vet class ever, and certainly the first to send a veterinarian into space.

Lucy (Pinkston) Schroth has been in small animal practice for 28 years, over 10 of which have involved emergency and critical care. She has seen a great need for financial assistance for pet owners who cannot afford life-saving emergency care in a crisis. To help with this need, Lucy and her husband Don are setting up a non-profit organization called Veterinary Emergency Funding Mission, Ltd.

**Class of 1981**

Noreen Lanza is pursuing a legal education at Rutgers in order to benefit the veterinary profession in legislative efforts, and some proactive or preventative malpractice type initiative in the future. She says that it has been challenging and fun to go back to school full-time at the age of 52.

**Class of 1983**

Ann Dywer, Scottsville, NY, just celebrated 25 years of practice at Genesee Valley Equine Clinic and is a co-owner. She's still playing the cello and is learning to kayak. Ann is also finishing a 3-year term on the Board of Directors of the American Association of Equine Practitioners as District 1 Rep.

**Class of 1985**

Denise (La Rocque) Petersen, Schaghticoke, NY retired from private practice. She is now running an alpaca/horse farm and homeschooling her 9-year old.

**Class of 1986**

Liz (DiBi) Dole, Syracuse, NY, looks forward to catching up with all of her fellow classmates at their next reunion, the 25th one!

**Class of 1995**

All is well in Pittsburgh for Suzanne (Mullings) Apanavicius, Pittsburgh, PA. Her children are growing nicely and keeping her on her toes. She finally purchased her first practice and will begin as a solo practitioner in small animal medicine. Indeed an exciting time. She can't wait for the next reunion.

Kathryn Dobyns, Staunton, VA, continues to work solo at Middle River Veterinary Hospital. She hopes to add an associate within the next 5 years. Kathryn is active in several local organizations, particularly with animal-assisted therapy at her local hospital with her 7-year old husky mix, Ripton, and one of her clinic cats, Spock.

**Class of 1996**

Cynthia Farrell, Colonie, NY, is doing fine in upstate New York. She says that it's great to see everyone in her travels.

**Class of 1997**

Michael Gorra, Washington, CT, is continuing to work with Trish Grinnell '97. His dad, Ferris Gorra '67, has cut back a bit. Michelle is helping with the business aspect. Daughters, Madeline (9) and Abigail (7), are doing great and are such a joy.

**Class of 1999**

Eric Christensen, Flemington, NJ, is hoping to buy into an 8-vet small/exotic animal hospital, which he has been working at since leaving Cornell in 2003. He and his wife, Cory, still have Ford, Captain Jack, and Geronimo – to that menagerie they have added Luke (17 months old) and welcomed a baby in Oct.!

Tara (Sparks) Haley, Orange, CA, is still living in Southern California with Scott, their two dogs and two cats.

**Class of 2000**

Sally Nicolson, Pittsford, NY, gave birth to twin girls, Katrina and Jessica, in December 2007. She's back at work part-time.

Mary Lee Fornes, Springville, NY, "bit the bullet" and started her own practice. She claims, "I think it was an act of insanity...crazier than ever!"

**Class of 1994**

Kelli Carpenter, Phillipsburg, NJ, has been working at Alpha Veterinary Care for 10 years, also celebrating 10 years of being cancer-free (she had Hodgkin's Lymphoma in 1997 and 1998). She has also been active in competitive obedience and rally events with her collies.

Maria DiGiavanni, Pinehurst, NC, and her husband, Dave, are loving life in beautiful North Carolina. Their community has many retirees needing hip and knee replacements for Dave, and many equestrians with horses for her! Their boys, Philip (11), Jack (9), and George (4), play in-line hockey and soccer, and keep them hustling! They bought a 5-acre plot of land and plan to build a home soon.

Amy (Rath) Leibek, Churchville, NY, is working on horses as part owner of Genesee Valley Equine Clinic.

Deborah McArthur-Wicks, Hampstead, NC, and her husband, Bily, love North Carolina. Their son, Travis is 12 now and doing great. Deborah opened her own hospital in 2002 and enjoys working for herself.

**Class of 2001**

Eve (Varon) Ryan, Baldwinsville, NY, is a full-time small animal general practitioner in the suburbs of Syracuse. She and her husband have a baby boy, James, who was born last year.

**Class of 2002**

Jeremy L. Cohen, Huntington, NY, is working on Long Island and on track for partnership.

Angela Martin, Huntington, NY, was recently hired by the Banfield Pet Hospital in Huntington, NY.

Tracy Powell, Broad Brook, CT, bought a 2½ doctor practice in Manchester, CT, in April 2008. Things are going well, and she enjoys the challenges of practice ownership.

Jennifer Usiak, Medford, MA, is getting married May 2009 to Robert Altschuler, currently a PhD student at MIT. She has been working in the Boston area since graduation as a small animal veterinarian and began teaching part-time at a vet tech college 2 years ago.

**Class of 2003**

After finishing his residencies and passing his board examinations, Christopher G. Byers, Gaithersburg, MD, decided to stay in the Washington, DC area and he currently serves as director of intensive care at a large referral practice.

Jennifer Dewe-Mathews, Bonita Springs, FL, is married and has two dogs and three cats.

**Class of 2005**

Lynda A. Duckett, Waynesboro, VA, will be getting married on September 12, 2009, to Erik Randall. The wedding is to be in Waynesboro, VA.

Elizabeth Lutz, Seaford, NY, finished her general rotating internship at Long Island Veterinary Specialists in Plainview, NY, in June 2008, and in July 2008, she started a specialty internship in ophthalmology (also at LIVS).

**Class of 2006**

Stacy Choczynski, Lacey, WA, and Anna Sweetman, Garner, NC, were recently hired by the Banfield Pet Hospital. Stacy will be practicing in Lacey, WA, and Anna will be practicing in Garner, NC.

**IN MEMORIAM (as of Dec. 31, 2008)**

Dr. Robert F. Brown '36, Dec. 15, 2008

Dr. Gerald Almon Faatz '39, Nov. 5, 2008

Dr. Jean M. Buist '42, Nov. 12, 2008

Dr. Everett Kermit Elmer '43, July 12, 2008

Dr. Kenneth I. Gumaer '43, Sept. 25, 2008

Dr. William Kaplan '46, July 30, 2008

Dr. La Verne M. Beakman '50, CALS '46, Oct. 27, 2008

Dr. Stanley E. Garrison '50, Oct. 9, 2008

Dr. Milton Schmidt '50, Nov. 14, 2008

Dr. Harlan J. Howlett '51, July 26, 2008

Dr. James R. Rooney '52, Sept. 5, 2008

Dr. Milton F. Ebersol '53, Sept. 2, 2008

Dr. Warren A. Meet '53, July 21, 2008

Dr. William T. Hume '54, Oct. 21, 2008

Dr. Herbert L. Bandemer '55, CALS '51, Oct. 7, 2008

Dr. Robert V. Williams '56, CALS '52, July 1, 2008

Dr. Forrest H. Davis '57, CALS '54, Aug. 21, 2008

Dr. Harry L. Gray '57, CALS '53, July 21, 2008

Dr. Alvin F. Schwartz '57, June 21, 2008

Dr. Louis V. L. Bowers '58, Nov. 21, 2008

Dr. Herbert L. Bandemer '59, CALS '55, Nov. 26, 2008

Dr. Forrest H. Davis '59, CALS '55, May 21, 2009

Dr. Robert V. Williams '59, CALS '55, May 21, 2009

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LOOKING FOR A GOOD READ AND THE CHANCE TO SUPPORT THE CORNELL COLLEGE OF VETERINARY MEDICINE?

Fellow graduate Dr. Elizabette Cohen DVM ’88, has announced the publication of her new book, *Most Of My Patients Wear Fur: Tales of Small Animals and Their Big City Vet*. Dr. Cohen has agreed to donate $12 from the sale of every book purchased by a Cornellian to the College (please make sure to note you are a Cornellian when purchasing the book).

According to Dr. Cohen, “Most Of My Patients Wear Fur offers practical guidance with anecdotes that will make pet lovers roar. It is a compilation of tales about her patients, most of whom wear fur, their owners and their veterinarian.” Each chapter offers its own stories and insights and is a companion to Dr. Cohen’s “Healthy and Happy Pet” program heard every weekend on WCBS 880, New York.

For further information or to purchase this book, visit: www.yourhealthyandhappypet.com/.

PICTURED ON BACK COVER:

The College of Veterinary Medicine and the College of Veterinary Medicine Alumni Association honored the Class of 2010 at the White Coat Ceremony in December 2008. White coat ceremonies have become a tradition at many schools of medicine, dentistry, pharmacy, osteopathy, and at veterinary medical colleges across the country. At these ceremonies, students receive a white coat—the symbol of professionalism and empathy in the practice of medicine.

The purpose of white coat ceremonies is to alert medical students of the need to balance excellence in science with humanistic patient care. Our College takes the celebration of this “rite of passage” one step further, by honoring the individuals who have provided considerable support and special encouragement to our students along the way. These individuals are invited to participate in the ceremony by enrobing their students with the time honored mantle of the medical profession: the white coat.

Judy St. Leger DVM ’91, San Diego, CA, was the featured speaker for this year’s White Coat Ceremony. In her speech, she praised the students for choosing Cornell, explaining that a good foundation is critical to professional success.

The next *Scopes Magazine* will be published in June 2009. Please let us know what you’d like to share with your classmates in our Class Notes section by April 15, 2009, for inclusion in our June issue.

Name __________________________________________ (Maiden if appropriate) __________ Class Year ______

Address

_________________________________________________________

_________________________________________________________

Email __________________________________________ Phone __________________________

Please tell my classmates that... __________________________________________________________

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Please send back to Cornell University, College of Veterinary Medicine, Box 39, Ithaca, NY 14853 or email us at vetfriends@cornell.edu.
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