



**CORNELL** Veterinary Medicine

SPRING 2005

**A global look at  
biology through  
vertebrate  
genomics**

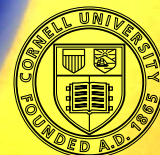
inside

**Celebrating early  
women graduates**

**Summer dairy  
institute**

**New flu breakthrough**

**\$50 million to life  
sciences from a man  
who loved dogs**



Cornell University

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# genomics:

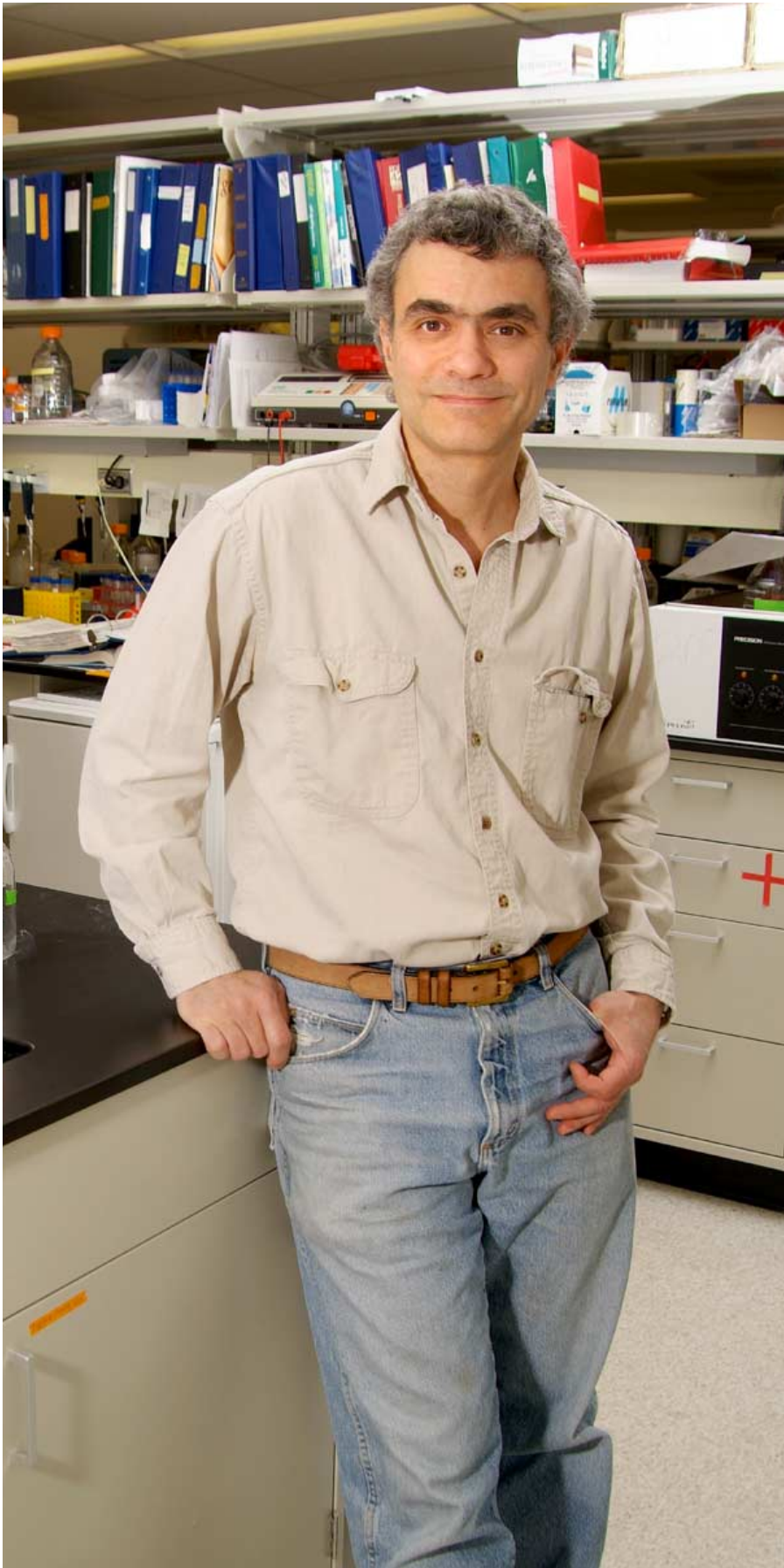
**W**hy do some dogs develop hip dysplasia while others don't? Which reproductive problems in cattle and horses are due to their genes? How can I explain to my daughter why her kitty died of cancer when she knows the littermates are still living?

Photos: Alexis Wenski-Roberts

If the genomes of all animals are more alike than different, wouldn't a veterinary college be the perfect place to study the genetic basis of health and disease? • Three tough questions, plus one to answer with an affirmative, yes! The newly established Vertebrate Genomics Center at Cornell University couldn't be in a better place than the College of Veterinary Medicine. **BY ROGER SEGELKEN**

# more THAN mice





Photos: Alexis Wenski-Roberts

**H**ere, clinicians who see the tough cases everyday can do more than ponder the genetic basis of medical conditions; they can share their whole-animal knowledge with researchers nearby who look at animals one DNA molecule at a time. Some clinicians even join the research themselves, seizing the once-in-a-lifetime opportunity to get in on the ground floor, now that more and more species' genomes are being sequenced and revealed to the scientific community.

Researchers who answer the call learn quickly that genomics, Cornell style, is about more than mice. True, the transgenic mice here outnumber their fellow mammals—or fish or birds, too. That is only because mice, in all their subtle genetic variations, had a head start in modeling everything from nutritional deficiencies and neurodegenerative disease to cancer. And laboratory mice are relatively inexpensive to breed and raise, and they grow up fast.

The scientific attributes of mice aside, the world is not waiting breathlessly for a cure for mouse cancer. Few clients arrive at their veterinarian's office with an arthritic mouse on a leash. And there is no charitable foundation to prevent mouse miscarriages.

So when the time came to establish a campus-wide program for animal genomics—in parallel to the plant genomics focus area that is based in Cornell's College of Agriculture and Life Sciences—it was not framed as a mouse genomics program, or even a mammalian genomics program, but rather the Center for Vertebrate Genomics. The genome of just about any life form with a skeleton inside its skin is open for exploration here.

**John Schimenti, Director of the Cornell Center for Vertebrate Genomics, surveys the campus scene from his ninth-floor office in the Veterinary Research Tower. OPPOSITE: Zebrafish, valuable for studies of developmental biology.**

## Genomes A to Z

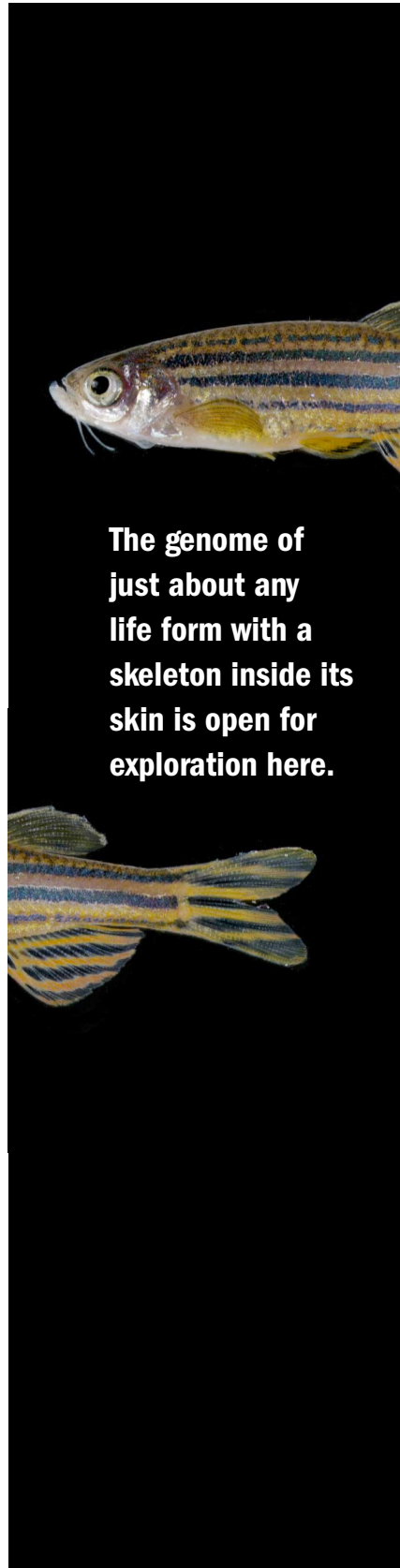
John C. Schimenti, the professor of biomedical sciences who came to Cornell in 2004 from Jackson Laboratory in Bar Harbor, Maine, the institution that established the mouse as the most-used model for human disease and disorders, says a modern comparative genomics program needs more than mice.

Once gene mappers overcame initial hurdles to sequence the human genome, Schimenti recalls, their strategies and computational techniques produced a rapid succession of accomplishments. Among vertebrate species that researchers now have at their disposal, the totally or nearly totally sequenced genomes of organisms range from “A” (for ape) to “Z,” including the chimpanzee, chicken, and cow; the dog, mouse, and opossum; and the zebrafish.

Genome “Z,” for zebrafish, is of interest to more than tropical fish breeders, Schimenti says, citing one opportunity to choose the best-available animal for the job: “Zebrafish embryos are almost perfectly transparent. You can see their organs and systems as they develop, and that makes zebrafish valuable for studies of developmental biology.

“Because we can sequence genomes so quickly now, we are no longer limited to just a few species,” the center’s director continues. “Even yeast are a good model for some of the genes that we are studying in cancer.”

As more and more species’ genomes are sequenced and published, the general public may be surprised to learn how many genes we share with the dog, for example, or even with a bacterium. But molecular biologists and geneticists are not. The similarities make comparative genomics a little easier, Schimenti says, when the discovery of the genes for one form of inherited blindness in dogs can be a clue to the location and nature of similar genes for parallel conditions in humans. Comparing the human and canine genomes, geneticists might not find the vision-defect genes



**The genome of just about any life form with a skeleton inside its skin is open for exploration here.**

at exactly the same “street address and apartment number,” but knowing the “zip code” and some nearby landmarks can bring them to the right genomic neighborhood.

“We’re not just interested in the similarities,” Schimenti says. “Differences can lead to insights, too.”

Participating researchers in the center, where genomics is broadly defined as “whole-genome approaches to understanding biologically relevant questions,” frequently work at the fundamental, basic-biology level of their disciplines. At the same time, most are mindful of possible applications of their work to real-world problems in species ranging from cats and dogs, horses and cattle, pocket pets and exotics, to the taxpayer species that pays the bills.

A virtual tour of the Cornell Center for Vertebrate Genomics starts with a researcher whose organisms go from yeast to mice to men—or rather, humankind—and whose findings hold hope for cattle breeders.

### When DNA Repair Goes Wrong

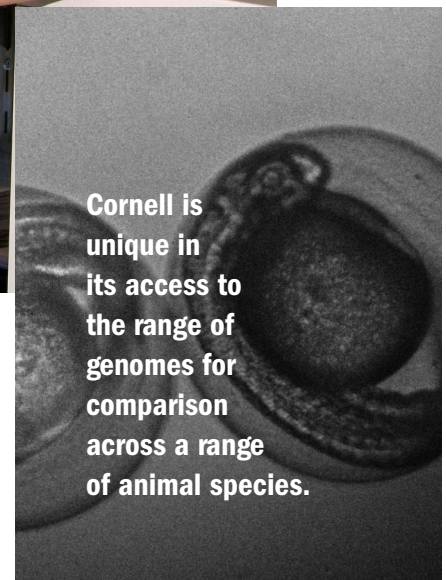
Paula E. Cohen is a genetic accident investigator with a specialty in quality assurance (QA). She rushes to the scene when something goes wrong in the normally routine—but accident-prone—process of meiosis, that critical moment in sexual reproduction when chromosomes from the sperm and the egg sort themselves out then recombine and segregate into the chromosomal complement that the developing organism will have for the rest of its life.

Cohen, an assistant professor of biomedical sciences, starts the QA inspection with a probing question: Why aren’t the DNA mismatch repair proteins doing their job—either in detecting a flawed recombination, fixing the mistake if possible, or making sure a bad chromosomal match isn’t perpetuated?

Sometimes, Cohen notes from her laboratory in the Veterinary Research Tower, the mammalian reproductive system does call a halt to an ill-fated



**Paula E. Cohen, an assistant professor of biomedical sciences, is a genetic accident investigator with a specialty in quality assurance. RIGHT: Zebrafish embryos.**



**Cornell is unique in its access to the range of genomes for comparison across a range of animal species.**

DNA match, by a miscarriage before birth, for instance. But all too often, individuals are born with a less-than-optimal set of chromosomes, into a life of birth defects, such as Down Syndrome. Later, during the mitosis process of cell division and chromosome duplication, chromosomal instability can lead to cancer.

While at Albert Einstein College of Medicine, Cohen began her studies of DNA replication and mismatch repair proteins, first in yeast and then in mouse models, recently extending this work to human systems. The traditional way of studying mismatch repair and meiosis has been in yeast, but this doesn't reveal detail about the etiology of chromosomal imbalance, she explains. It is only in larger organisms that scientists can see the raised error rate.

"There is an interesting difference in error rates of chromosomal instability across species," Cohen observes.

Yeast cells, with their relatively simple complement of chromosomes, incur an error rate at meiosis of less than 0.1 percent. In mice, the rate is 1 to 3 percent. "And about 40 percent of human eggs can have missegregation problems, which may account for our increased miscarriage and birth defect rate," she says.

"The ability to make DNA mismatch repair protein has been conserved, in the evolutionary sense, all the way from yeasts to humans. We will be interested in learning the extent of this problem in other species, including primates. That's why I'm excited to work in a veterinary college setting, because we can compare conditions across such a range of animal species. Our ability to compare genomes in this way is essential for making sense of our new-found knowledge about the genome—and a place like Cornell is unique in its access to the range of genomes for comparison."

One eventual application of the

chromosome instability studies, Cohen predicts, might be a genetic screening test to help cattle breeders select for stock with fewer fertility problems. That kind of selection in humans isn't ethical, of course. But a test for mutations in the genes that code for specific mismatch repair protein could help oncologists choose the best kind of chemotherapy for cancer patients.

"And then I wonder—suppose there is some kind of genetic event, a subtle variation but not a full-blown mutation, that predisposes to this defect. These subtle variations in the genome are highly prevalent in humans, occurring once in every 100 to 300

basepairs (the building blocks of the genome), and more than one million of these variations have been mapped through the human genome so far.” Cohen says. “Or maybe the problem begins during embryogenesis as a result of an environmental event, because of toxins to which the embryo is exposed in the womb.”

Focusing her research for the time being on the species with a 3 percent error rate, the molecular accident investigator can work with 15 to 20 different mouse lines that are suitable for study of mismatch repair gene problems. But she’ll have to work while they’re young. Some of the mismatch repair-deficient mice quickly develop colon cancer, so there’s no time to waste.

### A Genomic Fox Hunt

In the canine genetics and reproduction laboratory at the college’s James A. Baker Institute for Animal Health, research associate Anna Kukekova is running a fox hunt of the genomic kind.

The Siberian foxes she studies are half a world away, in a Russian fur farm where genetic records and pedigrees have been kept since 1959. The Russian geneticists had, over a period of more than 40 years of careful selection, developed an unusually tame strain of silver foxes that behave towards people like friendly puppies. Dr Kukekova has

developed a collaborative program with the Russian geneticists to identify the genes underlying the friendly behavior of these foxes.

“Of course there’s probably not just one gene that makes wild animals become tame-able,” Kukekova explains. “We are expecting to find a complex of genes associated with sociability, and probably that gene complex will code for other traits, as well.”

In the case of Siberian foxes on farms, Kukekova reports, some of the more sociable animals—the ones most easily domesticated to a life among many of their kind and among humans—also looked different and sometimes had different reproductive patterns than their less-friendly relatives. Curiously, the tamer foxes also had two traits that make dog puppies so endearing to pet owners: curly tails and floppy ears. And indeed, Kukekova notes, a thoroughly tamed Siberian fox makes a pretty friendly house pet.

The Cornell geneticist and others in her group have one resource now at their disposal that twentieth century geneticists in Russia lacked—the detailed sequencing of the canine genome. The fox genome, when it is sequenced, almost certainly will have many similarities to the canine genome, which isn’t all that dissimilar to the human genome—one reason that part of Kuke-

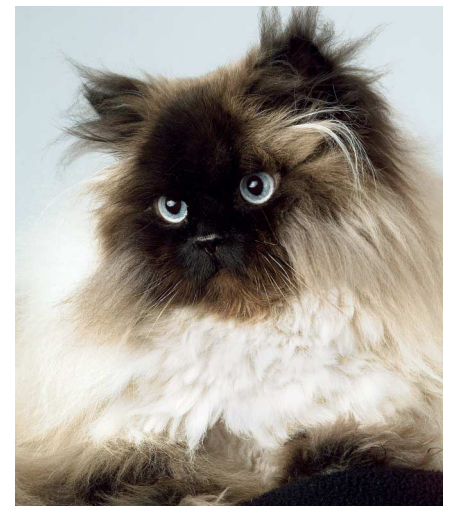
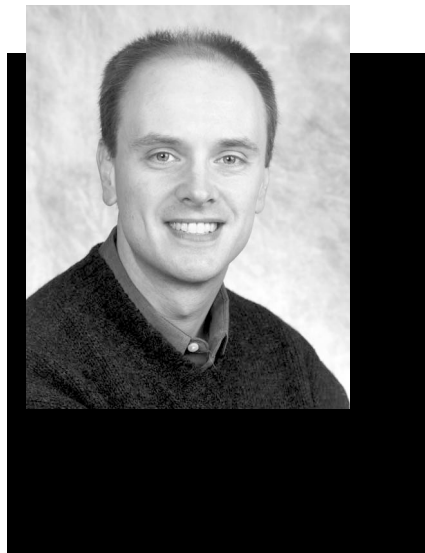
kova’s funding support comes from a human health agency, the National Institute of Mental Health.

### An Unlikely Ally

Working with a type of stem cell called spermatogonia, Assistant Professor of Biomedical Sciences Alexander Travis hopes to boost populations of rare and endangered cats with a little help from an unlikely ally—the laboratory mouse.

His research project, titled “Optimization of Testis Xenografting for the Preservation of Rare/Endangered Cats,” addresses one obstacle to endangered-species conservation—the death of males before they can reproduce and pass their genes to the next generation. He takes small pieces of feline testis tissue and grafts them into immunodeficient mice, in which they can grow and hopefully produce sperm. Because spermatogonial stem cells are found in the testis immediately after birth, unlike sperm which appear at puberty, development of this technology could be used to preserve species that have high neonatal mortality, such as the Pallas cat, fishing cat, and cheetah.

In another project, Travis’s lab is isolating the stem cells from a “donor” testis and transplanting them into the testis of a “recipient” domestic cat. If this transplantation technique is successful, a domestic cat could produce



Alex Travis’s research may one day help conserve genetic diversity in wild cat populations.

tiger sperm, for example, over a period of years. This system would provide an experimental model in which he could study why so many endangered cats have defects in their sperm, as well as produce sperm for breeding programs.

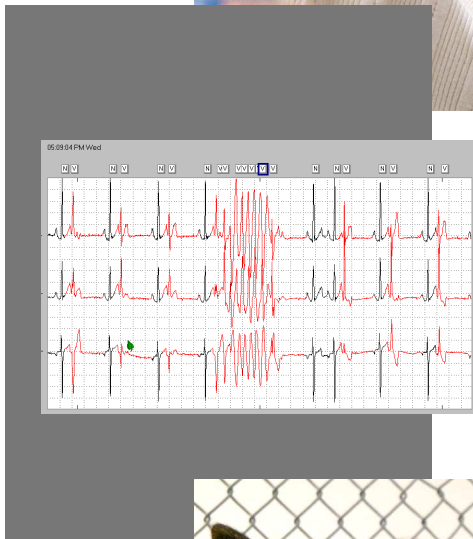
### SIDS, the Heart of the Dog

Mice are the preferred animal model for Assistant Professor of Genetics Teresa Gunn as she studies families of genes with overlapping functions in the body, such as distinctively dark fur and neurodegenerative disease in the so-called mahogany mouse, for example. But lately Gunn is turning her attention to an animal with a bigger heart—the dog, and, in particular, young German shepherds with a genetic predisposition to lethal cardiac arrhythmias that mimic some of the inherited arrhythmias in humans (long QT syndrome, Brugada syndrome). She is working with N. Sydney Moise, the professor of clinical science and widely acknowledged expert in the electrophysiology of cardiac function who needed a geneticist on her team.

Together, Moise and Gunn are looking for the gene or genes that sometimes mutate to cause abnormal ion channels in the signaling pathways. Or improper development of nerves to the heart muscle. Or both, if the gene complex for canine arrhythmia turns out to be as complex as some discovered recently.

“Once we know the genes responsible for the arrhythmias, we can get back to biochemistry and think about therapies and intervention for dogs with this genetic defect,” Gunn says.

And perhaps she can develop a murine (mouse) model for the disease, “although dogs are already a good large-mammal model” for similar conditions in humans, Gunn says. “Mice have such tiny hearts, and we’re not sure that some



**Assistant Professor of Genetics Teresa Gunn studies families of genes with overlapping functions in the body. Doctors Gunn and Moise are looking for the genes that sometimes mutate and cause signaling errors to the heart.**

of these functions scale from a little species to a bigger one.”

### The Genetics of CHD

At home, Gunn has five energetic golden retrievers, and she knows a lot about their bones, thanks to another genomics project at Cornell. Three of her goldens are rated “good” for an absence of canine hip dysplasia (CHD) and two are rated “excellent,” making them a statistical rarity among a breed known for its predisposition to the crippling form of osteoarthritis.

While good hip grades based on radiographs are gratifying to the dogs’ owner, both good and bad hips are important to Rory Todhunter’s search for the genes that cause CHD. The associate professor of surgery is analyzing the DNA and the hip X-rays of hundreds of dogs with CHD, hoping to find the specific genetic mutation, or at least the markers around chromosomal regions where the genes reside. His work necessarily involves collaborations with George Lust and Nancy Burton-Wurster



at the college's Baker Institute and his clinical colleagues in the Cornell University Hospital for Animals.

One possible approach to finding gene defects in dogs is to assemble pedigrees of animals known to carry the defective gene. However, the genetics of CHD has been a tough knuckle to crack. Now that chromosomal regions of interest have been identified in pedigrees, Todhunter will try the so-called fine-mapping approach with DNA samples from large numbers of unrelated dogs. With the cooperation of clinicians at the Cornell University Hospital for Animals and organizations that employ many working dogs—such as Guiding Eyes for the Blind, the U.S. Air Force, and police agencies—Todhunter gathers hundreds of samples each year. By searching across dog breeds to find the chromosomal regions that confer protection or susceptibility to hip dysplasia and secondary arthritis, he can narrow the regions in which to search for candidate genes.

That won't yield the sample size of typical fine-mapping studies in humans. But the canine genome, if genes for hip osteoarthritis can be found somewhere within, might help humans after all.

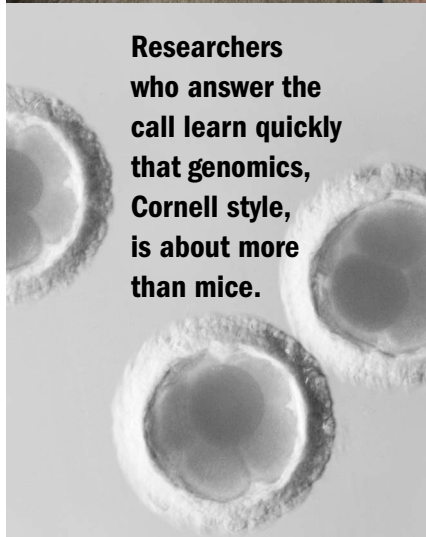
"This research is about more than hip dysplasia in dogs," he says. "It's about arthritis in the elbows and other regions." Although the osteoarthritis genes may be in different locations in various dog breeds and in that species that shares so much of its genome with other animals, the human species, the biochemical pathways in which they operate are likely to be similar. "The osteoarthritis genes may be regulators of local genetic expression in the tissues of affected dogs or humans," Todhunter says. "Finding the genes that contribute to or protect against hip dysplasia and other common inherited diseases in dogs is the holy grail for canine geneticists."

### Where Mice Still Rule

Back in the headquarters of the Cornell Center for Vertebrate Genomics, Director Schimenti surveys the campus scene. From his ninth-floor office in the Veterinary Research Tower he can see the

Biotechnology Building, where Assistant Professor of Developmental Biology Kathleen Whitlock's studies of zebrafish might soon explain why some neuroendocrine cells fail to produce enough of the hormone that lets young humans develop secondary sexual characteristics and enter puberty.

To the east is the Clinical Programs Center's laboratory of Richard E. Goldstein, assistant professor of small-animal medicine, who uses seed-grant funding from the genomics center to study "The Genetic Basis of Hyperparathyroidism in the Keeshond." To the northwest, barely visible as the oaks on Tower Road leaf out, is Savage Hall where Associ-



**Researchers who answer the call learn quickly that genomics, Cornell style, is about more than mice.**

**Dr. Richard Goldstein uses genome technology to explore hyperparathyroidism in keeshond.**  
BELOW: dog embryo.

ate Professor of Nutritional Biochemistry Patrick Stover keeps transgenic mice to examine the dual roles of prenatal nutrition and genetics in neural tube defects, such as spina bifida.

Next door is Clark Hall, where scientists are working with mice, genomic models for brain cancer, to test a promising new optical biopsy procedure that images intact, living brain cells without harming a hair on the head. At the end of their workday with biophysics researchers, the mice return home to the Core Transgenic Mouse Facility.

Located at the base of the Veterinary Research Tower, the 12,000-square-foot Mouse House, as the Core Transgenic Facility is nicknamed, soon will be supplemented by a larger East Campus Research Facility. Part of a \$90 million program to refurbish Cornell's existing research-and-teaching animal facilities and build new ones, the East Campus facility will house a variety of species engaged in vertebrate genomics studies and other kinds of studies, as well.

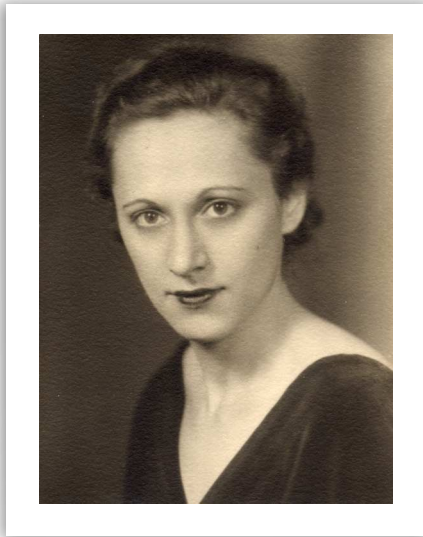
In the meantime John Schimenti, in collaboration with colleagues he brought along from Jackson Laboratory and other researchers recruited to Cornell, is sticking with mice. One research goal, he says, is a screen—possibly a simple blood test—for DNA fragmentation and the genetic instability that can lead to cancer. Not everyone will want to know the results of such a test, he acknowledges, but many will find it motivational. "That's the power of prediction from genomics," Schimenti explains. "If we can characterize the genetics (that predispose to disease), perhaps we can take measures in advance to avoid, or at least ameliorate, our genetic destiny."

At the same time the "mouse man" leading Cornell's Center for Vertebrate Genomics has an eye for the big picture and all the animals that fit therein. "We must look at biology in a more global way," Schimenti says. "We have the tools to do that now, and we cannot afford to be close-minded."

For more information on the Cornell Center for Vertebrate Genomics, see [www.vertebrategenomics.cornell.edu](http://www.vertebrategenomics.cornell.edu).



**Florence Kimball**



**Helen Goldhaft**



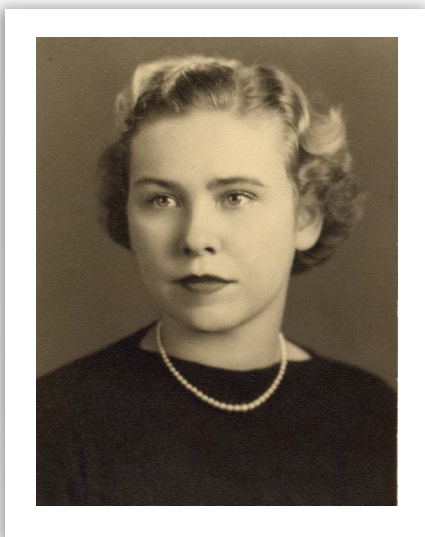
**Marie Koenig Olson**

**T**he early women graduates in veterinary medicine were tenacious, combining fortitude and determination with decency, honor, and a healthy sense of humor. These women were outstanding individuals who often had a positive effect in areas beyond medicine, as they applied their talents and education in other areas of their lives.

During their student days, many of the early women veterinary students were well-accepted by their male classmates. However, the challenges that they faced must not be forgotten. They

**Women  
Veterinary  
Graduates  
BEFORE 1950**

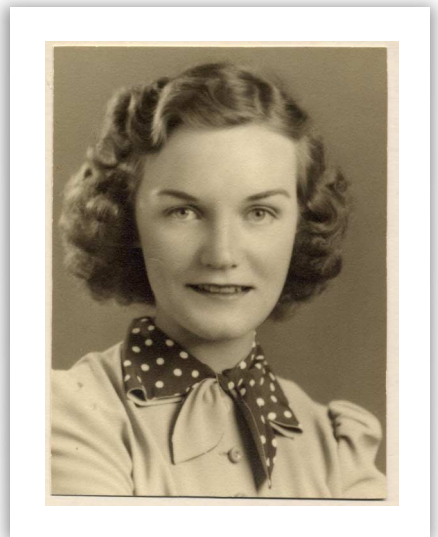
entered into a traditionally male field and, as in other professions, faced challenges of sexism. For some of these women, the challenges included being assigned the most foul cadavers available to the class. Others were excluded from ambulatory or farriery privileges on the grounds that the clientele would not accept women in the barn. There were no locker facilities for women students. The occasional practice of misinforming female students of the actual times of examinations or assignments may have seemed like a practical joke to the perpetrators, but the ramifications were sometimes serious. Nonetheless, each of



**Patricia O'Connor Halloran**



**Jeanne Neubecker Logue**



**Helen Borchmann Doremus**

these early women became role models for those that followed.

Here are some of their stories.

Florence Kimball entered Cornell and graduated with 21 men in 1910. Widely acknowledged as the first woman to graduate from a non-proprietary American university, Dr. Kimball operated a successful small-animal hospital in Massachusetts for several years before entering the nursing profession where she spent the remainder of her career.

Helen Goldhaft '33 was the daughter of a veterinarian. She aspired to follow her father's footsteps to the University of Pennsylvania. However, there were no facilities for women there, so Helen came to Cornell. Dean Pierre Fish was so impressed with her academic qualifications that he provided her a lucrative scholarship. During her final year, Helen quietly eloped with Nathan Wernicoff '31, but fear of discrimination and loss of dormitory privileges forced them to keep their union a secret until after graduation. The Drs. Wernicoff operated a small-animal practice together for several years, eventually becoming partners with members of their family in the highly successful Vineland Poultry Laboratories, a vaccine company.

Marie Koenig '37 was the daughter of a member of Cornell's veterinary faculty. Dr. Koenig Olson was a community leader and activist. Along with such people as Amelia Earhart, she was a charter member of Zonta International. Some of the practice ideals that Marie Olson instituted include v-trough restraint methods, the use of intravenous fluids, isolation wards with separate air flows, and a passion for continuing education. She also established early protocols for treating liver and inflammatory bowel disease. Olson's granddaughter will soon matriculate at Cornell, becoming the fourth generation in this family of Cornell-educated veterinarians.

The classes of 1939 and 1940 had a total of seven women students. One of the best known was Patricia O'Connor Halloran '39, who became the first female zoo veterinarian. Dr. O'Connor

wrote numerous articles, but even more were written about her. She was an icon in the veterinary world, not so much because of her gender—though that was clearly an issue of great interest at the time—but because of the manner in which she blended zoo medicine with public education and scientific writing, most notably in her 1955 compendium, *A Bibliography of References to Diseases of Wild Mammals and Birds*.

At the age of 12, Helen Borchmann '40, who grew up in the Bronx, announced to her parents that she would like to become a veterinarian. Nine years later, she graduated in a class that included three other women. She



**Sylvia Burg Salk**

and husband, Henry Doremus '46, established practices in New Jersey and Vermont, sequentially. An animal-rights activist, Dr. Borchman Doremus was influential in compelling the Canadian government to halt the clubbing slaughter of baby seals on the Newfoundland ice floes during the 1970s. She also was deeply committed to shelter medicine and, following her death, a large and ultra-modern animal shelter opened in her retirement community of Vero Beach, Florida, as a lasting tribute to her and others with a passion for supporting helpless and homeless animals.

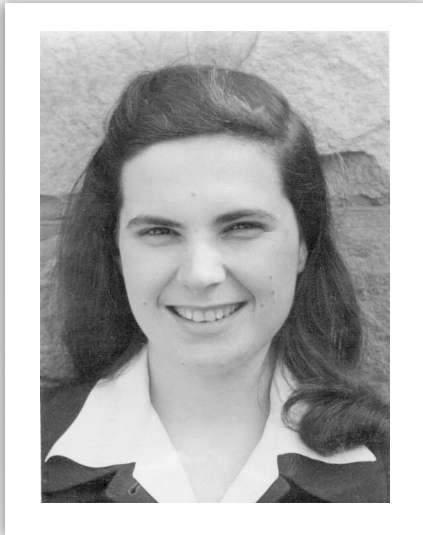
Jeanne Neubecker Logue '44, one of the country's earliest female large-

animal veterinarians, chronicled her personal veterinary experiences in a James Harriet-like book written after she retired from active practice. However, her writing reached a pinnacle in the biography of Cooper Curtice, an 1881 graduate of Cornell who studied under James Law and other members of the first veterinary faculty. *Beyond the Germ Theory* chronicles the powerful story of the elucidation of the origin of Texas fever in cattle.

Sylvia Burg Salk '46 did not have farm experience when she applied to Cornell. After her second rejection, her mother journeyed from New York to the college and held a private conference with Dean Hagan—Sylvia Burg was admitted the following fall. Dr. Burg Salk and her husband, Herman Salk '46, settled initially in Vermont, where she became the state's first female veterinarian. They later moved to western Pennsylvania, where her husband raised laboratory animals, kept a small animal practice, and may have assisted his brother, Jonas, in developing the vaccine against polio. The Salks later moved to Palm Springs, California, where they operated a successful small-animal practice. They were eventually drawn to use their skill to help people in underdeveloped regions of the world. They sold their practice and embarked on a series of tours with Heifer Project International in Cameroon, Egypt, Thailand, China, and Laos. Thereafter, they returned to work in the southwest United States with the Navajo and Hopi nations, where they taught vaccination strategies, production medicine, nutrition, and management. The Salks also established a scholarship program for African students to attend college in North America. In 1990, Dr. Burg Salk enrolled in a master's degree program in international public health at Loma Linda University in California. As the oldest student and the only veterinarian in the program, she was able to share a firsthand global perspective, especially on the subject of zoonotic diseases.

Cornell's early women veterinary graduates were pioneers in breaching

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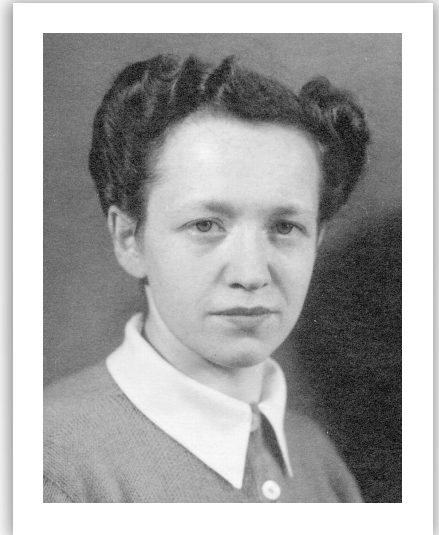


**Estelle Hecht Geller**

barriers in biomedical research. Estelle Hecht Geller '47 worked as a research veterinarian at the Veteran's Administration Hospital in the Bronx, then took a faculty position in pathology at the Albert Einstein College of Medicine, Yeshiva University, where she taught for more than 35 years. She helped found the Animal Care Panel (American Association of Laboratory Animal Science) and in 1957 was the only woman

among the first group to pass the board examination for the American College of Laboratory Animal Medicine. Lisbeth Kraft '45 led an extraordinary career as a research scientist. She held academic positions at Cornell, Yale, and Harvard, specializing in microbiology and laboratory-animal medicine. While at Yale in 1958, she characterized and described a rotavirus-induced diarrheal disease of infant mice. From her development of the first static filter-top devices for rodent cages (known as Kraft tops), individual ventilated-cage systems were developed. Dr. Kraft was a founding charter diplomate of the American College of Laboratory Animal Medicine and served as its president in 1966. She spent the last 11 years of her professional career with NASA's Ames Laboratory in northern California, receiving three achievement awards for her role in biomedical research.

The 34 women who received DVM degrees from Cornell University in the first half of the twentieth century had an extraordinary impact on the veterinary profession. They also became part of the Cornell legacy. We honor them and cherish the stories of their profes-



**Lisbeth Kraft**

sional and personal accomplishments.

Material for this article was drawn from many sources, but none more meaningful than countless conversations with the surviving women themselves, their spouses and family members, and their classmates and colleagues. For more information about the first 50 years of our female veterinary graduates, see <http://www.vet.cornell.edu/library/archives/Legacy/intro.htm>.

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# dairy institute

**T**his summer, 21 of tomorrow's leaders in food-systems veterinary medicine will gain entree into top industry facilities—from a consolidated 12,000-cow dairy farm in Fair Oaks, Indiana, to the Kalamazoo, Michigan, research facilities of Pfizer Inc., a world leader in biologicals and pharmaceuticals for animals and humans.

The Summer Dairy Institute at Cornell provides ambitious fourth-year veterinary students and recent veterinary graduates an education beyond the

Teaching  
Best Practices  
in Production  
Medicine

scope of what is offered in the curricula of any of North America's 31 veterinary schools. The program focuses on production-medicine techniques, combining behind-the-scenes tours with hands-on wet labs and intensive classroom instruction in advanced quantitative skills, diagnostic techniques, and clinical practices. Students learn how to make data-based decisions in all production practices, including reproductive programs, milk-quality programs, and nutrition programs.

"Many dairy-farm owners have MBAs these days, so they expect their veterinarian to have sophisticated production-medicine tools, firsthand knowledge of food safety, and experience in all the aspects of cow comfort, in addition to more traditional medical and surgical skills," says dairy-produc-

tion veterinarian and epidemiologist Daryl Nydam, co-creator of the institute. “Customers are becoming more sophisticated, too. They demand that milk, cheese, yogurt, and ice cream be not only plentiful and economically priced but also of the highest quality and produced with the least environmental impact.”

In New York State, cash receipts from dairy farms exceed \$1.6 billion annually. Dairy farms are the largest cash generator of tangible goods in the state. “Tomorrow’s veterinarians need to be trained in many different areas to address the needs of large, consolidated farms where the profit margin is small. They must keep animals in optimal health—that offers the most efficient production with the least environmental impact,” says Nydam.

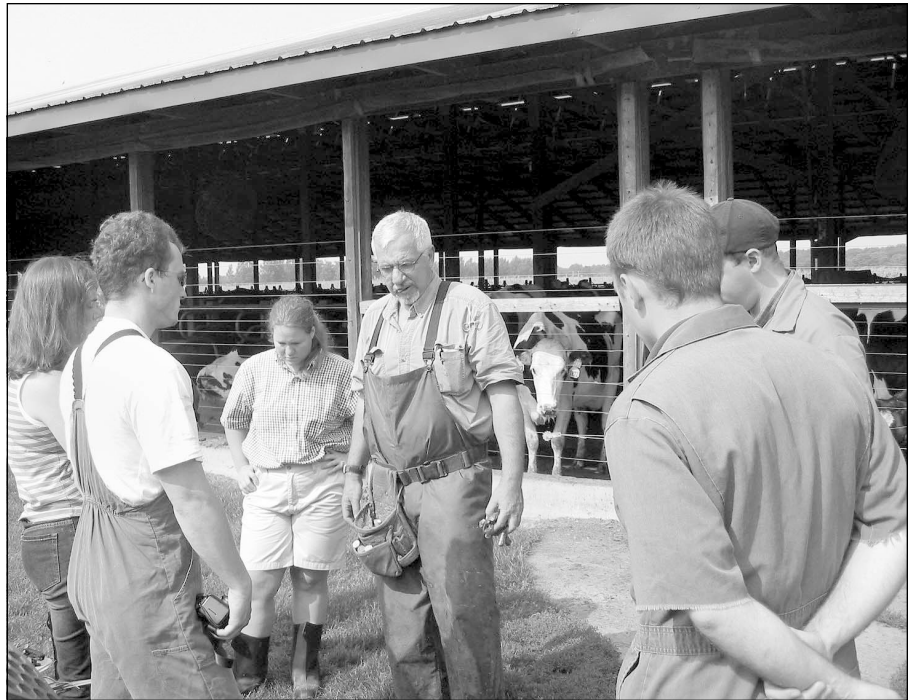
To give students the skills they need to excel in an increasingly complex industry, Nydam—along with Chuck Guard, an associate professor in the Department of

### **What a dream team of instructors.**

—Gordie Jones

Population Medicine and Diagnostic Sciences, and Associate Dean Robert Gilbert—have assembled a world-class faculty from across North America. They’ve chosen 52 academics, practitioners, and professionals from all segments of the industry to share the latest research, technology, and best practices during an eight-week intensive institute. Underwriting from the American Association of Bovine Practitioners provides scholarship assistance to participants. Students come from as far away as Spain and Austria, each of Canada’s veterinary schools, and 15 other schools in the United States. This diverse group of participants lives together for the duration of the course so they may form friendships and networks with each other and program faculty that will serve them and the industry well into the future. First offered last summer, the institute received so many applications that the enrollment limit was increased this year.

Feedback from the first group of



**Tomorrow’s veterinarians need to be trained in many different areas to address the needs of large, consolidated farms.**

students was very positive. One faculty member—foremost production-medicine veterinarian Gordie Jones—commented, “What a dream team of instructors. I wish the institute had been available early in my career.”

Working one-on-one with recognized experts was a highly valued opportunity. Topics in the course modules include: financial decision making, nutrition, biosecurity, labor training and management, public health and regulatory considerations, reproduction, farm facilities and cow comfort, hoof care, and data management, and performance monitoring. Among the facilities toured are packing plants, artificial-insemination centers, feed-analysis laboratories, milk-processing and cheese factories, and a dedicated heifer facility.

On-farm practice sessions allow students to work in small groups gaining additional hands-on experience in milking management in large dairies, calving pen management, feeding management, foot care, and reproductive exams.

Because increasing numbers of the staff members on progressive dairies are Spanish speakers, language instruction

is fundamental for communicating effectively in Spanish in a dairy-farm setting.

“We recognize how important it is for well-trained veterinarians to consult with not only owners and managers but also with the staff who work directly with the animals,” explains Nydam, who is a senior extension associate in the Department of Population Medicine and Diagnostic Services.

Alumni of last year’s institute are now employed across the spectrum of jobs represented in the dairy industry. One took a position with the Food Safety Inspection Service of the U.S. Department of Agriculture, another is managing a multi-thousand-cow dairy, and others are employed in progressive private clinical practices with herd-health orientations.

“The advanced training they receive at the institute gives our alumni access to careers across the whole spectrum, from field to table,” Nydam says. “Our aim is to make participants more confident in modern practice roles. In this way, they will provide value to themselves, their prospective employers, the dairy industry, and society as a whole.”

by Metta Winter

## Scientists Discover Critical Step in

# flu virus infection

**A**vian flu is in the news. Flu vaccination shortages plagued the United States this year. Research in the college may put a whole new spin on flu prevention. Two researchers in the college's Department of Microbiology and Immunology have found a new step in the pathway that is critical for the flu virus to enter and infect a cell. The discovery could lead to the development of antiviral medications and vaccines that would target all influenza viruses.

Gary R. Whittaker, assistant professor of virology, and Victor C. Chu, a

graduate student in comparative biomedical sciences, have published their findings in the *Proceedings of the National Academy of Sciences*. The report is an open-access article, freely available online at [www.pnas.org/cgi/reprint/101/52/18153](http://www.pnas.org/cgi/reprint/101/52/18153).

The newly discovered pathway occurs after the virus attaches to a cell. The next stage of infection, the scientists say, involves an unknown co-receptor that allows the virus to infect the cell.

"Once we identify the receptor, we expect that a whole new avenue of an-

tiviral medications and vaccines could be developed that would target all influenza viruses, not just one strain at a time," says Whittaker.

Scientists have known for about 50 years how the influenza virus attaches to cells before it infects them. Previous work focused on red blood cells, which are suitable experimental systems for examining virus attachment. However, red blood cells don't have nuclei and can't be infected by the virus.

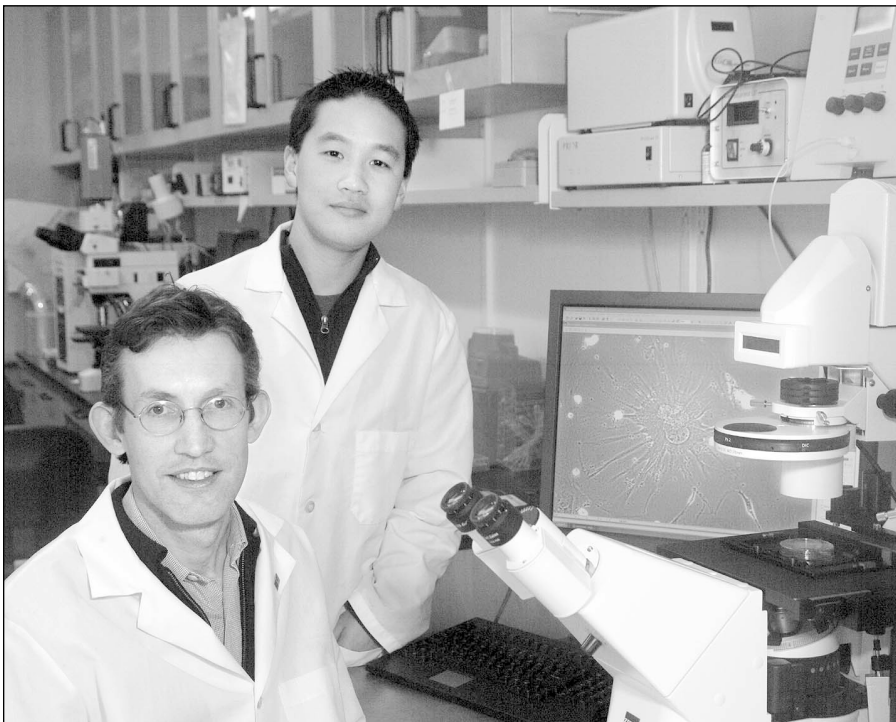
Instead of red blood cells, Whittaker and Chu turned to a line of Chinese hamster ovary (CHO) cells, which have been used since the 1970s to study cell genetics. The normal line of CHO cells get infected—just as all nucleated cells do—but a mutant line of these cells, called Lec1 cells, are deficient in the surface N-linked glycoprotein and are resistant to the influenza virus. The critical factor that protects these cells from infection is the lack of a specific surface receptor comprising N-linked glycoprotein.

Thus, although the influenza virus can still attach to these cells, without the surface N-linked glycoprotein, the virus cannot infect them.

Whittaker points out that the latest influenza discovery is paralleling the research advances with the HIV-AIDS virus about nine years ago, when a second HIV co-receptor was discovered. This enabled researchers to develop new drugs that are now in clinical trials.

The research was supported, in part, by a Career Investigator Grant from the American Lung Association and by a National Institutes of Health grant.

by Susan S. Lang



Alexis Wenski-Roberts

**Gary R. Whittaker, assistant professor of virology, and Victor C. Chu, a graduate student in comparative biomedical sciences, study the cell biology of influenza.**

97TH ANNUAL

## CORNELL VETERINARY CONFERENCE

INCLUDES A ONE-DAY VETERINARY TECHNICIAN PROGRAM



TRANSLATING DISCOVERY  
JUNE 13–14, 2005



Cornell University  
College of  
Veterinary Medicine

INFORMATION: 607-253-3200 or [www.vet.cornell.edu/extension/conedu](http://www.vet.cornell.edu/extension/conedu)

### Bronx Zoo Expert to Speak at Annual Conference

The 97th annual Cornell Veterinary Conference will be held on the Monday and Tuesday following Cornell's reunion weekend—this year's dates are June 13 and 14. The keynote speaker for Monday evening's dinner is Dr. Robert Cook of the Bronx Zoo in New York City. Cook is the chief veterinarian of wildlife health sciences at the zoo and vice president of the Wildlife Conservation Society, headquartered at the zoo. The title of his presentation, "One World—One Health," emphasizes the stunning relationships that exist among animal species worldwide and the ecological environments in which they live and reproduce. Drawing on his extensive international field experience and inti-

mate knowledge of the extraordinary collection at the Bronx Zoo, Cook will highlight the interface of domestic animals and human populations within the environment that we share.

"The June date allows us to take full advantage of our college facilities and the natural beauty of Ithaca and the surrounding area. It also facilitates the participation of faculty and students in the program," says Katherine Edmondson, assistant dean for learning and instruction. "We also have events to please the whole family." Events include a Finger Lakes dinner cruise on Cayuga Lake aboard the *MV Manhattan*, a wine tour of Seneca Lake vineyards, and a tour of the Museum of the Earth, hosted

by Professor Emeritus Howard Evans.

Monday and Tuesday workshops will present the latest scientific findings and clinical practice. Topics include small-animal pain relief, critical-care techniques in pet birds, common errors in dermatological case referral, rethinking approaches to radiation therapy, and new drugs for management of heart disease.

In acknowledgement of the critical role that veterinary technicians play in animal care, a full day of scientific programming has been designed just for them. Topics in both small-animal and equine medicine include: common exotic pets, case presentations of small-animal anesthesia patients, diagnosis and management of secondary bleeding, and equine neonatology.

*Cornell*  
**Reunion**  
2005

**Return**  
**Reacquaint**  
**Renew**

**JUNE 9–12, 2005**

- DVM Barbeque (Friday)
- Alumni Association  
Guest Speaker:  
John Huntley, DVM'80
- Zweig 25th Anniversary  
Lecture at Baker Institute
- Class Dinners

**Call for more information:  
607-253-3716**

# gift planning

Supporting the College of Veterinary Medicine is a wonderful thing; gaining immediate benefits from your generosity while increasing the impact of your giving is even better.

The gift planning program at Cornell supports each of the 11 undergraduate and graduate/professional colleges and schools at the university. I have always been impressed by the loyalty and support of veterinary alumni and friends: the combination of a love of animals and hard work is a strong forge! The college's many diverse programs provide an opportunity for everyone to find a cause they can support: from enhancing the training of veterinarians, to improving the environments of wild animals, to research on medical conditions of humans and beloved pets.

Over the next few issues of *Cornell Veterinary Medicine*, I will share with you

## Benefits for you, your family, and the college

BY CHIP BRYCE '81,  
CORNELL DIRECTOR  
OF GIFT PLANNING

information highlighting the tried and true methods of structuring gifts to the college that capitalize on tax and planning opportunities. When integrated into an overall financial plan, gift planning enables you to make a significant gift to the college without committing up-front cash and allows you and your loved ones to reap numerous benefits.

### Earn Income, Pay Fewer Taxes, Secure Your Retirement

As an example, you might create a life income agreement that allows you to gift assets (securities, real estate, cash) to the college while retaining income from those assets for you or your designees. The income may be fixed for life or vary with investment performance. Part of the income may be tax-free, and you may avoid capital gain taxes on gifts of appreciated property. You'll earn an income-tax charitable deduction for a portion of your gift.

### Enhance Your Net Estate

Your family may benefit from certain charitable opportunities that help to reduce or eliminate gift and estate taxes on the transfer of your assets. You can essentially "loan" estate assets and al-

## A helping hand...It comes in many forms

Gifts to support the college are always appreciated and allow us to continue our efforts to educate veterinary professionals, research diseases and life processes, and enhance our ability to care for animals.

### \$50,000

**Secure the Future** With a gift of \$50,000 you can start a legacy endowment. The fund can be named in honor of a cherished mentor, veterinarian, animal lover, or beloved pet. Call Alison Smith at (607) 253-3742 to discuss plans to create an endowment.

### \$20,000

**21st Century Surgery** Cornell University Hospital for Animals surgeons need a minimally invasive laparoscopic device that seals off internal vessels and tissues by reorganizing collagen.

### \$15,000

**History Preserved** Add to and enhance an electronic catalog of historical college photographs.

### \$15,000

**Banking for Life** Replace the refrigeration unit used to store blood in the blood bank. **FUNDED!**

**Still needed:** Smaller gifts can ensure an adequate supply of blood for patients in need by supporting the donor program that enables dogs, cats, and ferrets to routinely



donate blood to save the lives of their species. Gifts offset the costs of donating blood (cost of screening, health exams, flea/tick and

heartworm preventative) and reward the animal donors (benefits for the volunteer donor include pet food, treats, bandannas, collars, leashes, toys).

### \$10,500

**What a View!** Augment thoracoscopic surgery equipment at Cornell University Hospital for Animals to help surgeons use mini-



low the college to receive the income for a period of time. Or you may wish to avoid the substantial taxes (up to 80 percent) that may diminish the value of retirement-plan balances when they pass to heirs.

### Create a Personal Legacy

You can eloquently express your enduring support for college's mission of teaching, research, and public service by making a gift at your death through your will, retirement plan, trust, or life insurance policy. Such gifts are the most common planned gifts and may reduce your estate taxes while creating your legacy at Cornell.

By working with a professional adviser in the Cornell Office of Gift Planning, you can create a gift plan that will meet your individual income/tax planning needs, secure your family's future, and strengthen the college and its mission—all at the same time. In subsequent issues we will take a closer look at each of these concepts. In the meantime, please feel free to call us: (800) 481-1865. Our staff can provide information to you or your financial advisers without obligation in a personal and confidential manner.

### College Cooks at Westminster

During the week that New York City becomes "dog crazy," the week of the Westminster Kennel Club Show, the college gathered friends and alumni to celebrate humankind's best friend. The Valentine's Day-inspired theme "Cooking for the Ones you Love" reflected many a New Yorker's affection for their canine companions.

The party featured a book signing by the founders of the Three Dog Bakery, Mark Beckloff and Dan Dye; cooking demonstrations of canine cuisine and human nibbles; and new music from the CD *Tails of the City*—songs with a dog's point of view, featuring a single by singer Phoebe Snow. Partygoers sampled delicious human "treats" and "puptinnis" by Robbins Wolfe Eventeurs (a company co-owned by Cornellian, Ken Wolfe).

Cornell faculty interacted with guests. Francis A. Kallfelz, DVM, PhD, Cornell's James Law Professor of Medicine and Nutrition, was the featured expert, sharing information on canine nutrition and health.



Mark Beckloff and Dan Dye, founders of Three Dog Bakery



Mark Demailo, Ken Wolfe '66, Kathy Demailo

Photos: Alexis Wenski-Roberts

mally invasive surgery to visualize and treat disease inside the chest of dogs and cats.

**\$7,500**

**A Different Angle** A tilting surgical table for companion-animal surgery will enable surgeons and veterinary students to have the best possible angle.

**\$5,000**

**"Four Eyes"** Fund a dual-headed microscope to aid clinicians with patient diagnosis, while teaching interns, residents, students, and technicians at the same time.



**\$3,500**

**Get the Picture** In the college's hospital, wedge-exposure filters are used to improve radiographic image quality of bones with varying thicknesses, enabling just one image to be used instead of two or three. Two filters at \$1,750 each = \$3,500.

**\$2,000**

**Get Connected** Enhance computing capabilities for students by supporting acquisition of computers for their use.

**\$2,000**

**Take a Seat** Name a seat after a loved one or pet in the Thaw Charitable Trust Lecture Theater at the James A. Baker Institute for Animal Health.

**\$1,000**

**Oh, the Things You Will Learn** Sponsor student travel to professional conferences. These experiences allow students to be exposed to new ideas, and learn about potential employment and educational opportunities.



**\$1,000**

**Strengthen the Team** Assist with a licensed veterinary technician's continuing education. Technicians are a key part of the clinical team, caring for clients and teaching students.

## from the Sprecher Institute for Comparative Cancer Research

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### Praise for Breast Cancer Education

The program on Breast Cancer and Environmental Risk Factors (BCERF), part of the college's Sprecher Institute for Comparative Cancer Research, is recognized worldwide for its scientific and educational programming to reduce the risk of breast cancer in women. Through the program, Cornell faculty and health educators from across the state critically evaluate the scientific evidence for relationships between breast cancer and risk factors in the home, workplace, and community. "The team then shares this information to improve the capacity of health professionals, extension educators, and community leaders to address breast-cancer risk," explains Rod Page, professor of clinical sciences and BCERF director.

Resources are often requested for continuing education programs by oc-



**Page**

cupational health nurses, genetic counselors, dietitians, extension educators, policy officials, and scientists in the form of live programs as well as video-conferencing and web-streaming. These professional groups then multiply the educational impact by providing programs to their constituents. Twice-yearly Cancer and Environment Forums, held in different parts of New York State, also provide an opportunity for information sharing on ongoing research and educational activities.

The BCERF website—<http://envirocancer.cornell.edu>—offers a

wealth of information for health professionals and the general public. Approximately 31,000 web hits were recorded in 2004 to access the searchable databases and bibliographies, view maps, or download any of the publications, including quarterly newsletters, fact sheets, and comprehensive reviews on cancer risk.

In addition, BCERF recently served as the expert source for articles on cancer prevention in *Redbook* magazine, *USA Today Weekend*, and *Scientific American*.

Funding for BCERF is partially provided by the New York State Department of Health and the U.S. Department of Agriculture. Further funding is being sought to enable expansion of programming into additional languages and other cancer types.

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## from the Baker Institute for Animal Health

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### Equine Medicine Training and Research Program Begins

Four college faculty joined together recently to initiate a new program—postgraduate studies in equine medicine: immunology and research training programs. Dorothy Ainsworth and Julia Flaminio of the Department of Clinical Sciences have teamed with Doug Antczak and Bettina Wagner of the Baker Institute to formalize and strengthen their research and training activities.

Each of these faculty members has a specialization in a distinct aspect of immunology as applied to the horse. The interests of the group include allergic conditions involving the lung and skin, immunodeficiency diseases, immune capacity of the newborn foal, pregnancy immunology, and fundamental studies of equine antibodies and the major histocompatibility complex.

The goal of the new program is to promote research and advanced training for veterinarians on important disease conditions of the horse. The members of the group hold joint laboratory meetings throughout the year and collaborate on several research projects. Already the group has achieved considerable success in obtaining new grants from national funding agencies.

More information about this program is available online at [www.vet.cornell.edu/equinemed](http://www.vet.cornell.edu/equinemed).



Alexis Wenski-Roberts

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## from the Cornell University Hospital for Animals

### Alignment of Fortunate Events Improves a Guide Dog's Sight

Bette Jayne Spinney's intuition told her that something was wrong with Brando, her nine-year-old retired guide dog. He was very happy to be living the life of leisure.

However, something was slightly off kilter with his balance and vision. On a hunch, Spinney made an appoint-

ment and brought Brando to the Cornell University Hospital for Animals.

Thomas Kern, DVM, chief of ophthalmology, confirmed that Brando was indeed having vision problems—

#### Brando

the dog actually was blind in one eye. Kern ordered an MRI.

Thanks to the superb imaging quality of new MRI equipment, which had been installed only a few weeks before Brando's appointment, the radiology staff members were able to pinpoint a small tumor impinging on Brando's optic nerve. "Due to the new MRI, we were able to diagnose the tumor at this early stage," said Kern. "Catching it early bodes for a better prognosis."

"He is a lucky dog," said Rod Page, director of the Sprecher Comparative Cancer Institute housed within the college. "The new imaging technology, coupled with his owner's intuition, extended his life. Without those benefits, the tumor could have quickly grown and caused a fatal situation."

The tumor was inoperable due to its location. However, Cornell is home to a state-of-the-art nuclear accelerator that can be finely tuned for irradiation therapy in small animals. Margaret McEntee, DVM, chief of oncology, suggested a three week course of radiation to shrink the tumor. Spinney decided that Brando had made his contribution

to humankind and more than deserved a chance at remission.

After the first week of treatment, Spinney drove home to Stamford, New York, and over the weekend observed that Brando's balance was improved, he was more active, and he could climb the stairs again. She shared these events

with Page on her return to Cornell for week-two's treatment. Eric Ledbetter, a resident in ophthalmology, examined Brando and concluded that his improved pupil reflex could well indicate vision improvement. Radiation treatment concluded on December 24.

As of mid April, Brando continues to be active and is living a high-quality life. Spinney brings him to the hospital for regular follow-up visits. Brando is providing a genuine learning experience for both faculty and students.



Alexis Wenski-Roberts

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## from the Feline Health Center

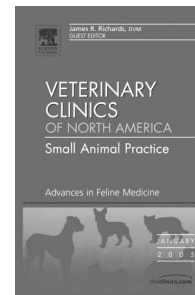
### Forums on Vaccine-Associated Feline Sarcoma

**The Vaccine-Associated Feline Sarcoma Task Force (VAFSTF) convened a roundtable discussion at the American Animal Hospital Association headquarters in Denver, Colorado, in December 2004. James Richards, director of the Cornell Feline Health Center, moderated the session. A written transcript of the discussion will appear in an upcoming issue of the *Journal of the American Veterinary Medical Association*.**

**The roundtable will reconvene during a session at the upcoming 142nd Annual American Veterinary Medical Association Conference/28th World Veterinary Congress, July 16–20, 2005, in Minneapolis, Minnesota. Meeting attendees will have the opportunity to ask questions of roundtable participants.**

### New Book on Feline Medicine

**Cornell Feline Health Center Director James Richards is guest editor of a new volume on feline medicine—*Advances in Feline Medicine* (W. B. Saunders Company, 2005). To determine what issues the publication should highlight, Richards consulted with an extensive**



**network of feline practitioners and members of the American Association of Feline Practitioners. Topics covered in the book include: zoonotic disease control, disease control in**

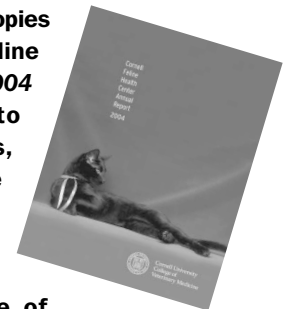
**shelters, managing pain in felines, feline hepatic lipidosis, and much more.**

**The book is dedicated to another Cornellian, Jean Holzwrth, DVM '50, "a lifelong devotee of cats and veterinarian of immeasurable importance to feline medicine."**

### 2004 Annual Report Available

**If you would like copies of the Cornell Feline Health Center's 2004 Annual Report to share with clients, please contact the Feline Health Center at (607) 253-3414. Staff will send copies free of charge (maximum of 10 copies).**

**The report can be reviewed online at the Feline Health Center website—<http://www.vet.cornell.edu/FHC>.**



# CVM people

## FACULTY

**Noha Abou-Madi** is a new diplomate of the American College of Zoological Medicine. She received her DVM from the University of Montreal and came to the college in 1996 as a postdoctoral associate in the Department of Clinical Sciences. Abou-Madi is currently



**Abou-Madi**

**Normand Ducharme**, DMV, MSc, professor of surgery and medical director of the Equine and Farm Animal Hospital, has been named 2004–5 president-elect of the American College of Vet-

erinary Surgeons. Founded in 1965, the ACVS sets the standards for advanced professionalism in veterinary surgery.

**Richard Goldstein**, DVM, assistant professor of medicine, received the 2004 Carl J. Norden-Pfizer Distinguished Teaching Award. The Norden award is given in recognition of character and leadership qualities as well as outstanding teaching abilities.



**Goldstein**

## Five New Named Professors

The trustees of Cornell University recently announced the awarding of named professorships to five faculty members at the College of Veterinary Medicine:

**James Law Professor of Surgery:** **Normand Ducharme**, DMV, MSc, diplomate of the American College of Veterinary Surgeons, medical director of the Equine and Farm Animal Hospitals at the Cornell University Hospital for Animals, and professor of surgery in the Department of Clinical Sciences



**Fortune**

**James Law Professor of Physiology:** **Joanne Fortune**, MS, PhD, professor of physiology in the Department of Biomedical Sciences and professor of Feminist, Gender, and Sexuality Studies

**James Law Professor of Behavior Medicine:** **Katherine Houpt**, DVM, PhD, diplomate of the American College of Veterinary Behaviorists, director

of the Animal Behavior Clinic at the Cornell University Hospital for Animals, and professor of behavioral physiology in the Department of Clinical Sciences

**Alfred H. Caspary Professor:** **Judith Appleton**, PhD, professor of immunology in the Mucosal Immunity Laboratory at the college's Baker Institute

**James Olin Professor:** **Colin Parrish**, BSc, PhD, professor of virology in the Albert C. Bostwick Laboratory of Molecular Biology at the college's Baker Institute

The James Law professorship, created in 1974, is named for the first professor of veterinary medicine at Cornell and in the United States. The six Law professorships at



**Ducharme**



**Houpt**



**Appleton**



**Parrish**

the college recognize distinguished faculty who have earned national and international reputations in veterinary medicine and the biomedical sciences and who have demonstrated a commitment to excellence and academic leadership. The three other current James Law Professors are: Bud Tennant, James Law Professor of Medicine (since 1989); Alexander de Lahunta, James Law Professor of Veterinary Anatomy (since 1992); and Francis Kallfelz, James Law Professor of Medicine (since 1997).

The Alfred H. Caspary Professorship was established at the Baker Institute in the late 1950s to honor financial contributions from Mr. Alfred H. Caspary. The professorship furthers the research activities of the Baker Institute.

The Olin Professorship was established at the Baker Institute in 1963 by the founding Baker Institute Director, James Andrew Baker, in honor of John M. Olin '13. Olin was a member of the Cornell University Board of Trustees and is recognized as a foremost benefactor of the university. He was a lifelong sportsman with interests in dogs and horses and was instrumental in the establishment of the Baker Institute in 1950. The professorship fosters research in canine infectious diseases, one of Olin's strongest interests.

**Sheila Allen**, '81, associate dean for academic affairs and acting department head of small-animal medicine and surgery, became interim dean of the University of Georgia College of Veterinary Medicine on March 1. Dr.

Allen has been a member of the college's faculty since 1986, where she has developed computer-assisted techniques for teaching basic surgical skills and provided leadership in revising the curriculum. She is a diplomate of the American College of Veterinary Surgeons.



Allen

**Bruce T. Boehringer**, DVM '64, recently spent a month helping the animal and human victims of the tsunamis that had swept through Southeast Asia. Through a volunteer list with the AVMA, he was contacted by Project HOPE—Health Opportunities for People Everywhere. The organization assembled crews of volunteer medical professionals to staff a Navy hospital ship—the U.S.N.S. Mercy—bound for the Indonesian coast. Boehringer was assigned to a 93-person crew of doctors, nurses, social workers, and other health care providers. He was the only veterinarian. While on the ship, he participated in medical rounds, consulting with physicians who were providing tertiary care to patients rescued from the sea or those whom the land-based field hospitals could not help. In Banda Ache, Indonesia, Boehringer worked with a preventive medicine group (including U.S. Navy and U.S. Public Health Service and civilian medicine and public health volunteers) that collaborated with the World Health Organization (WHO) and the Indonesian Ministry of Health. They conducted assessments and made recommendations for improved water supply, sewage, infection control, and vector control.

**James DeBitetto**, DVM '85, is a new diplomate of the American Board of Veterinary Practitioners, Canine and Feline Specialty. There are fewer than 400

## In Memoriam

The college community mourns the loss of several former faculty and alumni.

**Stephen Roberts**,  
DVM '39  
(Ruth Roberts)

**Ken McEntee**,  
DVM '44  
(Janet McEntee)

**Norman Pick**,  
DVM '56  
(Marilyn Pick)

**James McClure**,  
DVM '69  
(Ronetta McClure)

clinical practitioner diplomates in the canine/feline specialty worldwide. DeBitetto is the owner of Country Home Veterinary Clinic in Bedford Hills, New York. He is a member of the American Veterinary Medical Association, New York State Veterinary Medical Society, American Association of Feline Practitioners, and Cornell Alumni Association.

**Leslie DeGross**, DVM '69, received the Dairy Award from the American Association of Bovine Practitioners at their annual conference in September.

**Richard Grambow**, DVM '57, was one of the six winners of Cornell University's 2005 Frank H. T. Rhodes Exemplary Alumni Service Award. The honor is given in recognition of extraordinary service to Cornell, in both length and quality of contribution by the individual. The winners will be recognized at a banquet during the 2005 Homecoming weekend. Grambow is only the second DVM ever to receive the award, following John Brennan, DVM '52, who received the honor in 1999. Grambow was elected as a Life Member of the Cornell University Council in 2003. He has been a Reunion class chair since

1977. He was a recipient of the Daniel E. Salmon Award in 1994 and a member of the college's Advisory Council from 1990–2002.

**Edward J. Rackowski**, DVM '52, retired from practice in November 2004 after 52 years of dedicated service to clients in upstate New York and Florida. He practiced for 30 years in Amsterdam, New York, and established the Treasure Coast Animal Clinic, a small-animal clinic, in Vero Beach, Florida, which he ran until he retired.

**Nathaniel White II**, DVM '71, was the recipient of the Distinguished Service Award from the American Association of Equine Practitioners. Awarded to an individual who has provided exemplary service to the AAEP or similar organization to the benefit of the horse, horse industry, or the equine profession, White received the award at the president's luncheon at the AAEP's 50th Annual Convention in December 2004. Since 1985, White has served as a professor of surgery and the assistant director for clinical services at the Marion DuPont Scott Equine Medical Center in Virginia.

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**The Johns Hopkins-Cornell Link** The Department of Comparative Medicine at Johns Hopkins University School of Medicine is one of the most prestigious programs in comparative medicine in the country, and has been led by Cornellians for most of its history.

**Edward C. Melby, Jr.**, DVM '54 was the founder of the comparative medicine program and its first director. Melby left Hopkins to be dean of Cornell's College of Veterinary Medicine in 1974. **Frank Loew**, DVM '65, PhD ('71, Saskatchewan) served as director of the program at Hopkins from 1977–1982, when he left to become dean of Tufts University School of Veterinary Medicine in 1982 and then dean of Cornell's College of Veterinary Medicine in 1995. **John Strandberg**, DVM '64, PhD '68 was director of the program at Johns Hopkins until very recently when he left for a post at the National Institutes of Health.

We at Cornell salute this magnificent department at John Hopkins, as it celebrates its 35th anniversary this spring.

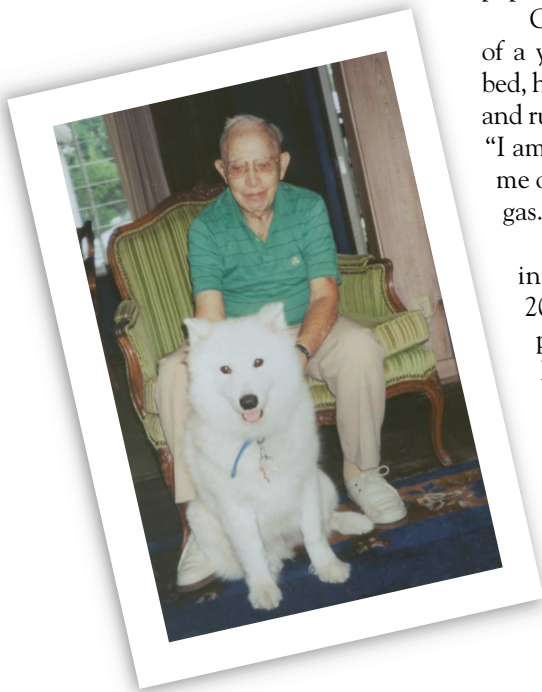
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# endnote

## With Grateful Appreciation to the Man Who Loved Dogs

Four years ago, I wrote in this column about a 90-year-old man in Delray Beach, Florida. George Cornell, a distant relative of Ezra Cornell, the founder of Cornell University, lived alone in his large house; alone, that is, except for his marvelous Samoyed companions.

Mr. Cornell was the quintessential lover of dogs: all shapes, sizes, and temperaments. However, he had a favored breed, and since the age of six he had always shared life with a Samoyed. After his seventh dog died, his wife Harriett surprised him with a male puppy whom he named Ivan. Following his wife's death, Mr. Cornell obtained a



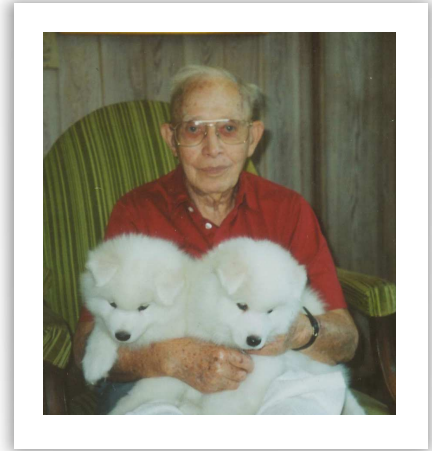
seven-week-old female named Posie. He was fond of telling me how the little white bundle of nascent energy crept up to the waiting male hunk—"It was love at first sight," he said.

My wife Doris and I were introduced to George and Harriet by Esther Bonderoff, another dear friend of the college, at a Cornell Club event at the West Palm Beach Zoo. Following Harriet's death in 1999, I had numerous occasions to visit George. Each visit to his home began with the requisite 30 minutes of romping on the floor with Ivan and Posie, then it was off to the dog park, the zoo, the museum, or dinner.

Having no children of his own, George yearned for a litter of pups. With the assurance that the college would assist with the whelping and care of Posie and her litter, he had her bred. Nine weeks later, Dawna Lamphere, DVM '03, then a final-year student, moved on-site with George to direct the final preparations for parturition and assist with the cesarean delivery of six healthy pups.

George's joy was resplendent, that of a young boy. Every evening before bed, he would hold every puppy, in turn, and rub their tummies for five minutes. "I am just so happy," he proclaimed to me one day. "I am surviving on puppy gas."

Mr. Cornell passed away quietly in the early morning of April 4, 2003, three months before his puppies reached their first birthday. Ivan joined the household of George's longtime housekeeper, Jean Fisher. Posie woofed her final goodbyes to Ivan and to Ms. Fisher, and, per George's request, I transported her by car from South Florida to her original home on Long Is-



George Cornell and Samoyed companions

**George and Harriet's magnificent gift to the life sciences initiative at Cornell will advance the health and well being of many species.**

land. The six puppies also were suitably accommodated in new homes.

On January 19, 2005, at a donor recognition dinner in New York City, Cornell President Jeffrey S. Lehman announced the magnificent gift to the university of \$50 million from the estate of George and Harriett Cornell to support programs in the life sciences and to benefit undergraduate student scholarships.

So ended the life, but not the memory nor the impact, of the man who loved dogs.

Austin O. Hooey Dean  
College of Veterinary Medicine

# coming events

## MAY 2005

- 24 Honor Day, Cornell  
College of Veterinary Medicine
- 28 Hooding Ceremony, Cornell  
College of Veterinary Medicine
- 29 Cornell University Commencement

## JUNE

- 9-11 Reunion, 5s and 0s, Cornell
- 13-14 97th Annual Veterinary Conference,  
Cornell

## JULY

- 16-20 142nd AVMA Annual Convention,  
Minneapolis, MN (alumni reception)
- 20-23 World Equine Airways Symposium, Cornell
- 29-31 17th Annual Fred Scott Feline Symposium,  
Cornell

## OCTOBER

- 14-16 Homecoming Weekend (Georgetown),  
Cornell (college tailgate)

## NOVEMBER

- 10-11 Equine Practitioners Conference, Cornell
- 12-13 22nd Farrier's Conference, Cornell
- 12-14 AAEP Fall Conference, Chicago, IL

## DECEMBER

- 3-7 51st AAEP Convention, Seattle, WA  
(alumni reception)
- 3-7 ACVP Annual Meeting, Boston, MA  
(alumni reception)

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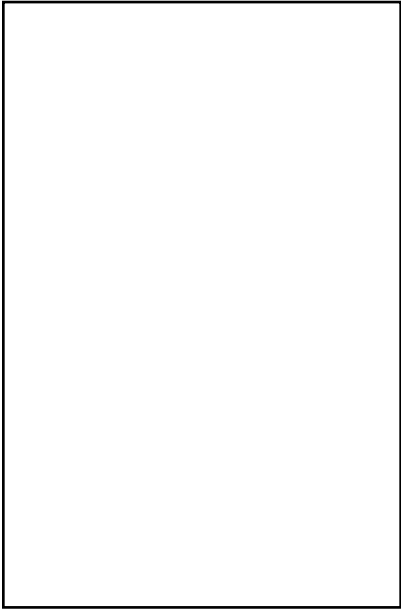
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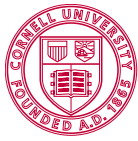
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