The anatomy of a legend: Alexander de Lahunta
The Veterinary Role in First Response

As our collective state of disbelief began to dissipate following the shocking assaults of September 11th, it was for many of us replaced by a desire to do something—anything—to help the victims, their families, and their would-be rescuers. According to our abilities and inclinations we wrote checks, gave blood, bought flags, donated supplies, wrote letters-to-the-editor, and prayed. Volunteers converged on New York City from as far away as California, some of them with no clear idea how they would help when they got there, but many with special expertise to lend to the rescue effort. Veterinarians had a very special part to play. One of those was Nishi Dhupa, who recently joined the faculty of the College of Veterinary Medicine as director of emergency and critical care in the Cornell University Hospital for Animals.

“I felt so lucky to be able to go, and to do something,” says Dhupa, a veteran of disaster response. Board-certified in both veterinary internal medicine and emergency and critical care, she went to New York City to join the veterinary medical assistance team (VMAT-1) that had been in place on the scene within hours of the collapse of the World Trade Center towers. She took with her needed supplies donated by Cornell’s Companion Animal Hospital, including medications, ophthalmoscopes, and a nebulizer for administering aerosol treatments to dogs having respiratory difficulties. For several days she examined and treated search-and-rescue dogs as they came off their 12- to 15-hour shifts searching fruitlessly for survivors in the rubble of Ground Zero, a half block away.

“When the dogs come off their shift on ‘the Mound’, as everyone calls it, we check their footpads for debris and lac-

erations and wash their eyes with a special solution, and then do a quick medical examination,” Dhupa reported by cell phone from the scene in mid-September. “If the dogs are covered with debris, we use a makeshift shower with a bucket and a hose to decontaminate and cool them down.” Some dogs also had to be treated for exhaustion and dehydration.

The Massachusetts VMAT that responded to the World Trade Center disaster was the first of four such teams that have been established nationwide. The group, which is headed by veterinarian Barry Kellogg, stockpiles medical supplies and maintains a roster of veterinarians and veterinary technicians with first-response training who can be mobilized within 24 hours of a disaster. In New York City VMAT-1 linked up with the Suffolk County SPCA, which brought its own hospital—a mobile spay/neuter clinic that can be modified on-the-fly for emergency use. The Long Island Veterinary Medical Association provided additional veterinarians to staff the VMAT site, using their long-established disaster-preparedness list. Other New York City veterinarians, headed by Barbara Calvig, also played a key role. “They mobilized incredibly quickly,” says Dhupa. “It was actually very impressive.”

Dhupa helped develop the first VMAT in the mid-1990s while she was a clinical assistant professor in the intensive care unit at Tufts University’s veterinary hospital. “It took years to develop,” says Dhupa. “It was an unbelievable amount of work to develop the infrastructure, to get funding, to get people in place. There was no precedent for what they were doing.”

The VMAT project began in 1994 at the behest of the American Veterinary
Veterinary Response

Medical Association, which saw a need to address officially the animal issues that complicate emergency evacuation efforts. The AVMA and the American Veterinary Medical Foundation developed a formal operations system to coordinate with the federal government, put together a stockpile of equipment and supplies, and helped fund the teams.

Thanks to the persistent lobbying efforts of the AVMA and the VMATs in the intervening years, the Federal Emergency Management Association (FEMA) has come a long way in recognizing the importance of a veterinary presence in the first response to a disaster. "After the Oklahoma City bombing, there was some delay in bringing in veterinarians to care for the dogs searching for survivors," says Dhupa. "In New York City, FEMA called on the VMAT immediately. The team, plus many local veterinarians and volunteers, were on the scene within a few hours and able to give effective treatment."

According to Dhupa, FEMA's thinking about the animal factor began to change after a series of hurricanes hit Florida and the Carolinas — particularly when Hurricane Floyd hit the southeast U.S. coastline in 1999. "They found that there was a huge problem evacuating people without their pets, or finding shelter for pets," says Dhupa, who was on the scene in the days following the hurricane. "People didn't want to leave their pets, their horses. Animals were not permitted in the shelters, and some owners wouldn't go to the shelters without them." Many animals were separated from their owners in the storm, and many died. Florida learned from its experiences - and from the educational efforts of the VMAT members - and became the first state to develop a disaster plan for animals, including how to move them and where to shelter them. The state now makes available some pet-friendly shelters for people.

Dhupa points out that pets must be factored into the aftermath of a disaster as well: they have real therapeutic value in helping people cope with the psychological stresses brought on by catastrophe. And if something happens to them, thoughts of their suffering add greatly to the suffering of their human companions. "We have been working to raise awareness of how important companion animals are in times of loss, she says. "If you want to look after people in times of disaster, then you have to think of their animals, too."

This truth was painfully evident in New York City, where pets belonging to residents of lower Manhattan or to victims of the terrorist attacks spent as many as nine days trapped in their homes. The New York Police Department was understandably busy elsewhere, and it took several days of concerted effort by various animal organizations to get permission to cross police lines and enter potentially shaky buildings. Owners were frantic to get their pets rescued, as Dhupa saw when she visited one of the sites set up by the ASPCA to help in locating animals and reuniting them with their owners. In addition to establishing a pet registry and giving people the opportunity to drop off a house key to facilitate rescue, the center had counselors on hand to try to comfort the many distraught pet owners who showed up looking for help.

"Of course they would tell the people not to worry, that their pets were prob-
Play Hooky!

Like me, many of you have called New York City home at some point in your lives. May I recommend a day trip?

Start out at your favorite place of worship. Turn around to see an entire row of uniformed FDNY employees behind you and see if you can keep a dry eye.

Go to the corner of Varick and King and find the Animal Medical booth. Introduce yourself as a Cornell veterinary student and watch the exhausted look on their faces turn to a smile as they invite you to pitch in and treat you like an equal. Give fluids to dehydrated pets recently rescued from their abandoned homes and bandage lacerations on one of the hundreds of outstanding and tireless working dogs.

Stand on the corner of West and Canal in the cheering section. Clap with each passing service vehicle, and to the dozens of exhausted workers on foot shout “Thank you!” with 500 other people. Watch the look on the firemen’s faces as they approach, working under a grief unimaginable, as thousands cheer and applaud and yell, “We love you!”

Weep unashamedly with a thousand others as you watch a hook-and-ladder half the height it should be, twisted and melted and covered in mud as it goes by on a flatbed, the only thing discernible about it the yellow “#20” visible where someone has carefully wiped away the ashes.

Spend some time in Union Square and let the 5000 “Missing” posters with photos and descriptions of birthmarks and tattoos surrounded by pounds and pounds of melted candle wax and roses sober you.

Stand on Fifth Avenue outside St. Patrick’s Cathedral with several thousand others singing Amazing Grace and God Bless America and relish the goosebumps.

Walk down to Battery Park. Stand with the Statue of Liberty over your left shoulder and a burning heap over your right. Look at the treacherous lean of Five Liberty Plaza and cringe.

Feel the pride as the cheers rise to a new crescendo when the veterinary trucks move past. Talk with the Belmont racetrack vets who come over after morning training hours to help out where they can.

Talk to the people around you. Feel with the people around you. Share with the people around you. It is your city and your country and your pride and your grief. It is always easier to say goodbye when you can watch a thing going, rather than suddenly turning around to find it gone.

Go home for a day. Exhaust yourself by fighting the good fight. The world will be a little bit better for it, and you will be forever changed.
We saw every kind of pet — birds, snakes, you name it. Hundreds of pets were rescued, and a very high number — perhaps 95 percent — survived. Dhupa stresses that the veterinary effort was coordinated across many organizations and involved the individual contributions of many local veterinarians, technicians, and volunteers. "Considering that nobody had planned for this, it was very well organized," she says of the pet rescue. A significant foster-care network also sprang up, largely through the initiative of retired Cornell veterinary professor Fred Quimby, who mustered his colleagues at Rockefeller University to find homes for the pets left abandoned by the deaths of their owners or other circumstances. Local veterinary practices housed animals and treated them for free. "The outpouring of generosity was amazing. Nobody was thinking about what this was costing or who was paying," she says.

Such generosity comes as no surprise to Francis Kallfelz, the College's James Law Professor of Medicine (Nutrition) and president of the New York State Veterinary Medical Society (NYSVMS). "The profession of veterinary medicine has historically been considered one of the most charitable, caring, and responsible of the learned professions," he says. "This was most evident during and after the horrific attacks on the World Trade Center in New York City. The New York State Veterinary Medical Society is very proud of the role played by members of its regional associations in response to this tragedy."

"Veterinarians from across New York State and the Northeast, donating their time and working in 12-hour shifts, have continued to provide emergency care 24 hours a day, seven days a week, as was done after September 11th, and have been available to provide emergency care in the days immediately following the attack," Kallfelz continues. "The NYSVMS is very thankful for the unstinting generosity of its members in response to these most unfortunate events and knows that veterinarians will be willing to respond similarly again in the future, should the need arise."

At the Cornell University Hospital for Animals, Dhupa is responsible for the administration of the small animal intensive care unit and intermediate care ward, which is a "step-down" unit for animals well enough to be moved out of the ICU, and for the specialized training of the licensed veterinary technicians working in those areas. She also has oversight of the 24-hour emergency service that the hospital's interns provide.

A native of Nairobi, Kenya, Dhupa is the sister, daughter, niece, and granddaughter of physicians. Among her siblings one brother is a board-certified veterinary surgeon; her other brother is a critical-care physician at St. Vincent's Hospital in Manhattan. He treated some of the survivors who streamed into hospitals in the first hours after the disaster. After that, there were only the animals to save. •

"We saw every kind of pet — birds, snakes, you name it. Hundreds of pets were rescued, and a very high number — perhaps 95 percent — survived."

Volunteer veterinarians and veterinary technicians care for search-and-rescue dogs as they come off their shifts working in the rubble of the World Trade Center collapse.
Lecture Hall II is packed. Students, junior clinicians, and the occasional professor occupy every seat, line the back of the room from one side to the other, sit along the floor in front of the first row of seats, and fill the steps a third of the way down the aisles.

On the projection screen a five-month-old golden retriever named Cochise is being walked up and down on a leash, then put through a hopping test. His examiner picks up three of the dog’s limbs to observe how he hops on the remaining hind leg.

Off to one side of the screen stands that examiner, Alexander de Lahunta, DVM ’58, PhD ’63, the James Law Professor of Anatomy. De Lahunta is an icon, revered as a teacher, renowned as an author, and universally acknowledged as a world-class neuroanatomist, clinical neurologist, and neuropathologist. As a specialty, veterinary neurology is a young field, and de Lahunta was one of its pioneers, a founding diplomate of the sub-specialty of neurology within the American College of Veterinary Internal Medicine.
“He has a memory of all these old cases. On a 1000-foot reel of film he’d have markers for all these different cases, and he’d know about all those cases.”

Howard Evans, professor of anatomy, emeritus.
Alexander de Lahunta

Self-consciousness is not a de Lahunta trait. He is dressed this day, as on most any day, in a short-sleeved white shirt, white pants, sneakers, and a red bow tie; half of the bow tie is trapped under the neck of a colorless sweatshirt. In a gruff accent that's not quite Boston, but close, he avidly points out the dog's atrophied hind limbs, the arch in his back, and his short stride and adds that he fatigues easily. Cochise is also lame in the left thoracic (front) limb, but de Lahunta attributes that to an earlier fracture.

He has the dog with him; he sets him up on a table after the video, introduces him to the audience, and gently settles him down for a nap. Despite the booming vocal projections being lobbed from directly overhead, Cochise readsily complies and is soon asleep.

De Lahunta then shows video of two goldens examined in 1972 who had the same clinical signs as Cochise but also others: a stiff, rolling motion to the thoracic limbs, cow-hocked hind limbs, and "the very first sign these guys develop", a reduced range of motion in the jaw. They also have hypertrophy in the tongue, which, he says, makes them sloppy eaters. Dogs like these, all male, have Duchenne's muscular dystrophy.

Cochise doesn't have the tight jaw. De Lahunta doesn't know what is wrong with him, but he has seen these signs in others, both male and female (Duchenne's is X-linked and rare in females). He shows video of two other dogs who also had the syndrome, and says that head-to-tail autopsies at Cornell have shown that it is not neurologic, but some sort of an inherited muscular disorder.

If the syndrome had been neurologic, he probably would have figured it out by now. Over decades of exquisitely discerning examination of neurologic cases in the clinics and post-mortem, de Lahunta has identified numerous novel syndromes or diseases, including a wobbler syndrome in dogs, a cerebellar abiotrophy of Kerry blue terriers, and a cerebral infarction syndrome in cats, and he participated in the recognition of an equine motor neuron disease akin to Lou Gehrig's disease in humans.

De Lahunta has diagnosed and documented thousands of cases - both his own and those submitted by former students in specialty practice - on slides, in writing, in radiographs and CT scans, and on film or videotape. Along with pathology professor Brian Summers, a close collaborator, he has amassed a collection of neuropathology slides that colleague Clive Huxtable, the chief of Anatomic Pathology and director of Necropsy Services, characterizes as "unquestionably the largest veterinary / comparative neuropathology collection in the world."

Huxtable has launched a project to assemble a web-based color atlas of some of the images in Cornell's neuropathology archives. The atlas will serve as a supplement to Veterinary Neuropathology, a 1995 text written by Summers with de Lahunta and the late John Cummings. The book has 564 illustrations, far too few, in Huxtable's view, to represent adequately the astounding collection that de Lahunta and Summers have compiled. He is currently working with Julie Powell, a courseware programmer in the College's Office of Educational Development, to put together a pilot module.

Much of this treasure is housed in de Lahunta's office on the second floor of Schurman Hall. More of it is filed away in cabinets that line the hallway outside. "I've been at it a while," he says with a smile. Incredibly, de Lahunta knows what's in those files and on those film reels and video cassettes. "He has a memory of all these old cases. On a 1000-foot reel of film he'd have markers for all these different cases, and he'd know about all those cases," marvels Howard Evans, a professor emeritus of anatomy. As Brian Summers puts it, "He remembers details of my experimental work on canine distemper better than I do. He knows it like it's his - that's quite exceptional."

The banks of cabinets and bookshelves have turned de Lahunta's small office into something of a maze, and he sits at his desk with enough room to back his chair up, but no more. Floor space in the adjoining laboratory has been reduced to a patch in the middle just large enough to allow him and a visitor to move around a small microscope table and a cart that serves up the anatomic specimen of the hour. In contrast to Evans's office down the hall, where the curator's hand is everywhere apparent in a wondrous display of anatomic curiosities, there is not much to see in de Lahunta's office except the plaques and citations hung or propped wherever they'll fit around the walls and along the window sill. There are a lot of them: his Borden scholarship award from 1957; an award of merit for distinguished teaching from Gamma Sigma Delta; a plaque "for outstanding achievement and service to the field of veterinary anatomy" from the American Association of Veterinary Anatomists; student AVMA and Norden awards for

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Left: Contemplating a case report.
Alexander de Lahunta

Preparing slides for pathology.

“As much as he has contributed to the field of veterinary neurology – and he is the field of veterinary neurology – his impact on students is not as an expert, it’s as a teacher.”

Wendy Deal ’03

Over the years de Lahunta has also devoted a good deal of his time to administration and writing. From 1976 to 1982 he served as director of the teaching hospital. He chaired the Department of Clinical Sciences from 1977 to 1986 and then moved his chair over to the Department of Anatomy, where he served until 1991. Among over 200 publications he has four books, all of them classic texts in standard usage in veterinary colleges worldwide: Veterinary Neuroanatomy and Clinical Neurology (1977, revised 1983), The Embryology of Domestic Animals: Developmental Mechanisms and Malformations (with Drew Noden, 1985), and Applied Veterinary Anatomy (with Robert Habel, 1985). He and Howard Evans have published five editions of Miller’s Guide to the Dissection of the Dog, a very popular text that has been translated into Spanish, Portuguese, Japanese, and an unauthorized Chinese edition.

But ask any student – or former student – what matters most about the professor known universally as “Dr. D.,” and they will tell you about the man who put everything he had into teaching them everything he could. Since joining the faculty in 1963 he has never taken a sabbatical leave because, he says, he didn’t want to leave teaching.

Stephen J. Ettinger, DVM ’64 was one of de Lahunta’s first students. One of the outstanding veterinary cardiologists in the U.S., a renowned textbook author, and a Foremost Benefactor of Cornell University, Ettinger found de Lahunta’s greatness already apparent in the first year that he taught neurology: “Sandy was hands-down the ‘teacher of the year’ to our class and he still is 40 years later.” Last May de Lahunta
became the College's first four-time recipient of the Carl J. Norden Distinguished Teacher Award, an honor accorded by the graduating class.

"Teaching is his number-one priority, and it comes through in the way he interacts with everyone," affirms third-year student Wendy Deal, who spent one summer working for de Lahunta. "As much as he has contributed to the field of veterinary neurology — and he is the field of veterinary neurology — his impact on students is not as an expert, it's as a teacher. It's not important to him that you know that he's world-renowned. He wants to teach you. He cares about the students, and he cares that we get it, that we understand what's going on."

 Adds second-year student Ann Bilderback, "Going to the two a.m. consults is totally worth it. It's obvious that he loves to teach. Things that he's taught you in Block I, taught you in Neurology, taught you ever... he'll ask you a question that you're supposed to know, not like you're supposed to know it, but kind of like it's the first time he's teaching you. He'll sit there and teach you everything. A lot of people are intimidated by him, because he's a legend, but you ask a question and he's just himself. There's no air of anything, it's just you and him, and you learn so much."

 "The thing about Dr. D. is that he's so symbolic of our experience at Cornell," explains Deal. "He's involved in our very first course, Block I, as a tutor, lecturer, and instructor in the radiology and dissection labs; he teaches Neuroanatomy and Clinical Neurology during the spring of our first year, and he teaches Applied Anatomy as part of Block V during our second and third years." "And he teaches Neuropathology in Block V and Advanced Neurology," adds Dharshan Neravanda '03, a devotee of the two a.m. consults. "You just don't have the same exposure to any other professor," concludes Deal.

De Lahunta is fond of telling students that he didn't get accepted into veterinary school on the first try. He entered Cornell as an alternate on his second try. True, he was applying as an out-of-state resident (from New Hampshire), and there were only 50 slots in a class back then, but it does seem hard to imagine what the admissions committee didn't see in him. Howard Evans remembers him as an outstanding freshman. So does Richard Grambow, DVM '57, a friend from undergraduate days at Cornell who was accepted into veterinary school the year that de Lahunta was turned down. "Sandy was a real student, dedicated to study — self-disciplined, serious, with strong work habits. He had his own agenda." De Lahunta graduated first in his class.

As a neuroanatomist, de Lahunta is self-taught. He recalls that cardiology and ophthalmology were the only specialties in the clinics when he was a veterinary student in the 1950s — and they were new in that decade. Neuroanatomy amounted to one small part of the applied anatomy course taught by department chairman Robert Habel. Habel instituted the first full course in neuroanatomy in 1960, the same year that he talked de Lahunta into returning to the College from veterinary practice as his graduate student — studying the bovine rumen. ("Habel was an applied anatomist and his field was bovine rumina, so that's what I worked on," he says with a shrug.) Once de Lahunta finished his...
Alexander de Lahunta

“One of the great strengths of Cornell is that there were no lines drawn between departments. If I wanted to work with someone in another area, I just did it.”

PhD in 1963, Professor Habel asked him to stay on to teach the neuroanatomy course. He has been teaching it ever since.

The neuroanatomy course that de Lahunta inherited had been taught by visiting instructors (or “firemen”, as he calls them) who confined themselves to lecturing on normal anatomy. No thought was given — at Cornell or anywhere else — to offering a course about neurologic diseases. Very little was known at the time about the relationship of clinical manifestations of disease to the location of lesions in the brain or spinal cord. Only two books had been published on the subject, both just after de Lahunta graduated from veterinary school. With the exception of their authors, one at the University of Pennsylvania and the other at Cambridge University, no one was studying veterinary neuropathology.

De Lahunta reasoned that students needed to know about the diseases they would see in clinical practice, and he recognized that he was not going to progress in his own efforts to master neurology until he learned neuropathology. He started prowling the clinics to make contacts and learn about cases that he could examine and share with his classes. As he likes to point out to his students, he was involved in case-based, or “vertically integrated” teaching, as he calls it, long before it was fashionable.

Pathology professor John King was in charge of Necropsy at the time, and de Lahunta persuaded him to call whenever a neurology case came in from the clinics. De Lahunta would then go down to Necropsy and remove the animal’s brain and other components of the nervous system for study. With help from King and from pathology professor Charlie Rickard, he taught himself, and in turn his students, neuropathology.

“Anatomy and pathology were separate departments until recently, but one of the great strengths of Cornell is that there were no lines drawn between departments,” he says. “There was never any bureaucracy we had to deal with. If I wanted to work with someone in another area, I just did it.”

Nor did de Lahunta confine his cross-disciplinary explorations to other departments at Cornell. During his last year of graduate school, he and

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Although Professor de Lahunta probably remembers every student he’s ever taught, he’ll have an especially hard time forgetting Jason Crandell, DVM ’01. Looks were definitely a factor in Crandell’s selection as presenter of de Lahunta’s fourth Carl J. Norden Distinguished Teacher Award at last May’s Honor Day observances. Crandell’s dress for the occasion included the famed de Lahunta bow tie that he had won in a very determined bidding contest at the SCAVMA auction in December 2000. The winning bid: $625 — and darned well worth it.

Here is an excerpt from the text of Crandell’s presentation: “I had never experienced anyone who could teach quite like him. He has unbelievable patience and strives to make you understand, and he doesn’t give up, even if you look at him as if he were speaking Greek... As for his oral exams, I have never met anyone with such a knack for dragging information out of someone in my entire life. And what’s so special about him is that he realizes we all have the knowledge buried somewhere in the back of our heads, and he will stop at nothing to get it out of us. I remember that, during my first Applied Anatomy exam, I was having a problem remembering something, and he stopped me and said, ‘What do farmers grow?’ I replied, ‘Crops, I guess,’ to which he said, ‘And crops rhyme with...?’ I don’t remember what crops rhymed with, but I do remember that after that I was able to recall the information and answer his question correctly.”

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Donald Smith, dean of the College
Alexander de Lahunta

John Cummings, who was then Habel's newest graduate student, started attending grand rounds every week at Upstate Medical Center in Syracuse. In the early 1960s the field of human neuropathology was much more advanced than was veterinary neuropathology, and de Lahunta and Cummings spent the next several years learning as much as they could. After Cummings joined the Anatomy faculty, he and de Lahunta continued to support each other's efforts to advance knowledge in their field.

De Lahunta's colleagues are quick to point out his generosity in sharing information and material, a rare trait in some academic circles. Clive Huxtable says, "His generosity with colleagues and students is remarkable. He's just unbelievably thoughtful and modest and ready to acknowledge anybody's contributions immediately. If you ask him to do something he'll do it, and do it quickly, and go beyond what you've asked him to do." Adds Brian Summers, "He is the least protective of his own discoveries. I can't think of anyone who's given more material away, no strings attached, than he has." Life's too short, says de Lahunta, to do otherwise.

Until recently de Lahunta never had a resident of his own, although for nearly four decades residents have flocked to Cornell from all over the world to learn neuroanatomy and neuropathology from the greatest mind in the field. At a time when he could rightfully be winding down his career, de Lahunta has instead taken on his first resident of his own, although for near-term plans. Scatberg searches for the right person to conduct this study in the field of veterinary neuroanatomy and neuropathology.

Schatzberg searches for the right person to take over de Lahunta's tremendous stature as a scholar, clinician, and teacher. "This is a guy who happened to choose veterinary medicine - or maybe it chose him - but he's one of the unique thinkers of the past century, in his own way an Edison, or an Einstein. But from the time students enter here, they are colleagues. He lectures on the very most current thinking in the field and brings his own discoveries to class. I'm sitting there thinking: I'll bet that a lot of the neurologists in the country don't know this, and here he is teaching it to his third-year students."

The question of de Lahunta's eventual retirement leaves students and colleagues at a loss. The popular perception is that it will take three people to carry on his work. Happily, planning is underway to recruit at least two clinical neurologists and establish a full-blown neurology service within the Cornell University Hospital for Animals. "A neurology service is one of our top priorities," confirms Richard Hackett, chairman of the Department of Clinical Sciences. "The hope is that it will be up and running long before Dr. de Lahunta retires so that there can be ample overlap with him."

According to Robert Gilbert, associate dean for clinical programs and professional service, success is now also foreseeable on a related front - the effort to equip the hospital with a state-of-the-art MRI machine. Magnetic resonance imaging, which allows detailed, non-invasive examination of soft tissues, is a very important modality for neurology practice, says Gilbert, and the acquisition of this technology must go hand-in-hand with the establishment of a neurology service at Cornell.

For almost 40 years, however, Alexander de Lahunta has carried the load alone, and done so with exceptional distinction. "There is no doubt in my mind that Dr. de Lahunta is the most highly revered veterinary teacher and clinical scholar of his generation," says Donald Smith, dean of the College. "He elevates greatly the reputation of Cornell in the eyes of the practicing community as well as the academy. Despite the strength of his professional stature, I marvel at his sustained ability to reflect optimism, zeal, and passion in all that he does. As a professional colleague, teacher, and friend, Sandy will always stand out in my memories of all my years at Cornell."

"Sandy de Lahunta is the only person I've known in my working career who I can truly say will leave a huge hole when he goes," says Huxtable. "Most holes close up pretty quickly after people go, but there will never be anyone to replace him."

Woof!

Right: de Lahunta in his element, explaining the nerves of the spinal cord in Applied Anatomy.

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“Sandy de Lahunta is the only person I’ve known in my working career who I can truly say will leave a huge hole when he goes.”

Clive Huxtable, professor of pathology
Chief USDA Veterinarian to Head Diagnostic Laboratory at Cornell

A native of Colombia, Torres has a DVM from the National University of Colombia in Bogotá, where he graduated first in his class, and MS and PhD degrees, in veterinary pathology and virology, respectively, from the University of Nebraska. He is an honorary diplomate of the American Veterinary Epidemiology Society and recipient of the 1998 Daniel E. Salmon Award presented by the U.S. Secretary of Agriculture. Last month he received a Meritorious Presidential Rank Award, an honor bestowed annually by the President of the United States to recognize excellence in the work of federal senior executive service employees.

Prior to joining the USDA ten years ago as head of the Diagnostic Services Section at Plum Island, Torres managed the virology department of SmithKline Beecham Animal Health (and its predecessor Norden Laboratories) in Lincoln, Nebraska. He had previously held several academic posts, including an associate professorship in Cornell’s diagnostic laboratory from 1983 to 1987.

In his position at USDA, Torres is responsible for all federal aspects of programs to safeguard animal health for the nation, including livestock disease eradication efforts and protection against the entry into the U.S. of diseases with the potential to devastate

"Dr. Torres is a consummate professional and a skilled visionary and is dedicated to advancing U.S. animal agriculture. It is with great pleasure that I welcome his return to Cornell."

New York State Agriculture Commissioner Nathan L. Rudgers

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Anthrax is an 'Emerging Issue' for the Diagnostic Laboratory

by Roger Segelken, Cornell News Service

Before anthrax was a tool of terrorism, it was an animal disease that was rarely seen in this part of the United States but not entirely unknown to veterinary diagnostic laboratories such as the New York State Animal Health Diagnostic Laboratory at Cornell. Now the laboratory is a much-in-demand source of information and testing for anthrax. One of the most valuable services the Diagnostic Laboratory can offer is reliable, science-based information for veterinarians, public-health officials, farmers, and the general public. In between telephone calls, scientists at the Diagnostic Laboratory and other units of the College prepare detailed information for web sites, such as the Cornell laboratory's material on the "emerging issues" of anthrax and other agents.

The preliminary screening test for anthrax infections takes less than ten minutes. A sample taken from the ear is smeared on a microscope slide and stained to highlight significant parts of the bacterial capsules. Bacteriologists look for short chains of bacilli that resemble a train's boxcars, but a more conclusive result must await the culturing of the sample, which takes about 18 to 24 hours.

"Anthrax grows very quickly," McDonough notes. "Within ten hours we can see reasonably sized colonies." One test for cultured anthrax uses bacteriophages, viruses that infect only specific bacteria. The laboratory also uses fatty-acid analysis, which looks for anthrax among a range of several bacteria thought to be bioterrorism agents. The use of PCR (polymerase chain reaction) tests will enable the Cornell laboratory to perform genetic identifications of anthrax and other agents. Suspected anthrax samples in nasal and throat swabs are handled in biosafety level 2 (BL-2) facilities at the laboratory.

Bioterrorists seeking anthrax would not find useful materials at Cornell, according to Robert Gilbert, associate dean for clinical programs and professional service. "We do have a non-virulent strain of anthrax that was provided by the Centers for Disease Control to enable us to perform required diagnostic testing, but this is a form that does not pose a threat to human or animal health." Virulent anthrax organisms had been in storage at the veterinary college several years ago when students in bacteriology teaching laboratories were taught to identify the organisms and differentiate them from similar bacteria, Gilbert notes. But that class no longer is offered and the anthrax organisms were destroyed, as was the anthrax archived from a cow in 1984 - the last time the Cornell laboratory diagnosed a spontaneous case of anthrax. The cow had contracted anthrax from the site of an abandoned woolen mill in the Albany area.

Opportunistic anthrax organisms can lie dormant for years in the soil, awaiting the ideal climatic conditions, such as heavy rains followed by a dry, windy period that distributes spores. McDonough observes. Fortunately, anthrax in cattle was never endemic in this state or the Northeast, although it continues to occur in the Southwest, including parts of Texas, as well as elsewhere in the world.

"We're trying to provide balanced information about the actual risks of anthrax," McDonough says. "Because anthrax is not endemic to this region, the sudden death of an animal is probably not a spontaneous case of anthrax." But the dissemination of anthrax through the mail and the possibility of agroterrorism, he acknowledges, casts an entirely new light on the issue.
Catherine Grenci Fabricant, the microbiology researcher whose 1970s animal-model studies in the College of Veterinary Medicine were among the first to link viruses with atherosclerotic heart disease, died September 13.

Acceptance by the research establishment of the viral hypothesis for human arterial disease was grudging, gradual, but ultimately gratifying for Fabricant, who lived to see international symposia organized on the subject. And it all began with chickens.

“She was a real pioneer in the viral etiology for atherosclerosis. She discovered that a herpesvirus of chickens was the direct cause of atherosclerosis, and this stimulated similar studies in humans by a number of investigators,” recalled Bruce W. Calnek, former chairman of the Department of Avian and Aquatic Animal Medicine, where Fabricant was a research associate, and one of the world’s leading experts on viral diseases of birds. “It was the kind of thing that — had the work gone directly into humans — wins Nobel Prizes. It was that major,” said Calnek, the Rudolph J. and Katharine L. Steffen Professor of Veterinary Medicine, Emeritus.

Fabricant’s chicken experiments built on her discovery, as reported in the journal Science in 1973, that a previously undescribed herpesvirus caused urinary obstruction in cats. Moving to the chicken as an animal model in a Cornell department already distinguished for its work with avian diseases, Fabricant was a research associate, and one of the world’s leading experts on viral diseases of birds. “It was the kind of thing that — had the work gone directly into humans — wins Nobel Prizes. It was that major,” said Calnek, the Rudolph J. and Katharine L. Steffen Professor of Veterinary Medicine, Emeritus.

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But not everyone was persuaded, at a time when cholesterol was coming into favor as the principal and purportedly sole cause of atherosclerosis.

“People like to focus on what’s fashionable in research,” Fabricant said 25 years later. “And people with little or no knowledge of virology did not want to give up pet theories, especially not to a woman!”

Fabricant, who had “only a master’s degree”, continued her research and eventually showed that chickens could be immunized against the virus to prevent arterial lesions as well as tumors.

The scientist without a PhD or faculty rank worked under the aegis — but certainly not in the shadow — of her husband of more than 50 years, Julius Fabricant, professor of avian medicine emeritus, who survives her. Born in Davoli, Italy, she emigrated at age 15 months with her parents to Rochester, New York. She attended the College of Agriculture at Cornell, where she published her first scientific paper as an undergraduate and earned bachelor’s and master’s degrees in bacteriology.

Fabricant retired in 1986, three years after researchers at Baylor College of Medicine reported evidence of cytomegalovirus (a widespread member of the herpesvirus family called CMV) in the fatty plaques of human patients with diseased arteries. Subsequent research at other medical schools has implicated CMV in unhealthy thickening of the linings of carotid arteries and proved that restenosis (rethickening of previously clogged arteries) is five times more likely in patients with CMV.

“People never realized the power of CMV,” Fabricant observed in a 1997 interview, and that was a shame, she said. Even chickens these days are the beneficiaries of an anti-herpes vaccine that is widely used in the poultry industry.
Clinical Programs Center Completed

The Department of Clinical Sciences has a newly renovated home following completion of the Clinical Programs Center. The new facility covers 4,000 square feet of space in the former Small Animal Clinic building and the adjacent one-story wing that once housed the Large Animal Clinic.

In addition to offices for Clinical Sciences faculty, interns, and residents, the building houses research laboratories, multipurpose meeting rooms, staging areas for teaching soft-tissue surgery, a large-animal arena for lunging and demonstrations, and laboratory and teaching space for the theriogenology and the ambulatory- and production-medicine services.

The SUNY-funded renovation was the last of three major projects to be completed as part of the facilities master plan finalized in 1985. The first project was the construction of the Veterinary Education Center, completed in 1993; the second project, the Veterinary Medical Center, opened in 1996.

Torres

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livestock and, as in the case of bovine spongiform encephalopathy, to endanger human health. In his federal capacity he is also chief veterinary officer of the United States in the Office International des Epizooties, the Paris-based unit designated by the World Trade Organization to develop health standards for international trade in animals and animal products. As head ofAPHIS Torres has leadership over six units with combined staffs of 1,400 people, including more than 400 veterinarians stationed in all 50 states and the U.S. protectorates.

In learning of Torres’s appointment, New York State Agriculture Commissioner Nathan L. Rudgers said, “The agriculture industry of New York State is truly blessed to have the opportunity to work with this very talented individual. Dr. Torres is a consummate professional and a skilled visionary and is dedicated to advancing U.S. animal agriculture. It is with great pleasure that I welcome his return to Cornell as the director of our highly regarded diagnostic laboratory.”

The New York State Animal Health Diagnostic Laboratory operates as a partnership between the New York State Department of Agriculture and Markets and the College of Veterinary Medicine to improve the health of animals — whether food- and fiber-producing, companion, sporting, zoo, or wild — and to prevent communicable diseases that have an impact on human health throughout the state and the region. The laboratory conducts more than 700,000 diagnostic tests each year for animals of all species, including humans, and provides education, consulting, outbreak investigation, and prevention programs.

“I am delighted in returning to Cornell University to lead the activities of the New York State Animal Health Diagnostic Laboratory,” says Torres. “Safeguarding the health of all our animals is one of the most important services that our veterinary profession provides to society. Recent events threatening the health of our animal industries and our supply of healthy and abundant food point to the greater importance that veterinary diagnostic laboratories have in the early recognition of and response to emerging or foreign animal diseases and in promoting international trade. The Diagnostic Laboratory at Cornell has a long and distinguished history of service to the state and the nation, and I am committed to maintaining and enhancing its reputation and scope of services.”
Unprecedented Gift to Further Feline Health Research

An anonymous benefactress has devised a six-million-dollar bequest — the largest gift in the history of the College of Veterinary Medicine — to benefit the Feline Health Center.

The woman who made this colossal gift is not a Cornell alumna. She does not live in the Northeast. Until her veterinarian, Dr. Colleen Currigan of the Cat Hospital of Chicago, made a gift to the Feline Health Center in memory of one of her beloved Persians, she was not aware that such a center existed.

She was painfully aware, however, of the need for research to combat infectious diseases of cats. Her four-month-old kitten had just died after a protracted and terrible struggle with feline infectious peritonitis, or FIP, an intense and destructive inflammatory response touched off by a coronavirus. Most cats who encounter the virus have no problem with it. Those who do, however, die — sometimes in as little as a week after the first signs develop. There is no effective treatment and no vaccine proven invariably to prevent the disease.

In meeting with James Richards, director of the Feline Health Center, and then with Rodney Page, director of the Cornell Comparative Cancer Program, the donor was impressed by the College's highly collaborative and cross-disciplinary approach to research and treatment. She saw an opportunity to make a genuine difference in feline health by investing in their efforts.

"The charities that benefit people are 'dramatic' and always attract their share of major donors," she says. "It seems to me that animal research, particularly feline research, is lagging behind human research because it hasn't had that level of financial support. Cats, who offer such a degree of grace and beauty and kind companionship to their friends, and who are my special interest, deserve my attention. It is time to give back the affection and care that cats have given me throughout my life."

Her magnificent generosity will establish an endowment for general program support of studies of feline infectious diseases and other inflammatory conditions and fevers of unknown origin. This exceptional funding will assure that the Feline Health Center can continue in perpetuity and respond effectively to the needs and opportunities that arise to conquer FIP and other devastating diseases of cats.

Kresge Foundation Awards Grant for Linear Accelerator

The College of Veterinary Medicine is one giant step closer to its goal of acquiring a state-of-the-art linear accelerator for the Cornell University Hospital for Animals after receiving a $500,000 Kresge Foundation Science Initiative grant. Half of the challenge grant will be awarded as soon as contracts are signed for the purchase of the accelerator. Before receiving the remaining $250,000, however, the College must raise one million dollars in donations from alumni and friends, corporations, and foundations by the end of March 2003.

As a prerequisite for qualifying for the Kresge grant, the College raised $500,000 in gifts for the accelerator during the last fiscal year. Those funds plus the initial $250,000 to be received from the Kresge Foundation will be applied to the purchase of the equipment. The one million dollars yet to be raised will be used to endow the maintenance and eventual replacement of the equipment. Once that fundraising effort succeeds, the Kresge Foundation will provide an additional $250,000 for the endowment.

The Science Initiative of the Kresge Foundation awards grants to colleges and universities, teaching hospitals, medical schools, and research institutions. Through the use of challenge grants, the program requires organizations to demonstrate the ability to raise funds for equipment and endowment. Since the program was launched in 1988, the Kresge Foundation has awarded 125 Science Initiative grants totalling $44.7 million. The Kresge Foundation is an independent, private foundation created by the personal gifts of Sebastian S. Kresge. It is not affiliated with any corporation or organization.

The acquisition of a linear accelerator for use in radiation therapy will greatly enhance the capacity of the hospital's oncology service to treat cancers in companion animals. Radiation is essential for the treatment of tumors that are poor candidates for surgery due to either their size or their location in the body. Newer accelerators come with optional capabilities that allow the information obtained in a CT scan to be downloaded to a specialized computer and used to create a "virtual patient". The radiation oncologist is then able to refine the angle, intensity, depth, and outline of the beam before touching the real patient. Unlike chemotherapy, which is administered systemically, computer-modelled radiation treatment can be focused precisely to destroy cancerous tissue while avoiding damage to surrounding, healthy tissues.

A large radiation suite with a 500-square-foot vault stands ready to house the needed equipment. The goal is to acquire the best equipment available in any veterinary teaching hospital in...
the country and to offer animal patients the very high quality of radiation therapy that is available in many human hospitals.

The linear accelerator will give Cornell the ability to redefine veterinary radiation oncology as it is used and understood today. The College of Veterinary Medicine seeks your help in achieving this important goal. Please contact Peg Hendricks, assistant dean of public affairs, by calling 607-253-3744 or by writing to the address on the inside back cover of this newsletter.

HONORS, GIFTS, AND GRANTS

Bequest to Benefit Research

Anne Groot of Rye, New York has expressed her lifelong love of cats and dogs by making a bequest of over $900,000 to benefit the College of Veterinary Medicine. A native of the Netherlands, Ms. Groot is a graduate of Hunter College of Veterinary Medicine. A native of the Netherlands, Ms. Groot is a graduate of Hunter College and Columbia and lived most of her life in Bronxville, New York. Her magnificent gift will support the College's animal health research programs.

Faculty News

Max J. Appel, professor of virology, emeritus, was recently honored with the Outstanding Service Award of the New York State Veterinary Medical Society. The award, given in recognition of "his prodigious scientific accomplishments and his commitment to veterinary medicine", was presented at the banquet following the Society's annual meeting in November.

Several years after completing a PhD as a student of Leland Carmichael at the Baker Institute, Appel, who is also a veterinarian, published his now-classic study of the pathogenesis of canine distemper virus (CDV). Over the years his expertise with CDV vaccines has repeatedly been placed in the service of wildlife conservation, most notably in protecting the black-footed ferret from extinction due to CDV infection. At the time that Appel developed a safe vaccination strategy for the ferrets, only six were known to remain; captive breeding has since increased their number to more than 1,000. Appel's other achievements include his role in the identification of canine parvovirus and the development of the first parvovirus vaccines and his success in establishing methods for the controlled study of Lyme disease pathogenesis in dogs.

Leland E. Carmichael, the College's John M. Olin Professor of Virology, Emeritus, has been chosen to receive Hill's Pet Nutrition's 2002 Mark L. Morris, Sr. Lifetime Achievement Award. The award will be presented during the opening ceremony of the North American Veterinary Conference in January. Carmichael will also be honored with a contribution of $20,000 for companion-animal research to be given in his name to the Morris Animal Foundation.

A veterinarian with a PhD in virology from Cornell, Carmichael produced a string of important discoveries in his 40-year career at the College's Baker Institute for Animal Health. He is best known for his work with canine parvovirus type 2 (CPV-2), a lethal pathogen of dogs that appeared seemingly out of nowhere in the late 1970s and rapidly spread across four continents. Working with Institute virology professor Max Appel, Carmichael made the first description of CPV-2 in the U.S. They and their colleagues determined the virus's pathogenesis and means of transmission and developed the first vaccination strategies. Carmichael developed the first diagnostic test for CPV-2 and perfected the first attenuated live vaccine, which was for many years Cornell's greatest source of patent income.

Robert Gilbert and Donald Lein were elected to different councils of the American Veterinary Medical Association at the organization's annual meeting in July. Gilbert, the College's associate dean for clinical programs and professional service, is serving on the Council on Veterinary Services. Lein, the director of the New York State Animal Health Diagnostic Laboratory at Cornell and chairman of the Department of Population Medicine and Diagnostic Sciences, was tapped for membership on the Council on Public Health and Regulatory Medicine. In addition, Donald Smith, dean of the College, currently serves on the Council on Education.

Peter Nathanielsz, the James Law Professor of Reproductive Medicine and director of the Laboratory for Reproduction Research in the Department of Biomedical Sciences, has published another book in his series on "fetal programming", or the effects of the environment in the womb on lifelong health. The Prenatal Prescription, published by HarperCollins, follows his earlier books, Life Before Birth (1997) and Life in the Womb (1999).
Piano virtuoso André Watts performed at Cornell’s Bailey Hall on a recent Thursday evening. During his rendition of Beethoven’s *Appassionata* sonata, I could not help but marvel at the great mystery of triumph over tribulation. The sonata was composed in 1804 and 1805, when Beethoven was deaf, lonely, and unable to sustain the close personal relationships that he sought with great passion. Having no children of his own, he even attempted unsuccessfully to adopt a beloved nephew. Angry and alone, and in a world where the only sound he heard was inside his head, he composed this most brilliant and expansive of piano scores, which some scholars have likened to Dante’s *Inferno*. Despite indescribable personal tragedy and solitude, Beethoven had the capacity to carry on, making transcendent use of the expressive powers with which he had been imbued by his creator.

One week earlier, I sat in the home of an elderly man in southern Florida, listening to story after story of his life experiences with Samoyed dogs. Since his early childhood, he had seldom been without one of these favored companions. Their names denoted a pattern of Russian influence: Sergei, Polka, Ivan, Prince, and so on. Now that he is recently widowed, the gentleman’s Ivan III and Posie sustain and amuse him. He not only plans every detail of their dietary needs and veterinary care, but he also prepares them for conformation and obedience showing. Though he has never had a litter of puppies before, he plans to breed Posie next year. Now in his nineties, he aspires, once again, to witness the creation of life.

Our third child prepares for university. Every weekend finds him visiting a different college: Colgate, Delaware, Gettysburg, Nazareth, and others. He visits classes and meets with lacrosse coaches. He rooms with freshman students, eats in cafeterias, and watches team practices. In the face of unstable national and world affairs, he and his classmates dream dreams. They are our future, and we find great joy in their planning, and we are sustained by their hope and optimism.

Despite the tumultuous events of the past two months when creation groaned and travailed in pain, we continue to celebrate life. We recognize the joys and fruitfulness of our work, even as we struggle to comprehend the tragic events unfolding before us. And we recall that to every thing there is a season:

> A time to weep, and a time to laugh;  
> A time to mourn, and a time to dance. 

Like so many public and private enterprises, the College of Veterinary Medicine faces great challenges in the aftermath of September 11th. How we deal with the unanticipated fiscal pressures will define our ability to prevail during adversity.

Thankfully, we have prepared wisely during the last few years: by reorganizing and revitalizing departments, by establishing priorities to yield maximal impact, and by venturing into new markets. Nevertheless, we are still about to be caught in a tightening vise of decreased state and public support, while facing increasing university and public expectations. The road ahead will be difficult. However, we are confident that we will prevail, and that we will be strengthened greatly in the process.

More than ever, I thank you for your support and encouragement, and invite your input.
COMING EVENTS

January
13-17
North American Veterinary Conference,
Orlando, Florida

February
11-14
Western States Veterinary Conference,
Las Vegas, Nevada

March
15-17
94th Annual Conference for Veterinarians,
Cornell College of Veterinary Medicine

April
6-7
Horses 2002,
Cornell College of Agriculture
and Life Sciences

13
36th Annual Open House,
Cornell College of Veterinary Medicine

Lisa Mitchell, LVT, works a horse in the new lunging arena.