Report of the College of Veterinary Medicine

1992-1993 and 1993-1994





The College of Veterinary Medicine at Cornell University in Ithaca, New York, is the primary health resource for the state's multibillion-dollar animal population.

The college's mission, mandated by the citizens of New York State through their elected representatives, is to advance animal and human health through education, research, and public service.

This report is a summary of the activities during the years 1992–93 and 1993–94 of the students, faculty, and staff who worked to accomplish that mission and, by doing so, to justify the public's trust.

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Report of the College of Veterinary Medicine

Cornell University

Ninety-sixth Report

A statutory college of the State University of New York Cornell University, Ithaca, New York July 1, 1992–June 30, 1993 July 1, 1993–June 30, 1994

This document fulfills the reporting requirements of article 115, section 5711 of the New York State Education Law.

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Message from the Dean

Future historians may very well characterize 1993–94 as a year that rivaled in significance the year of our founding. Over the past twelve months, we inaugurated fundamental changes in the curriculum for professional students, opened a state-of-the-art educational facility, and drew closer to completing what will be the largest and most modern veterinary medical hospital and research complex in the world. At the same time, we celebrated the 100th anniversary of our chartering as a college and passed the \$25 million mark in a major fund-raising campaign to ensure our financial stability for a second century.

Individually, any one of these events would be considered important. Collectively, they herald the beginning of a new era in veterinary medical education, research, and service at Cornell.

In the course of celebrating our centennial, we had the opportunity to recall and highlight many of the people, events, and achievements that shaped our first 100 years as a college. In lieu of an annual report for 1992–93, we published

onstruction of the new Veterinary Medical Center began in 1992 and was approximately six months ahead of schedule by fall 1994. The facility is slated to open in 1995 and will include a new teaching hospital with separate areas for food animals, horses, and small companion animals. Several of the college's seven academic departments will move into new research laboratories and offices on the upper floors.

The Veterinary Education Center opened for classes at the start of the fall 1993 semester. The new facility was built in the first phase of the state-funded \$90 million construction and renovation program currently under way. It includes expanded space for the library, two new lecture halls, and a state-of-theart teaching laboratory that can accommodate up to ninety-six students at shared workstations equipped with dual-headed microscopes and networked computers.



and distributed a commemorative booklet tracing the history of the college. Thus, rather than looking back again in this publication—even to chronicle the last two years—we have chosen the present as our primary focus. (The final section of this report, however, includes financial statements for both the 1992–93 and 1993–94 fiscal years.)

In the pages that follow, you will find a behind-the-scenes glimpse of life at the college today. By following a number of students, faculty, and staff through the course of a representative day, we hope to convey a sense of the pace, depth, and breadth of the work that goes on here as well as the vitality and dedication that characterize our people. Photographs were selected to illustrate in small part the continuum of life at the college, with scenes that hark back to earlier days interspersed among contemporary pictures of our classrooms, clinics, and research laboratories.

Robert D. Phemister

Robert D. Phemister Dean



James Law Hall, the first veterinary college building on the Cornell campus, circa 1900

Passages

Deaths

Charles G. Rickard (DVM '43, MS '46) Professor Emeritus

Dr. Charles G. Rickard, professor emeritus of pathology, died October 20, 1993, at his home in Ithaca following a long battle with cancer. His career at the college spanned forty-eight years.

Dr. Rickard, who earned his D.V.M. and M.S. degrees at Cornell, established the first clinical pathology laboratory at the college when he joined the faculty in 1946. He was chair of the Department of Pathology from 1965 to 1973 and served as associate dean from 1969 to 1984. As associate dean, he was largely responsible for academic programs and facilities administration. He coordinated several major capital projects, including construction of the Veterinary Research Tower and Diagnostic Laboratory. In the early 1980s he was instrumental in securing funding from New York State to develop the master plan for the building program that is now under way. Dr. Rickard was appointed acting dean in 1984 when Dr. Edward Melby left the college, and he retired a year later.

Throughout his career, Dr. Rickard was a notable teacher and one of the college's leading researchers, focusing primarily on feline infectious disease and cancer studies. In the mid-1960s he established and directed the first laboratory of oncology at the college and operated the Feline Leukemia Studies Laboratory on Snyder Hill, both of which were funded largely by the National Cancer Institute. In 1977 he helped establish Aquavet, a landmark program in aquatic veterinary medicine that is conducted jointly by Cornell, the University of Pennsylvania School of Veterinary Medicine, and the Marine Biological Laboratory at Woods Hole, Massachusetts. He co-directed the

program for twelve years.



Professor Emeritus

Dr. John H. Whitlock, professor emeritus of parasitology, died May 22, 1994. A member of the college faculty since 1944, he was well known for his dual interests in veterinary parasitology and ecology.

Dr. Whitlock was the author of more than one hundred journal articles and several textbooks on parasitology and histology. Much of his enduring work focused on the ecology of parasites, particularly the endoparasites of sheep. His 1958 study on the inheritance of resistance to trichostrongyloidosis in sheep is considered a landmark study in genetic resistance to intestinal worms. He was an early proponent of an ecological approach to parasitology in veterinary medicine and, in pursuing the diverse topics that interested him, did not confine himself solely to his own discipline. For example, his 1954 paper on new uses for esophageal intubation in lambs was "rediscovered" in the early 1970s and has since become the universal method of administering emergency treatment to hypothermic newborns.

Dr. Whitlock served the university as a faculty trustee from 1971 to 1976. In this role, he took a keen interest in issues of importance to students, particularly women and minorities. He also was known for having quietly provided financial support to a number of veterinary students over the years, which enabled them to finish their degrees on time. His commitment in this regard was so great that he bequeathed his estate to Cornell to create a new endowment named the Cornell Women in Science Fund. It will be used to provide financial assistance to female graduate students majoring in a science or enrolled in the Colleges of Veterinary Medicine or Engineering.



Charles G. Rickard



John H. Whitlock

Retirements



Francis H. Fox (DVM '45) Professor Emeritus

Dr. Francis H. Fox, professor of large animal medicine and obstetrics, celebrated his seventieth birthday in March 1992 and was promoted to emeritus status at the end of that year.

Dr. Fox received his D.V.M. degree from Cornell in 1945 and began work as a research assistant at the Veterinary College the afternoon after he graduated. He spent the 1946-47 academic year as an instructor in large animal surgery at the College of Veterinary Medicine at Ohio State University and returned to Cornell in 1947 as an assistant professor of medicine. He was named chief of medicine and director of the Ambulatory Clinic in 1965, and he was chair of the Department of Large Animal Medicine, Obstetrics, and Surgery from 1972 to 1977. Most alumni remember him equally for his colorful personality, for his skill as a diagnostician in large animal medicine and obstetrics, and for the emphasis he placed on teaching the art and science of physical diagnosis.

The annual celebration of Dr. Fox's birthday has been a favorite social event at the college for almost forty years and has been continued in spite of his retirement (and over his annual protests). Organized by third-year veterinary students, the tradition began in 1955 when the Class of '56 presented him with a fake birthday cake. In recent years, the occasion has evolved into a full-fledged theatrical production in James Law

Auditorium, in which the students entertain the entire college community with skits and impersonations of Dr. Fox and other favorite faculty members.



Neil L. Norcross Professor Emeritus

Dr. Neil L. Norcross, professor of immunochemistry and secretary of the college since 1973, was promoted to emeritus status at the end of June 1994.

Dr. Norcross earned M.S. and Ph.D. degrees at the University of Massachusetts, Amherst, and completed post-doctoral studies at Johns Hopkins University. He was a microbiologist in the immunology section at Plum Island Animal Disease Laboratory before joining the college faculty in 1960 as an assistant professor of immunochemistry. He taught basic and graduate courses in immunology for more than thirty years.

In the early 1970s Dr. Norcross worked with Dr. Leroy Coggins on the development of an immunodiffusion test for equine infectious anemia (now known as the Coggins test). He was named director of mastitis research in 1965, and his research has focused on immunological studies of mucosal immunity in bovine mastitis. He has studied specifically the pathogens *Streptococcus agalactiae*, *Staphylococcus aureus*, and *Escherichia coli*. His work led to the development of a vaccine for a mastitis caused by *S. aureus*, which was patented in 1985 and has been tested in field trials over the past two years.

Launches



Martin J. Fettman (DVM '80, MS '80)

As the college kicked off its Centennial Celebration in fall 1993, Cornellian Dr. Martin J. Fettman became the first veterinarian astronaut. He served as a payload specialist aboard the space shuttle *Columbia* for NASA's Spacelab Life Sciences-2 mission.

The primary goal of the fourteen-day space shuttle mission was to investigate physiologic responses in humans and animals to microgravity and subsequent readaptation to gravity. Eight experiments involving the astronauts and six using laboratory rats focused on the cardiovascular, neurovestibular, and musculoskeletal systems. It was the first time that hands-on experiments were performed on live animals in space.

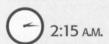
Dr. Fettman, who earned his B.S., D.V.M., and M.S. degrees at Cornell, is professor of pathology at the College of Veterinary Medicine and Biomedical Sciences at Colorado State University. He returned to Cornell in March 1994 as a keynote speaker for the college's Centennial Celebration and again in June to present the Spencer T. and Ann W. Olin Lecture during Cornell's reunion weekend.

A Day in the Life of the College of Veterinary Medicine

What is a typical day at Cornell's College of Veterinary Medicine?

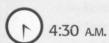
Setting out to answer that question, we quickly found that few of our faculty, students, and staff have a schedule that is consistent from day to day. And like all working people, those associated with the college find themselves juggling the responsibilities of their professional and personal lives, at work and at home, on a daily basis. No single day's events would truly represent the depth and breadth of the work that goes on here year-round. (On average, 320 D.V.M. students, 120 graduate students, more than 170 faculty members, and close to 700 staff members spend their days—and nights—studying, teaching, and working at the college.)

To show you what a typical day might be like, a number of faculty, students, and staff told us about the commitments and activities that fill their days. By describing some of the things that these few people have done recently, we hope to give you a behind-the-scenes glimpse of life at the college today. Although we freely admit to taking some literary license to fit their activities into the framework of a single day, everything described actually did take place during the first few weeks of the fall 1994 semester.



Veterinary Medical Teaching Hospital (VMTH). Senior D.V.M. student Rick Glass '95 arrives for neurology rounds conducted by Dr. Alexander "Sandy" de Lahunta, James Law Professor of Veterinary Anatomy. They are joined by three other students and Dr. Cindy Jackson, a resident in large animal medicine. Dr. de Lahunta holds "neuro rounds" five mornings a week to check confirmed and suspected cases of neurologic disease among patients in both the Large Animal and the Small Animal clinics. Attendance is voluntary for any interested D.V.M. students, residents, or interns, and Rick has been going two or three times a week since his third year. At about 3:30 A.M. he heads home to catch a couple of hours of sleep before returning for his current rotation on the small animal medicine service.



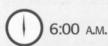


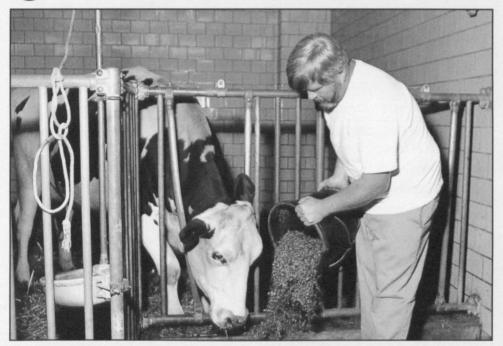
Small Animal Clinic. Betty Leete (left), small animal care supervisor, and animal attendant Judy Withers begin feeding and caring for patients and hospital-owned animals. At the same time, three clinic aides start cleaning and preparing the surgical suites, the examination and treatment rooms, and other facilities in the clinic, including the Avian and Exotic Unit and the Community Practice Service.

R-Barn. Animal attendants begin milking the fifty-five cows in the college's dairy teaching herd.

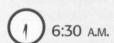


Large Animal Clinic. Dr. Tom Divers, associate professor of large animal medicine, arrives at his office, early as usual, to catch up on paperwork. This morning he wants to finish preparing materials for a presentation on bovine internal medicine that he has been asked to give at the annual meeting of the American Association of Bovine Practitioners later this month. He also will continue editing and revising a chapter for a book he is writing on equine emergency therapy with Dr. James Orsini, a Cornell graduate now practicing in Pennsylvania.

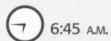




Large Animal Clinic. Fred Durfey and three other animal attendants begin milking and feeding, mucking stalls, and spreading bedding for patients, while two clinic aides clean and prepare the surgical suites, the treatment rooms, and the breezeway.



Small Animal Clinic. Rick Glass '95 returns to begin his day on the small animal medicine service rotation. He checks his two inpatient cases, administers medications, updates their charts, and talks with Betty Leete about the special care needed for these patients.



I-Barn. Ray Lawrence, the college's farm manager and head of the animal care section for the VMTH, arrives for work. His typical day runs until 4:00 p.m. so that he is present for all shift changes among the animal attendants and clinic aides and, if necessary, can assist the material handler with supply deliveries. During last February's blizzard, he was the only animal care staff member in the Large Animal Clinic who made it in to work (all county roads were closed). That day he took care of thirty-four clinic patients with the help of two senior students and a resident clinician.



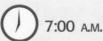
Dr. Cornelia "Nelly" Farnum, associate professor and chair of the anatomy department, leaves home about 6:00 A.M. for her daily two-and-a-half-mile walk with her poodle, Sophie. She began a six-month sabbatical leave from regular teaching and administrative duties on August 1, 1994, but is still actively engaged in her NIH-funded research study on the cellular regulation of postnatal bone growth.



arm manager Ray Lawrence (right) and material handler Lee Foster



Dr. Mary Smith, associate professor of large animal medicine, arrives at the Ambulatory Clinic at 7:30 A.M. She checks with the clinic secretary about calls that came in overnight. Then she returns phone calls to several clients and veterinarians, updates the schedule for today's farm visits, and delivers samples collected the previous day to the Diagnostic Laboratory. She's on the road four days a week and spends Fridays in the office catching up on paperwork and meeting with students and colleagues.



Schurman Hall. Dr. Barry Cooper, professor of pathology, arrives at his office to finish preparing material for today's afternoon laboratory session. He is the course leader for *Function and Dysfunction*, a new foundation course that integrates basic science material from the disciplines of physiology, biochemistry, cell biology, histology, basic pathology, hematology, and pharmacology. The twelve-week course begins in the spring of the students' first year and carries over to the fall semester of their second year. He equates the job of coordinating the new course—from compiling case studies, to organizing the microscopic labs and hands-on physical diagnosis sessions with live animals, to coordinating the efforts of more than twenty participating faculty members as lecturers and tutorial group leaders—to the challenge of "starting a new veterinary school from scratch."



7:30 A.M.

Cafeteria, Veterinary Research Tower. Senior Bart Forlano '95, a house manager for the coeducational veterinary fraternity Omega Tau Sigma, buys a cup of coffee and chats with several first-year students who are planning to pledge the fraternity. Bart has lived in the OTS house for the past three years and remains actively involved in fraternity functions, despite the long hours associated with clinical rotations this year. Last night, for example, he helped host and cook a special dinner for the pledges.



8:00 A.M.

Ithaca. Dr. Susan Fubini, associate professor of large animal surgery, leaves home to take her two children to day care before heading to Cornell. Her husband, Dr. Rory Todhunter, an assistant professor of small animal surgery, is already at work.

Third-year D.V.M. student Victoria Martinez '96 catches a bus to Cornell in downtown Ithaca.

Schurman Hall. Dr. Joel Baines, assistant professor of virology, arrives at his laboratory and sets up several experiments for his research project on the replication of herpes simplex virus. Although he joined the faculty just a year ago, his study has already generated findings significant enough to support a successful application for NIH funding.

VMTH. The Small Animal Clinic, Community Practice Service, and Large Animal Clinic begin receiving new patients for the day.



Class in large animal surgery, circa 1909



Rick Glass '95 prepares to draw blood from a patient. Animal health technician Deb Watrous (right) holds the dog while Dr. Sharon Center, head clinician on the small animal medicine service, observes.

Schurman Hall. Stephen Rutherford, courseware developer for the college's Office of Educational Development, reserves his mornings for software development and maintenance. Yesterday he finished writing a new code to add a feature to the courseware application CorVetLab; it will enable faculty and staff members to create "hyperlinks" in their computerized instructional programs. Today he'll begin revising the on-line documentation and "help" text in the software. By next week he should be able to release the new feature to a small group of faculty and staff members, who will use it on a test basis and report back any problems they encounter. Within a few weeks, Steve expects to resolve all the bugs and release the updated software for use in the dry laboratory and other teaching facilities.

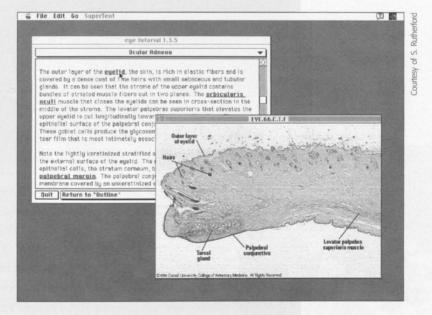
Senior student with a client and patient, circa 1947



n the courseware CorVetLab, a "hyperlink" appears as a highlighted word or phrase in the text on the screen. When the student clicks on the hyperlink with the computer's mouse, the display on the screen switches to a still picture or moving image (e.g., a video sequence from an endoscopic exam), or plays a sound.

Lecture Hall 1, Veterinary Education Center.

Drs. Mary Smith and Robert Hillman, senior clinician in theriogenology, conduct a onehour selective course for third- and fourth-year D.V.M. students on



poisonous plants. Today they will walk over to the Cornell Plantations for a field trip, stopping to examine indigenous plants along the way.



Ann Prince-Rivkin, grant and contract officer, meets at 8:00 A.M. with Dr. Richard Cerione, professor of pharmacology, to review a new BAA (Broad Agency Announcement) from the U.S. Department of the Army seeking applications for biomedical research projects on military women's health issues. Dr. Cerione is working on a breast cancer study funded by the Army. More and more these days, such federal agencies are directing the kind of research they will fund by issuing requests for proposals to universities for specifically targeted studies.

Research Administration Office. Grant and contract officer Judy Wood is compiling financial data on expenditures from restricted gift sources and state, federal, and industry grants and contracts for the college's annual report.



8:15 A.M.

Large Animal Clinic. Before conducting morning rounds, Dr. Tom Divers meets briefly with Dr. John Cummings, professor of anatomy, and Dr. Hussni Mohammed, associate professor of epidemiology, to discuss plans for two farm visits they will make next week to look at suspected cases of equine motor neuron disease (EMND). In the past four years, they have documented more than 100 cases of the disease, which closely resembles amyotrophic lateral sclerosis, or "Lou Gehrig's disease," in humans.

pr. Tom Divers begins morning rounds at 9:00 A.M. with senior students on the large animal medicine service.



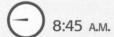


Tutorial groups in the first-year foundation course

The Animal Body meet three days a week from
8:00 to 10:00 A.M.

8:30 A.M.

Virology Section, Diagnostic Laboratory. Dr. Jorge Lopez, senior research associate and assistant director of the virology section in the Diagnostic Laboratory, meets with the laboratory technicians, assigns testing for the day, and answers their questions before starting to read and interpret test results from the previous day. He then returns calls to several veterinarians to answer questions about how to interpret test results and submit samples. The virology section processes an average of 6,000 samples each month from referring practitioners, pharmaceutical companies, diagnostic laboratories, and of course, the college's own teaching hospital.



Upson Hall, College of Engineering. Dr. Nelly Farnum is leading a discussion on the biological controls of longitudinal bone growth with twelve engineering graduate students in the short course she is co-teaching with Donald Bartel, professor of mechanical and aerospace engineering. She spends several hours a week working with them on the biological issues that are significant in understanding how bones grow. The engineers are reciprocating by helping her develop a computerized three-dimensional model—called a finite element analysis—of bone response to external mechanical perturbation during growth.

Radiology Suite, VMTH. Bart Forlano '95 (center) gives a ten-minute presentation on a case he saw earlier this week to other seniors currently on the radiology service rotation. He had assisted in performing a myelogram on a horse with cervical stenotic myelopathy (Wobbler's syndrome). Bart points out the lesions on the radiograph and describes the pathogenesis of the disease, noting that it is seen typically in thoroughbred horses and large-breed dogs.





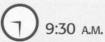
9:00 A.M.



Dr. Susan Fubini (right) observes as senior Suzanne Mullings '95 tends to a patient.

Large Animal Clinic. Dr. Susan Fubini joins the other clinic surgeons and the residents, interns, and senior students currently on the large animal surgery rotation for brief morning rounds to check the status of inpatients. By 9:30 A.M. they are beginning to take new surgery cases.

Hagan Room, Schurman Hall. Dr. Susan Wade, senior research associate and director of the Diagnostic Laboratory's parasitology section, holds a meeting with members of the Cornell Technical Support Group working on the New York City watershed research project. For the past three and a half years, she has been testing for *Giardia* and *Cryptosporidium* in fecal samples from cows, other domestic animals, and wildlife in the 1,900 square miles of watersheds that supply water to Manhattan and the other four boroughs.



Ambulatory Clinic. Dr. Mary Smith and two senior students leave for the day's farm visits. Their first stop is Cornell's Mount Pleasant sheep farm, where the students will gain practice performing ultrasound exams on ewes to check for pregnancy. Dr. Smith's ambulatory territory includes all the university's livestock farms in the Ithaca area, and she visits most of them twice a week. Much of her work on these routine visits is performed primarily for teaching purposes; for example, all stillborn and other dead lambs from the Mt. Pleasant farm are brought back to the college for necropsy.

Large Animal Barns. Ray Lawrence accepts delivery of approximately 1,500 bales of hay and 500 bales of straw from Cornell's Department of Agronomy and then asks two animal attendants to help him and Lee Foster, the material handler, unload the wagons. About twenty minutes later, another vendor arrives with 1,000 bags of shavings. They spend most of the morning stacking bales and moving pallets in the barns.



Dr. Barry Cooper stops in his laboratory for about a half hour before meeting with his tutorial group of second-year students in the foundation course *Function and Dysfunction*. His current research focuses on the molecular genetics of canine muscular dystrophy and is funded by NIH.



10:00 A.M.

Lecture Hall 1, Veterinary Education Center. Dr. Norman Ducharme, associate professor of large animal surgery, has just finished giving a lecture on equine lameness to third-year students. Their schedule this morning includes two more one-hour lectures: Dr. Sydney Moise, associate professor of cardiology, on cardiac disease in small animals; and Dr. John Ludders, associate professor of anesthesiology, on anesthesia recovery.

Immunohistochemistry Laboratory, Schurman Hall. Dr. Jorge Lopez sets up the automated histomatic slide-staining machine to run later that afternoon. The machine will automatically apply the various reagents, buffers, and washes necessary in the time-consuming process of making immunoperoxidase stains of formalin-fixed tissues. In this ongoing research project, Dr. Lopez has developed almost thirty unique stains that are used to identify infectious diseases such as rabies, bovine virus diarrhea (BVD), bovine corona virus, equine viral arteritis (EVA), minute parvovirus, *Trypanosoma cruzi*, *Toxoplasma gondii*, and feline infectious peritonitis (FIP). Cornell has the first laboratory in the United States to offer such a large panel of stains for both diagnostic and research purposes. The advantage of the technology Dr. Lopez has developed is its versatility for diagnostic pathology, teaching, and research. Field samples no longer have to be frozen



During a break between the thirdyear class's morning lectures, Mara DiGrazia '96, president of the Student Chapter of the American Veterinary Medical Association (SCAVMA), reminds her fellow students to pay their SCAVMA dues by the end of the week to receive a year's subscription to the *Journal of the* AVMA.

and transmitted to the laboratory immediately, and the process also can be used on archival samples for retrospective studies. Diagnostic accuracy is improved because with light microscopy the distribution of the infectious agent can be seen simultaneously with the histologic lesions.



10:15 A.M.

Small Animal Clinic. Rick Glass '95 greets his next clients, a couple who have returned with their Doberman Pinscher for exploratory surgery. The patient had been seen previously for chronic diarrhea, and parasites and malabsorption syndrome had been ruled out. Some form of cancer is suspected.

Schurman Hall. Dr. Barry Cooper and the twelve other faculty tutors for the foundation course *Function and Dysfunction* meet with their groups of second-year students to discuss a case study concerning canine reproduction. The tutorial groups of six or seven students meet for two and a half hours three times a week. Each week they work through a new case, which gives the students an opportunity to analyze and discuss clinical methods of

diagnosis and treatment and apply the basic science concepts they are learning in lectures and laboratory sessions.



Dr. Jorge Lopez in the immunohistochemistry laboratory

S econd-year students
Cesar Tello '97 (left) and
Nate Heilman '97 in a tutorial
group meeting for the
foundation course Function
and Dysfunction



11:00 A.M.

Ultrasound Laboratory, VMTH.

Dr. Amy Yeager, radiology instructor, conducts an abdominal ultrasound exam on a canine patient and shows the seniors on rotation in the radiology service how to interpret the images.

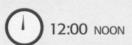
Next week the students will conduct the exams under her supervision.



A t 11:00 A.M. Dr. Sandy de Lahunta and other anatomy department faculty members are working with first-year students in a gross anatomy laboratory session.

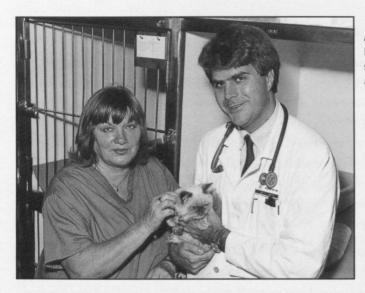
Dr. Susan Wade (right) shows lab technician Angela Struble an unusual sample submitted to the parasitology laboratory for analysis.





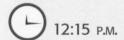


Pharmacology Laboratory, Schurman Hall. After her morning classes, Victoria Martinez '96 goes to Dr. Richard Cerione's laboratory in the Department of Pharmacology. She works about fifteen hours per week doing what she calls basic housekeeping: autoclaving flasks, test tubes, and media; making broth for agar plates and DMEM media for cell cultures; and organizing other materials for Dr. Cerione and his graduate students.



A round noon, animal care supervisor Betty Leete stops to chat with senior David Frantz '95 about one of his patients.

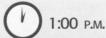
Hagan Room, Schurman Hall. Dr. Tom Divers attends a meeting with Dr. John Saidla, director of continuing education, and other faculty members on the college's Continuing Education Committee. They discuss plans for the 1995 Annual Conference for Veterinarians. Dr. Divers will assist in identifying and contacting speakers for the equine and bovine programs.



Schurman Hall. Dr. Joel Baines meets with third-year D.V.M. student Ashley Reynolds '96 (center) and Ph.D. student Ying Fan in his laboratory to discuss the progress of laboratory experiments. Ashley is the president of ROVS (Research-Oriented Veterinary Students) and secretary of SCAVMA (Student Chapter of the American Veterinary Medical Association) and is enrolled in the combined D.V.M./Ph.D. program. She works about sixteen hours per week in Dr. Baines's lab, assisting him and his graduate students in running experiments for his research on herpes simplex virus replication.



Lecture Hall 2, Veterinary Education Center. Students in the selective course *The Pathology Bottom Line* hear presentations from Dr. Christopher Mesher, resident in clinical pathology, on feline hyperparathyroidism and from Dr. Magali Guffroy, visiting fellow in pathology, on spinal nephroblastoma in a dog.





Research Administration Office. Judy Wood (left) meets with large animal surgery resident and Ph.D. candidate Lisa Fortier to discuss Dr. Fortier's application to the Arthritis Foundation. Most of Judy's afternoon will be spent on a final review of grant proposals from three faculty members and two postdoctoral fellows due to be mailed today to the Arthritis Foundation and the Wetterberg Foundation. The deadline for both funders is tomorrow, so the proposals must be approved, copied, packaged, and ready for Federal Express pick-up by 3:30 P.M.

Small Animal Clinic. Rick Glass '95 dons a surgical mask and robe to observe the exploratory surgery on the Doberman

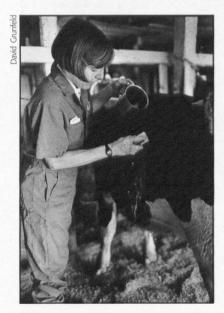
Pinscher. Dr. Robert Hardie, a resident in small animal surgery, takes multiple biopsies of the gastrointestinal tract. Rick prepares impression smears and stains the tissue samples. The initial cytology samples are suspicious of lymphoma, a diagnosis that is confirmed three days later by histopathology.



1:15 P.M.

aboratory sessions this week for second-year students in the foundation course *Function* and *Dysfunction* are focused on reproductive physiology. Right: In N-Barn, Dr. Robert Gilbert, associate professor of theriogenology, talks about estrous synchronization in sheep. Below: In Schurman Hall, Dr. Patrick Concannon, senior research associate in physiology, demonstrates the use of an endoscope to monitor vaginal morphology.





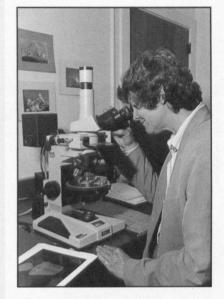
By 2:00 P.M. Dr. Mary Smith is working on her third ambulatory clinic call of the day.

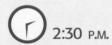


Schurman Hall. Steve Rutherford begins reading and answering his electronic mail. He calls Dr. Laura Eirmann, an instructor who has asked for help on a problem she's having using one of the courseware applications, and he arranges to meet with her later that afternoon.



Schurman Hall. Dr. Nelly Farnum is back in her laboratory reviewing micro-CT scans from her experiments the past summer. Assisting her with the study, Dr. Alan Nixon, associate professor of surgery, had placed tiny staples across the growth plates of the proximal tibias of five-week-old rats. The staples were removed at intervals varying from three to seven days, and tissue samples were taken for the CT scans to study the cellular response. Dr. Farnum's research has been funded for the past eight years by NIH, and the agency recently approved another four-year grant. The long-range implication of her work for human and animal health could be an improved understanding of how various surgical interventions work on a cellular level to correct growth abnormalities such as angular limb deformities.







A t 2:30 p.m., first-year students are working in P-Barn with cows, in Q-Barn with horses, and in a Schurman Hall laboratory with class members' dogs and cats. The students are learning how to perform physical exams, and this week's sessions focus on the oral cavity and associated structures in various species.



Cornell University Office of Government Affairs, Day Hall. Ann Prince-Rivkin and Dr. George Maylin, associate professor of toxicology and environmental health in the Diagnostic Laboratory, meet with representatives from the New York State Division of Budget and staff members in Cornell's government affairs and statutory affairs offices. They are to discuss continued funding for the college's Equine Drug Testing and Research Program. Dr. Maylin heads the program, which provides testing for all parimutuel tracks in New York State, and conducts research on the detection and pharmacological action of new drugs and chemicals.

Applied Anatomy Laboratory, Schurman Hall. Mara DiGrazia '96, Victoria Martinez '96, and other third-year students move to the lab for the hands-on portion of their two-and-a-half-hour applied anatomy class with Dr. Sandy de Lahunta. Working with a live horse, cow, and dog as well as radiographs, skeletons, and other wet specimens, they gain practical experience in recognizing the anatomical features that are essential to diagnostic, surgical, obstetrical, and postmortem procedures.



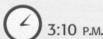
Students on an Ambulatory Clinic farm call, circa 1935

3:00 P.M.

Schurman Hall. Dr. Joel Baines takes a conference call with staff members in the research and development division of Burroughs Wellcome. In August 1994 the company announced it had produced a drug that prevents replication of the human cytomegalovirus, a type of herpes virus. Dr. Baines hopes to establish a contractual agreement with the company to study the pharmacology and action of the drug in hopes of understanding exactly how it works at a molecular level. Such findings could be vital to the development of effective antiviral therapies for other herpes viruses.

Ithaca. After two calls to privately owned dairy herds, Dr. Mary Smith and her students arrive at the university's Swine Barn, where they meet Dr. Terri Tyson, an intern in the Ambulatory Clinic, and two other seniors. Five boars are scheduled to have tusks removed, and the procedure is a learning experience for the intern as well as the veterinary students.

Immunohistochemistry Laboratory, Schurman Hall. Dr. Jorge Lopez stops in to check the automated slide-staining machine. Today he is staining foal tissues for a retrospective study on equine viral arteritis (EVA), calf tissues for a study on the pathogenesis of the virus that causes bovine virus diarrhea (BVD), and cat tissues to differentiate strains of feline infectious peritonitis (FIP).



Large Animal Clinic. Dr. Susan Fubini begins surgery on a calf brought in with a draining umbilicus. The client had declined an ultrasound exam to minimize expenses, so they have no forewarning that the infection has spread to involve the urinary tract, bladder, and liver. What is typically a one-hour procedure eventually stretches to more than three hours. At 4:30, Dr. Fubini calls her husband, Dr. Rory Todhunter, in the Small Animal Clinic to ask if he can pick up their children from day care by 5:00 p.m. Today he can get away early, and it's not necessary for one of the residents to finish Dr. Fubini's surgical case.





Parasitology Laboratory, Schurman Hall.

Dr. Susan Wade is examining samples received from referring practitioners and the college's own clinics. She turns from her microscope for the fourth time in the past hour to answer a phone call. A veterinarian who suspects that several cows in his client's herd have coccidia is calling for information. Dr. Wade answers his questions and explains how to submit samples to the Diagnostic Laboratory to confirm the diagnosis.



College mailroom, Schurman Hall. Judy Wood delivers five grant applications for Federal Express pick-up.



Professor R. R. Birch (DVM '12) working with hog cholera serum and virus in the serum laboratory at the veterinary experiment station on Snyder Hill, circa 1921



4:15 P.M.

Schurman Hall. Dr. Barry Cooper meets briefly with his laboratory technician to discuss the next experiments they will undertake in their efforts to develop myoblast transfer therapy for muscular dystrophy. While teaching, Dr. Cooper has been relying heavily on his technician to carry on the work in his research study on the molecular genetics of canine muscular dystrophy.

Schurman Hall. Dr. Nelly Farnum checks her electronic mail and replies to a message from a colleague overseas. In mid-October she will leave Ithaca to spend two months of her sabbatical leave in Switzerland at the M. E. Müller Institute for Biomechanics studying type X collagen localization in growing bones. Then in January 1995 she will continue her sabbatical at Oxford University in England, where she will study cellular volume regulation and its significance in bone growth.

Flower-Sprecher Library Archives

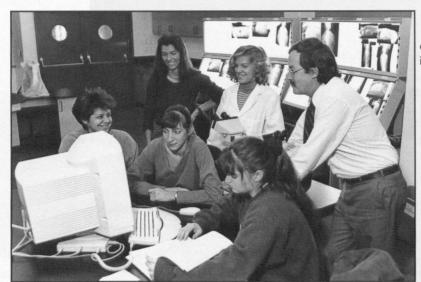


4:30 P.M.

Senior Seminar, Lecture Hall 1, Veterinary Education Center. Dr. Mary Smith and her students return from ambulatory calls in time to attend Senior Seminar, which she is coordinating this semester. Each week several senior D.V.M. students present reports either on a case they have studied to examine the basis for a particular disease or on a short-term, clinically oriented research project they have conducted under the direction of a faculty member. The seminars are attended by faculty members and third-year students, who join in the discussion after each presentation. Today Andie Dee's topic is "Profound, Inexplicable Pruritis in a Horse: One Case of a Confounding Paraneoplastic Syndrome"; Dawn Simmerman's topic is "Postoperative Peritonitis in a Puppy."

Radiology Suite, VMTH. Dr. Ned Dykes, assistant professor of radiology, is reviewing radiographs from several archival cases with Bart Forlano '95 and the other seniors on the radiology service rotation. As part of their clinical training, Dr. Dykes spends several hours at the end of each day discussing ailments that are seen less frequently and showing the students how to interpret the x-ray images to arrive at an accurate diagnosis.

t 3:30 P.M. Steve Rutherford helps A Dr. Laura Eirmann use the courseware application CorVetLab to solve a problem in an instructional module for the first-year foundation course Genetics and Development, which will begin in November.



Dr. Barry Cooper (right) works with a group of students on a computerized instructional module in the new learning laboratory.

5:00 P.M.

Cafeteria, Veterinary Research Tower. SCAVMA president Mara DiGrazia '96 (second from right) leads one of the group's bimonthly meetings. On the agenda is a discussion to confirm plans for their next guest speaker, Dr. Ralph Wilhelm, vice president of the AVMA, who will visit Cornell the following week.



Biomedical Communications



6:15 P.M.

Hagan Room, Schurman Hall. Victoria Martinez '96 meets with the other officers of Ultrasound, the a cappella singing group she and Paul Doria-Rose '96 cofounded last year. They have a two-hour rehearsal at 7:00 p.m. Twenty-five veterinary students and five other Cornell students have joined the group this year, and the leaders discuss plans for dividing the members into smaller subgroups to work on specific songs. Ultrasound gave their first major performance last spring for more than 400 alumni and friends at the college's Centennial Celebration, and they will join a group from Cornell's Law School (the Scales of Justice) to present a concert in November.

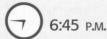


6:30 P.M.

Learning Laboratory I, Veterinary Education Center. Steve Rutherford begins installing a video capture system at one of the computer stations in the laboratory. It will take about three hours, and he has to do it in the evening because the room is in use all day for first- and second-year D.V.M. classes. The new equipment and software will enable faculty and staff members to digitize video sequences (e.g., from an endoscopy examination of a horse afflicted with laryngeal hemiplegia, or "roaring") so that they can be integrated into computer-based teaching modules.



eft to right: Kate Donis '97,
Mike Capel, Victoria Martinez '96,
and Tracy Misner '97 rehearse with
Ultrasound.



Small Animal Clinic. During evening rounds, Rick Glass '95, Dr. Sharon Center, associate professor of clinical sciences, and Dr. JoAnn DeMarco, resident in small animal medicine, look at radiographs of a patient seen that day by the small animal medicine service. After they discuss all current inpatient cases, the chief clinician usually spends about an hour quizzing the seniors about standard work-up strategies for different primary complaints. Today, they review the various diagnostic and treatment strategies for diarrhea.





Microcomputer Center, Schurman Hall. Mara DiGrazia '96 returns to the college after dinner to work in the Microcomputer Center on revising a case study for the new foundation course *Host*, *Agent*, *and Defense*, which begins in October for second-year students. She puts in an average of eight hours a week working for Dr. Dwight Bowman, the course leader. Tonight she spends about two hours finishing the concept map on the pathogenesis of a case on combined immunodeficiency in a horse.



7:30 P.M.

Ambulatory Clinic. Dr. Mary Smith and her students return from the last farm call of the day—a local goat farm that is one of Dr. Smith's long-time clients. A call for assistance had come in earlier that afternoon while they were on the road. The students said they didn't mind going out again at 5:30 P.M. when Senior Seminar ended; most days they are on the road until 6:30 or 7:00 P.M. anyway.





Schurman Hall. Dr. Joel Baines and graduate student Ying Fan review the results of the day's laboratory experiments.



9:00 P.M.

Ithaca. Mara DiGrazia '96 leaves the Microcomputer Center and goes to a local fitness club to play racquetball with a classmate. She tries to exercise four or five evenings a week.



9:50 P.M.

Ithaca. After practicing with the a cappella singing group, Ultrasound, Victoria Martinez '96 catches a ride home with copresident Paul Doria-Rose '96. She will study until about midnight.



10:00 P.M.

Small Animal Clinic. Dr. Sharon



Center finishes rounds on the small animal medicine service and draws Rick Glass '95 aside. She knows he's been attending the 2:15 A.M. "neuro rounds" with Dr. Sandy de Lahunta and is concerned that he's not getting enough sleep. Rick agrees to take a break from the late-night sessions for awhile. He has four inpatients tonight, including the Doberman Pinscher who had come in for surgery that morning. He examines all the animals, administers medications, and spends some time talking with two other seniors about some of the other cases they saw that day. He leaves for home about 11:00 P.M.



11:30 P.M.

Ithaca. Mara DiGrazia '96 arrives home from the fitness club and sits down at her kitchen table to review and rewrite her notes from the day's classes. She typically studies until about 1:00 A.M. each night.

Support and Funding

A Public-Private Partnership

The funding partnership between the public sector and private donors is an important part of the heritage of both Cornell University and the College of Veterinary Medicine. When the university was established with public support in 1868 as one of the nation's first land-grant institutions, its founder, Ezra Cornell, and first president, Andrew Dickson White, were also major benefactors in providing funds for faculty, buildings, and equipment. Twenty-six years later, the Veterinary College received its charter from New York State, and this public-private partnership was extended to create the first statesupported (now known as statutory) college at Cornell. Annual appropriations from the state legislature have provided funding for programs and facilities at the college ever since.

The college's first operating budget, reported in 1896 as "Expenditure of the Maintenance Fund," totalled \$25,000. By 1912 expenditures had reached \$50,000, and in the 1913–14 annual report, income was reported for the first time. That year tuition (non-resident), student fees, and income from cases treated in the clinics and from the sale of serums and vaccines added \$11,711 to the budget. By 1921, at \$25,068, income funds were nearly one-fifth of the entire budget.

For more than fifty years, the annual state appropriation made up the major share of the college budget, supporting faculty and staff salaries, plant operations and maintenance, and basic equipment in classrooms, laboratories, and the teaching hospital. Since the early 1970s, however, the portion of the college's budget provided by the state has diminished from more than one-half to about one-third.

In addition to operating funds, the state has provided periodic allocations for the construction of new facilities. When the college was established in 1894, the state legislature provided \$50,000 for the construction of a building devoted solely to veterinary education; another \$100,000 was added the following year. The college officially opened in 1896 in the building



The college in the 1950s, at the center of the Cornell campus. Clockwise from upper left: Small Animal Clinic, Medicine Building, Farriery, Large Animal Surgical Hospital, Moore Laboratory, James Law Hall

that would later be named James Law Hall in honor of its first dean. An appropriation of \$140,000 funded three clinic buildings, which were completed in 1913. Moore Laboratory, named for the college's second dean, was added in 1938 at a cost of \$300,000 and provided muchneeded space for the Department of Pathology and Bacteriology. In 1955 the legislature allocated \$6.5 million to build Schurman Hall and a new veterinary teaching hospital at the east end of Tower Road, and the college moved into these facilities in 1957. The eight-story Veterinary Research Tower, built at a cost of \$12 million, opened in 1974. The New York State Department of Agriculture and Markets provided \$2 million for a new Diagnostic Laboratory, which was completed in 1976.

In 1990, with an investment of more than \$90 million in state support, the college broke ground for major new construction and several renovation projects. In the first phase of new construction, the Veterinary Education Center was completed in 1993. Work began in 1992 on the new Veterinary Medical Center, which will house the teaching hospital as

"This unique blend of support from the public and private sectors has been absolutely essential to our success as a college throughout our first century. Without public funding, we simply would not exist. Without private support, we could not aspire to greatness."

-Dean Robert D. Phemister

New Endowments

Endowment funds are a critical source of support for all institutions of higher education. An endowment gift is made with the stipulation that the principal be invested in perpetuity and only the annual income be used to support the purpose for which the fund was designated. Cornell reinvests a portion of the annual earnings on each endowment to ensure that its purchasing power will remain constant and even increase over time. Essentially, an endowment is a guarantee for the future that financial support will always be available for programs and people at the College of Veterinary Medicine.

Since the Cornell Campaign for the College of Veterinary Medicine began in 1990, more than 90 new endowment funds totalling over \$14 million have been established to support named professorships, student aid, and other programs at the college. Most of the donors have created scholarship funds, which provide debt-free financial aid to D.V.M. students.

well as research facilities and office space for several academic departments. When that building is occupied in 1995–96, the third phase of the project—renovation of the former hospital for use as a secondary teaching center—will begin.

Research Funding

Research was first reported as an expenditure in the 1912–13 annual report, when \$4,533 was included for "experimental work, extension, etc." Support specifically for research activities was reported as income for the first time in 1960–61, when the annual financial statement included \$752,735 for research funding from the state and federal governments, corporations, foundations, trade associations, and individuals.

In the 1960s, research activity expanded rapidly as college faculty members successfully competed for grants from the National Institutes of Health (NIH) and other federal and state agencies. Prior to that time, most government support received by the college had been directed primarily toward research and service programs to combat diseases of food animals. Advances in veterinary medicine, however, have always had an important relationship to human medicine. For the last thirty-six years, the major thrust of research at the college has shifted to efforts that hold potential benefit for both animals and people. Today most of the college's research funding comes from the NIH, where each project must be justified in terms of its relevance to human health. Income from state, federal, and corporate grants and contracts made up approximately 34 percent of the college budget in 1992-93 and 1993-94.

Because family pets are not currently a priority for government agencies, important advances in companion animal medicine have largely been made possible by gifts from alumni and friends concerned about improved health for dogs, cats, and other pets. The Cornell Research Laboratory for Diseases of Dogs (a division of the college's Baker Institute for Animal Health) was established and built in 1951, funded entirely by gifts from veterinarians, dog owners and breeders, and corporate donors. It was the first permanent

research center in the world to focus on canine diseases. The Cornell Feline Health Center, founded in 1974, also receives a large share of its funding from the private sector.

Individual Giving

In the last two decades, individual giving has played an increasingly important role in providing critical support for the college. In the mid-1970s a group of alumni formed the College Development Advisory Committee (CDAC). The first organized fund-raising effort undertaken among alumni and friends was launched in 1976 as part of a five-year university campaign. The college campaign, organized by the CDAC and chaired by Frederick O. Wright (D.V.M. '41) raised more than \$7.5 million by 1981 for scholarships and loan funds, species programs, clinic equipment, library endowment, and other programs. The Veterinary College Annual Fund began in 1979-80 as part of that campaign and raised \$105,876 from 399 donors in its first year. In the years since, Cornell veterinarians have consistently contributed more generously to their alma mater than graduates of any other veterinary college in the country. Close to 900 alumni gave a total of \$307,680 to the 1993-94 annual fund.

In 1990 Cornell University embarked on another major fund-raising drive to reendow the university and its colleges. The goal of the five-year Cornell Campaign for the College of Veterinary Medicine is \$30 million—for endowment funds for named professorships, scholarships, graduate fellowships, clinical residencies, and program enhancement. These funds will ensure Cornell's continued margin of excellence in veterinary medicine by providing permanent sources of support for faculty and students, the foundation upon which the college's century-old reputation has been built. The Campaign Committee is led by co-chairs Robert E. Clark (D.V.M. '52) and Jay W. Geasling (D.V.M. '75) and vice-chairs John D. Murray (D.V.M. '39) and Richard A. Smith (D.V.M. '51). By October 31, 1994, four years into the campaign, they had secured gifts and pledges for 92 percent of the goal (\$27,694,926).

Major Donors and Sponsors

1992-1993 and 1993-1994

Support at all levels is vital to Cornell's work in creating a healthier future for animals and people. Space in this publication, however, does not permit a complete listing of all who have made gifts to the College of Veterinary Medicine in the past two years. Recognized here are those alumni, friends, corporations, foundations, and organizations who provided support in the 1992-93 and 1993-94 fiscal years at a level of \$500 or more.

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Roger E. Rees '74

Richard W. Reid '92

Arnold Remson '58 Joseph P. Renaldo '61 Harvey Rhein '62 Keith P. Richter '81 Charles G. Rickard '43* Henry A. Riehle '68 Brian I. Rind '65 Clarence R. Roberts '22 Dr. and Mrs. Kent C. Roberts '51 Stephen I. Roberts '38 Kim G. Roellke '93 Calvin Rofe '61 Dr. and Mrs. Irving S. Rosenfeld '74 Dr. and Mrs. Irving S. Rossoff '44 Neal J. Saslow '82 Dr. and Mrs. Burton Saunders '55 Jeremiah N. Sbarra '65 Jean M. Schaedler '91 Howard R. Schatz '75 Carl L. Schenholm '46 Ronnie L. Schenkein '80 Carmen S. Scherzo '65 Louis C. Schimoler '47 Robert P. Schmitt '69 Arthur Schnabel '77 Henry A. Schroeder '84 Herbert F. Schryver '54 Dr. and Mrs. Rudolph Schuster '59 Victor J. Schwartz '67 David F. Scoville '68 Gene W. Sellick '63 David B. Sequist '67 Richard J. Sheehan '63 Lawrence M. Sherman '57 Donald K. Sherwood '61 Dr. and Mrs. John D. Shumway '56 Francis A. Simpson '53 Dorothy B. Smallridge '43 Avery L. Smith '64 Ernest K. Smith '66 Mary C. Smith '72 Dr. and Mrs. Richard A. Smith '51 Dr. and Mrs. Isidor I. Sprecher '39 Durward W. Starr '63 John R. Steele '46 Rudolph J. Steffen '34 Hermann B. Stein '45 John D. Strandberg '64 David H. Taylor '61 Donald O. Taylor '63 Richard E. Thoma '65 Joseph A. Thomas '29 Belinda S. Thompson '81 Roger C. Thompson, Jr. '78 William J. Thonsen '77 Carvel G. Tiekert '63 Gerald Tobias '62 James W. Tompsett '69 David K. Trachtenberg '92 Henry J. Travis '74 Dr. and Mrs. Walter K. Trumbauer '61 Allen J. Tucker, Jr. '72 Michael J. Tulman '72 Louis P. Tumolo, Jr. '69 Benjamin F. Turner '64 Robert H. Udall '41 Margaret B. Ullmann '90 Dr. and Mrs. Carlton L. Ulrich '43 Arthur M. Underwood '51 Thurman C. Vaughn '44 Lawrence E. Venezia '76 George D. Vinevard '53 Dr. and Mrs. William C. Wagner '56 Dr. and Mrs. John A. Ward '36 Wayne F. Warriner '67 Philip A. Weber '59 Dr. and Mrs. Donald E. Webster '49 Susan J. Weinstein '74 Alison K. Wermer '79 Ralph F. Wester '45 Geoffrey J. Westfall '74 Nathaniel A. White III '71 John W. Whitefield '65

Dr. and Mrs. Roland G. Whitehead '44

Mary B. Whitwell '81 Bruce W. Widger '51 Jack E. Wilkes '54 Craig B. Williams '77 Andrew J. Williamson '59 John E. Willson '54 Irving W. Wiswall '54 R. George Wiswall '40 Stanley A. Witzel '57 Dr. and Mrs. Elmer A. Woelffer '31 Donald A. Wood '39 Leonard Wood '58 Albert G. Wooding '59 Merritt B. Wooding '61 Rochelle E. Woods '77 Dr. and Mrs. Daniel T. Woolfe '43 Leo A. Wuori '42 David E. Wyatt '54 Gary A. Yarnell '77 Richard M. Zeitel '62 William E. Zitek '59 Harold M. Zweighaft '56

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*Deceased

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Estate of Katherine L. Weems Patricia H. Wehle Estate of Ann Wendelken Robert Winthrop Mr. and Mrs. Robert Winthrop II Estate of Violet E. Wopat *Deceased

Other Organizations

Alumni Association, College of Veterinary Medicine American Association of Equine Practitioners American Association of Feline Practitioners American Belgian Tervuren Club American Cancer Society American College of Veterinary Dermatology American College of Veterinary Surgeons American Heart Association American Horse Shows Association American Institute for Cancer Research American Veterinary Medical Association American Veterinary Medical Association Auxiliary

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Development Fund
Belgian Sheepdog Club of America
Black Diamond Cat Club
Black-Eyed Susan Cat Fanciers
Cable Car Cats
Capital Cat Fanciers
Carolina Sophisticats
Centennial Chinese Shar-Pei Club
of America
Central New York Sheepdog Club
Central New York Veterinary Medical
Association

Chesapeake Cat Club

Chinese Shar-Pei Club of Canada Chinese Shar-Pei Club of North America Chinese Shar-Pei Club of Ozark Collie Club of America Foundation, Inc. Devon Dog Show Association Elmira Kennel Club, Inc. Equine Sports Medicine Association Finger Lakes Kennel Club Fort Worth Feline Fanatics Garden State Cat Club Gateway Chinese Shar-Pei Club Genesee Cat Fanciers Club, Inc. Greater Chicagoland Chinese Shar-Pei Club Greater Lowell Kennel Club

Harness Horse Breeders of New York
State
Harrisburg Kennel Club, Inc.
Houston Cat Club
Illiana Chinese Shar-Pei Club
International Duck Research
Cooperative, Inc.
Irish Setter Club of America
Japan Racing Association
Kachina Kennel Club
Kennel Club of Northern New Jersey
Lincoln State Cat Club
Long Island Duck Research Cooperative

Half Moon Cat Club

America National Association of Animal Breeders National Birman Fanciers National Collegiate Athletic Association National Pork Producers Council

Mason Dixon Maine Coon Fanciers

Mohawk Valley Cat Fanciers Muscular Dystrophy Association of

Naval Research Laboratory New York Horsemen's Benevolent and Protection Association New York State Veterinary Medical Society Newton Kennel Club North Central Florida Cat Club North Coast Cat Fanciers North Shore Animal League Northern Arizona Chinese Shar-Pei Club Oriental Shorthairs of America Ox Ridge Kennel Club, Inc. Paulins Kill Dog Fanciers Penn Ridge Kennel Club Podiatry Association of Germantown Poodle Club of America Foundation Ross Breeders San Joaquin Kennel Club Shasta Shar-Pei Club

Southeastern Egg and Poultry Association Spartanburg Kennel Club Travers Committee Research Fund Troy Kennel Club

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Foundations AAHA Foundation AVMA Foundation The Albert C. Bostwick Foundation Bado Foundation The Bristol Fund The Burroughs Wellcome Fund Canine Eye Registration Foundation The Carl J. Herzog Foundation, Inc. Mrs. Cheever Porter Foundation The Cottrell Foundation The Dorothy Schiff Foundation Edna P. Jacobsen Charitable Trust for Animals Elmer St. John Trust Exxon Education Foundation The Firman Fund Fundacion Purina The Gaylord Donnelley 1983 Gift Trust Geraldine R. Dodge Foundation Gilbert W. and Louise Ireland Humphrey Foundation Grayson-Jockey Club Foundation, Inc. Harold Wetterberg Foundation The Ireland Foundation The James A. MacDonald Foundation The Jaqua Foundation Jewish Communal Fund of New York The Lalor Foundation Marilyn M. Simpson Charitable Trusts Merck Company Foundation Metropolitan Atlanta Community Foundation The Milwaukee Foundation Morris Animal Foundation Murphy Foundation, Inc. National Retinitis Pigmentosa Foundation, Inc. The Owen Cheatham Foundation Pew Charitable Trusts Pharmaceutical Research and Manufacturers of America

Foundation, Inc.

Thrasher Research Fund

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American Farm Products American Kennel Club Bank of Ireland Biotron Laboratories Boehringer Ingelheim Animal Health Boots Pharmaceuticals CIBA-GEIGY Corporation CONMED Corporation Coudersport Animal Health Center Council for Tobacco Research-U.S.A. Credit Du Nord Eastern Artificial Insemination Cooperative, Inc. Eastman Kodak Company Eli Lilly and Company Embrex FARMOS Group Ltd. Greatbatch General Aid Ltd. Hills Pet Nutrition, Inc. Hoechst Roussell Agri-Vet Company The IAMS Company Immuno Dynamics, Inc. Innovet, Inc. Intervet America Johnson and Johnson LifeTECH Corporation Long Island Duck Research Coop, Inc. Marshall Farms USA Merck Research Laboratories Animale

Merwin Memorial Free Clinic for Personal Products, Inc. Pfizer Corporation Pitman-Moore Ralston Purina Company Rhone Merieux Laboratoire Iffa Rhone-Poulenc Sanofi Animal Health Schering Corporation SCIEX Scranton Label, Inc. SmithKline Beecham Animal Health Solvay Animal Health Spieler and Tenn Special Account CPA Sterling Winthrop Universal Manufacturing Co. Upjohn Company Ventritex VIRBAC Laboratories W. B. Saunders Company Wyeth-Ayerst International

Statistics

Microcomputer software titles

Table 1. Flower-Sprecher Library and Learning R	esources Center, 1993-94
Bound volumes at beginning of year	84,546
Acquisitions	+1,335
Less withdrawals	-3
Total bound volumes	85,878
Audiovisual items	30,424
Periodicals and annuals	1,041
CD-ROM titles	50

Table 5. Degrees Awarded, 1993-94

D.V.M. (with distinction: 4)	81
M.S.	3
Ph.D.	16

Table 2. Qualifications of Entering Students, Class of 1998

	Number of Students
Amount of preveterinary preparation	
Three years of college	8
Four years of college	48
More than four years of college (graduate level)	26
Institution previously attended	
Cornell University	24
Other	57
Field of preparatory study	
Animal science (or related)	20
Biological sciences (or related)	44
Other	7

Table 6. Student Enrollment, 1993-94

568

Candidates for the D.V.M. degree	
Class of 1994	81
Class of 1995	81
Class of 1996	79
Class of 1997	80
Total	321

Table 3. Geographic Distribution of Entering Students, Class of 1998

Number
60
1
6
14
81

Table 7. Graduate Students at the College of Veterinary Medicine, 1993–94

Candidates f	or the	Ph.D. degree	99
Candidates f	or the	M.S. degree	15

Table 4. Admission Summary, Class of 1998

2 60
7
4 20
81
) ₂

Table 8. Interns and Residents, 1993-94

10
17
14
41

Table 9. Clinical Patients and Diagnostic Examinations, 1993-94

			Sheep and						
	Horses	Cattle	Goats	Swine	Dogs	Cats	Birds	Other	Total
Medical and surgical patients	1,492	440	81	23	7,415	3,000	234	364	13,049
Ambulatory Clinic patients	2,842	38,720	2,792	84				73	44,511
Clinical pathology specimens	4,326	1,903	231	33	12,110	3,845	111	2,767	25,326
Diagnostic Laboratory tests	26,703	209,034	7,691	1,573	27,329	11,240	4,787	10,009	298,366
Necropsies	267	406	71	33	341	148	87	443	1,796
Surgical pathology specimens	626	429	63	34	3,773	978	51	143	6,097
Laboratory animal examinations	174	234	355	51	726	250	n.a.	7,932	9,722
Fish Diagnostic Laboratory								51	51
Poultry Diagnostic Services									
Ithaca (496 accessions)							7,432		7,432
Eastport (219 accessions)							2,466		2,466
Quality Milk Promotion Services		124,592	653					4,205	129,450

Financial Statements

Table 10. Sources of Funds (in Thousands)

	1993–94	1992-93
State appropriation	\$16,011	\$15,188
Federal and state: grants and contracts	13,947	13,436
Private support (restricted)	3,012	3,016
College income*	16,630	15,269
Total	\$49,600	\$46,909

^{*} College income includes indirect cost recovery on grants and contracts, tuition, unrestricted gifts from private sources, and other income from college programs.

Table 11. Uses of Funds (in Thousands)

	1993–94	1992-93
Instruction and departmental research	\$9,834	\$8,407
Teaching Hospital	6,009	5,652
Organized research	17,268	16,693
Extension and public service	8,008	8,222
Academic support	512	620
Student services	995	867
Institutional support	4,738	4,406
Plant maintenance and operation	1,307	1,188
Student aid	929	854
Total	\$49,600	\$46,909

Tables 10 and 11 are summaries of the income and expenditures of the College of Veterinary Medicine for fiscal years July 1, 1992, through June 30, 1993, and July 1, 1993, through June 30, 1994. These figures do not include expenditures for fringe benefits, estimated for 1993–94 at \$7.3 million, and general support services provided by the university. In previous years, private support was included in grants and contracts in table 10.

Table 12. Summary of Grant, Contract, and Restricted Gift Expenditures by Source of Funding

Source	1993-94	1992-93
Federal		
Department of Defense		
Cornell Biotechnology Institute	\$ 0	\$ 8,241
Department of Navy	29,476	20,856
National Institutes of Health	6,698,010	6,362,365
Department of Veterans Affairs	116,529	0
National Science Foundation	270,834	246,380
Department of Agriculture		
Grants and contracts	480,328	562,553
Federal appropriations	406,943	361,197
Total, federal grants and contracts	\$ 8,002,120	\$ 7,561,592
State		
Cornell Biotechnology Institute	\$ 107,031	\$ 127,646
Department of Environmental Conservation	32,090	85,442
Department of Environmental Resources	3,912	4,077
Harry M. Zweig Memorial Fund	452,840	496,463
New York City Department of Environmental Protection	126,674	21,457
New York State Agriculture and Markets contracts	3,204,130	2,588,609
New York State Racing and Wagering Board	2,014,029	2,544,711
New York State Sea Grant Institute	0	1,604
New York State Department of Education	4,149	4,123
Total, state grants and contracts	\$ 5,944,855	\$ 5,874,132
Total, federal and state grants and contracts	\$13,946,975	\$13,435,724
Private support		
Industry		
Grants and contracts	\$ 687,902	\$ 1,202,183
Cornell Biotechnology Institute	18,759	55,644
Foundations	711,373	459,756
Alumni, friends, associations, nonprofit organizations	1,237,867	1,022,414
Endowments	356,021	275,614
Total, private support (restricted)	\$ 3,011,922	\$ 3,015,611
Total, grants, contracts, gifts	\$16,958,897	\$16,451,335

Table 12 is a summary of grant, contract, and restricted gift expenditures of the College of Veterinary Medicine for the fiscal years July 1, 1992, through June 30, 1993, and July 1, 1993, through June 30, 1994. The amounts reported exclude expenditures for indirect costs as well as expenditures of unrestricted gifts.

Faculty and Staff Changes

1992-1993

New Appointments

Gregory M. Acland, senior research associate Gustavo D. Aguirre, Alfred H. Caspary Professor of Ophthalmology and director, James A. Baker Institute for Animal Health

Bennett G. Hershfield, senior research associate

Maria-Barbera Honnbier, senior research associate

Patrick L. McDonough, assistant professor Paula F. Moon, assistant professor Dean A. Myers, assistant professor Jharna Ray, assistant professor Kunal Ray, senior research associate

Promotions and Title Changes

Jean Sirois, assistant professor

Judith A. Appleton, associate professor (from assistant professor)

Bruce W. Calnek, Rudolph J. and Katharine L. Steffen Professor of Veterinary Medicine

Hollis N. Erb, professor (from associate professor)

Joanne Fortune, professor (from associate professor)

Robert O. Gilbert, associate professor (from assistant professor)

Robert F. Gilmour Jr., associate professor (tenure granted)

John D. Henion, professor (from associate professor)

Jorge Lopez, senior research associate (from assistant professor)

James A. Marsh, professor (from associate professor)

Peter W. Nathanielsz, professor (tenure granted)

Linda M. Nowak, associate professor (from assistant professor)

Robert E. Oswald, professor (from associate professor)

Philip M. Sears, associate professor (from assistant professor)

Resignations

Kathy A. Beck, assistant professor David Gallagher, lecturer William A. Horne, assistant professor Thomas H. Kawula, assistant professor Ahmed Mutalib, senior extension associate

Retirements

Francis H. Fox, professor

1993-1994

New Appointments

Mossaad Abdel-Ghany, senior research associate

Joel D. Baines, assistant professor Arleigh Reynolds, assistant professor Samia A. Shawky, senior research associate Rory Todhunter, assistant professor

Promotions and Title Changes

Barry A. Ball, associate professor (from assistant professor)

Dwight D. Bowman, associate professor (from assistant professor)

James W. Casey, associate professor (tenure granted)

Richard A. Cerione, professor (from associate professor)

Barry J. Cooper, professor (from associate professor)

Elizabeth Ann Dewey, senior research associate (from research associate)

John W. Hermanson, associate professor (from assistant professor)

Donald L. Holzschu, senior research associate (from postdoctoral associate)

Vicki N. Meyers-Wallen, associate professor (from assistant professor)

Linda A. Mizer, senior lecturer (from lecturer) Hussni O. Mohammed, associate professor (from assistant professor)

Fred W. Quimby, professor (from associate professor)

Susan M. Stehman, senior extension associate (from extension associate)

Andrew Yen, professor (from associate professor)

Resignations

W. Jay Gould, assistant professor Dean A. Myers, assistant professor Maja M. Suter, assistant professor

Retirements

Neil L. Norcross, professor

Deaths

Charles G. Rickard, professor emeritus John H. Whitlock, professor emeritus

Administrators and Advisers

Further Information

All college offices can be reached by dialing directly: Area code: 607

College information: 253-3000 An operator is on duty from 8:00 A.M. to 5:00 P.M. Monday through Friday, except holidays.

General Inquiries

Direct general inquiries to:
Office of Communication
Services
College of Veterinary Medicine
Cornell University
Ithaca, New York 14853-6401
Telephone: 607-253-3747

Laboratory Locations in New York State

Avian Disease Laboratories: Ithaca Eastport

Quality Milk Promotion Program, Regional Laboratories: Canton (northern region) Cobleskill (eastern region) Geneseo (western region) Ithaca (central region)

Cornell University

Administration

Frank H. T. Rhodes, president Malden C. Nesheim, provost

State University of New York

Administration

D. Bruce Johnstone, chancellor Joseph C. Burke, interim chancellor, February–October 1994

College of Veterinary Medicine

Administration

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Douglas D. McGregor, associate dean for research and graduate education

Eugenia G. Kelman, assistant dean for student services

John A. Lambert, assistant dean for administration

Timothy T. Redden, assistant dean for public affairs

Neil L. Norcross, secretary of the college William C. Anderson, director, Facilities Administration

Sandra P. Berry, director, Biomedical Communications

S. Gordon Campbell, director, International Programs

Gloria S. Crissey, registrar and director, Financial Aid

Katherine M. Edmondson, director, Educational Development

Linda F. Emmick, director, Development Rita W. Harris, director, Personnel

H. Donald Hinman, director, Biomedical Electronics

John M. Lewkowicz, director, Computing Facility

Charles Pearson, director, Financial Services Fred W. Quimby, director, Center for Research Animal Resources

John E. Saidla, director, Continuing Education

Susanne K. Whitaker, librarian, Flower— Sprecher Library and Learning Resources Center

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Bruce W. Calnek, chair, Department of Avian and Aquatic Animal Medicine

Cornelia E. Farnum, chair, Department of Anatomy

Brian R. H. Farrow, chair, Department of Clinical Sciences Francis A. Kallfelz, director, Veterinary Medical Teaching Hospital

Donald H. Lein, director, Diagnostic Laboratory

Bendicht U. Pauli, chair, Department of Pathology

David Robertshaw, chair, Department of Physiology

Geoffrey W. G. Sharp, chair, Department of Pharmacology

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