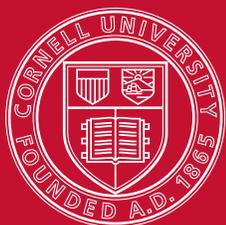




The DVM Program



Cornell University
College of Veterinary Medicine



After graduation **Julio Lopez** will start down the road to becoming board certified in internal medicine. His first stop is the California Animal Hospital in Los Angeles for an internship under the direction of Stephen J. Ettinger '62, DVM '64, author and editor of the seminal work that students and practitioners alike refer to simply as "Ettinger's"—*The Textbook of Internal Medicine*.

Soltero-Rivera looks forward to returning to her native Puerto Rico, board-certified in internal medicine with a specialty in neurology. She'll be one of the island's first veterinary neurologists, ready to participate in the emerging trend of establishing specialty practices.

"When you are on rotation in the hospital's Community Practice Service—which is a setting like a general practice—you handle everything about the case and all communication with the client. This includes writing instructions for when the patient goes home and following up with cards and phone calls. The client becomes your client and sometimes when they call back they ask specifically to talk with you."

—**Maria M. Soltero-Rivera**,
DVM Class of 2008

"At the beginning of the second year we learned about a disease—ovine pulmonary adenomatosis, a retrovirus causing cancer in the mucous-producing cells of the lungs—that affects sheep in Peru. I found a pathologist down there and he said, 'Yea, come on down,' so eight months later I'm in the Andes chasing sheep!"

—**Michael Greenberg**,
DVM Class of 2009



By the time **Thompson** begins her clinical rotations she'll have spent two years in the laboratory of Robert Oswald, PhD, professor of molecular medicine, studying the structure of glutamate receptors by X-ray crystallography. These receptors mediate neurotransmission in the mammalian brain and are involved in seizure disorders and Alzheimer's disease, as well as the normal processes of learning and memory.



"The DVM is the best degree in comparative medicine and a strong foundation for going on for a PhD. There are many opportunities here—in the lab and through paid employment—that are preparing me for a research career in pharmacology."

—**Melissa Thompson**, DVM Class of 2010

Greenberg, who is exploring many veterinary interests, spent 10 weeks one summer conducting an epidemiological study of the incidence of ovine pulmonary adenomatosis near Huancayo, Peru, 3,500 meters high in the Andes. The project was funded through Expanding Horizons, a college program that sponsors research and hands-on veterinary experience in developing countries.



“From the first day of class, our veterinary students learn by reading and discussing clinical cases. By the time they do clinical rotations in the teaching hospital, they’ve been thoroughly immersed in problem-based learning and prepared for how to work together to approach a patient’s case.”

—**Richard Rawson, DVM, PhD,**
senior lecturer in physiology,
Department of
Biomedical Sciences



“One of my DVM students developed a beautiful piece of research work showing that even during fetal life, foals are capable of producing antibodies.”

—**Julia Flaminio, DVM, MS, PhD,**
Harry M. Zweig Assistant
Professor in Equine Health

In **Flaminio’s** laboratory, Cornell undergraduate students, DVM students, graduate students, and postdoctoral associates study the development of the immune system of the foal. They don’t need to look far for subjects—the college’s Equine Research Park, just a mile from campus, houses a herd of 75 horses—along with 15 new foals each year.

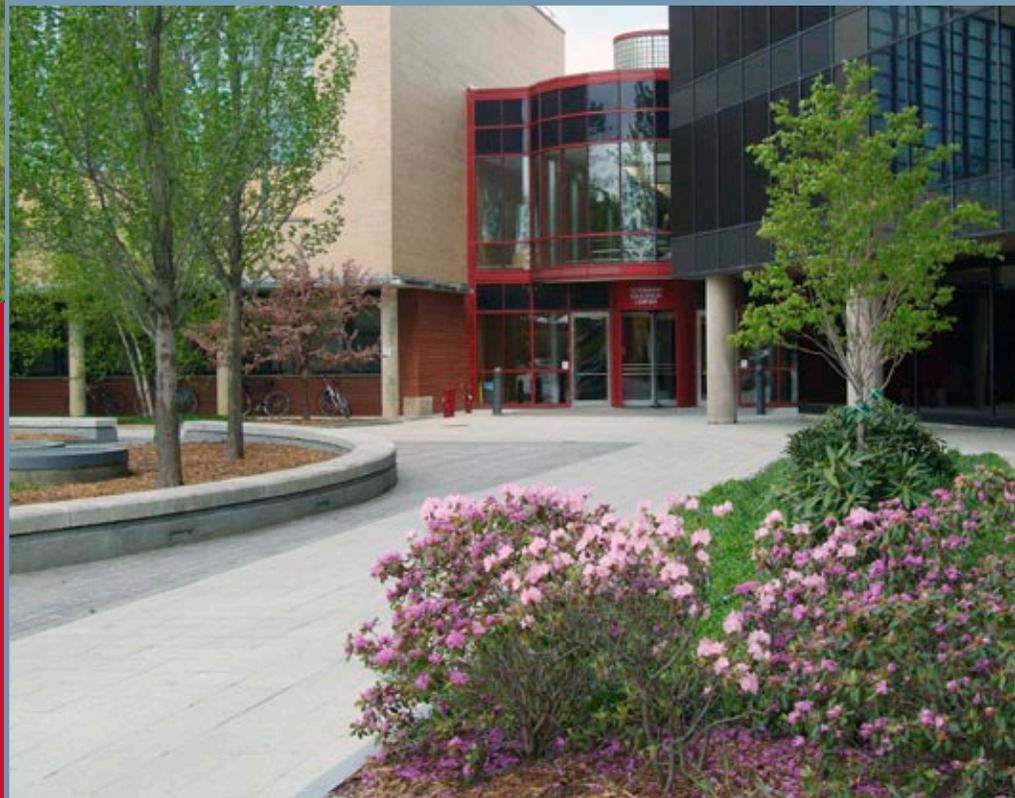


General Application Procedures

All applicants to Cornell’s DVM program (except those applying through the Early Acceptance Program) must apply through VMCAS and self-initiate Cornell’s Supplemental Application—www.vet.cornell.edu/admissions/howtoapply.htm.

Early Acceptance Program

Highly qualified students may apply at the end of their sophomore year of college (no later than June 1) for early acceptance into the D.V.M. degree program—www.vet.cornell.edu/admissions/appinfoEarly.htm.



“Cornell is the only college of veterinary medicine in the country at this time that offers three courses related to companion-animal welfare and shelter medicine.”

—Janet Scarlett, DVM, MPH, PhD,
professor of epidemiology
and director of the Maddie’s
Shelter Medicine Program

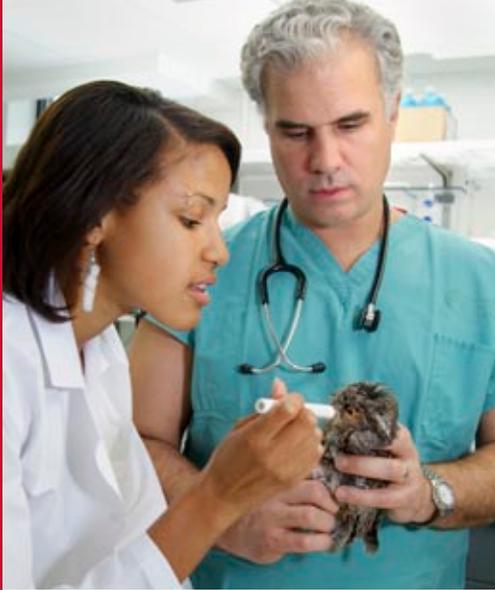
An estimated four million dogs and six million cats enter animal shelters in the United States annually. **Scarlett** is a pioneer in evaluating how the principles of managing herds of food-production animals can apply to caring for companion animals housed in shelters.



“Cornell is uniquely situated to study food-supply veterinary medicine, in that we have a world-class teaching and research university in the middle of corn fields—we have cows, literally, in our own back yard.”

—Daryl Nydam, DVM '97, PhD '02, assistant professor of dairy health and production

One mission of the dairy health program is to teach veterinarians how to produce safe, abundant food in an environmentally responsible manner while enhancing the well-being of animal patients. **Nydam** is pleased to see Cornell attracting students interested in food-supply veterinary medicine.



Morrisey is one of the DVMs providing care to patients in the exotic medicine clinic in the teaching hospital, where faculty and students see almost every kind of pet that isn't a dog or a cat—such as iguanas, ferrets, rabbits, sugargliders, and even kangaroos. He also is a member of a team of specialized zoological medicine faculty and residents-in-training that provides medical care for animals at Rosamond-Gifford Zoo in Syracuse, New York. A third part of Cornell's wildlife health program is the college's new Wildlife Health Center—where the program's clinical staff provides diagnostic, medical, and surgical services and care for wildlife; the center also serves as a hub for the program's teaching and research activities.

Lewis (above), who was an elementary school teacher in New York City before starting veterinary school, has long had a desire to work with disenfranchised communities. The summer before she went to Zambia as part of a collaborative program between the college and the Wildlife Conservation Society, her interest in wildlife rehabilitation took her to the Guatemalan rainforest to assist with a spider-monkey rehabilitation and release program.

"As veterinarians we can't get to animals without talking with people, so we teach our DVM students how to talk to clients about everything from euthanasia to money."

—**James Morrisey, DVM '92, lecturer in exotic and wildlife medicine**



Goldstein was the clinical member of a team—comprised of toxicologists from Cornell's Animal Health Diagnostic Center and staff at the U.S. Federal Drug Administration and pet-food manufacturer Menu Foods—that determined melamine as the contaminant that caused kidney failure in 15 cats and one dog in the United States in spring 2007.

The DVM Program at Cornell

The doctor of veterinary medicine (DVM) curriculum at Cornell is science-based and reflects the leading edge of scientific knowledge and clinical medicine. It is comprehensive, interdisciplinary, and continually evolving to prepare veterinarians who pursue diverse career paths. It provides a broad-based education in all of the traditional subjects and, in an era of increasing specialization, gives students the opportunity to develop areas of expertise.

In addition to a strong foundation in biomedical and clinical disciplines, the DVM curriculum emphasizes important related topics in veterinary medicine—communication skills, client relations, ethics, public health, practice management, and professional development.

Problem-Based Learning

The curriculum is designed with a flexible structure of courses, providing each student with the foundation of knowledge and skills necessary to build a career in the veterinary profession.

Teaching formats—in particular, the incorporation of small-group learning and collaborative work—foster self-education, critical thinking, problem solving, and recognition of the limits of individual knowledge and skills.

Most preclinical courses focus on problem-based learning. The day after orientation, first-year students are put in tutor groups where they sit down with faculty mentors and read over a case. From day one, they are trained to think like clinicians.

The study of clinical cases fuels scientific curiosity while emphasizing the scientific principles that underlie medicine. The program offers a rich environment for learning, assuring that students become actively engaged—working with faculty and peers, as well as independently. Students assume greater responsibility for their education, learn to use additional resources, and develop habits of lifelong learning.

Foundation Courses

These courses, required of all students, account for approximately 70 percent of the four-year curriculum:

- **The Animal Body:** gross anatomy, histology, imaging, introduction to surgical approaches
- **Neuroanatomy:** structure and anatomic basis for the diagnosis of diseases of the central nervous system

Any hot topic in veterinary medicine today will somehow be tied to Cornell.

—**Richard Goldstein, DVM, associate professor of small-animal medicine and a specialist in kidney function**

- **Cell Biology and Genetics:** cell biology, cell signaling, medical genetics, cancer biology
- **Function and Dysfunction:** physiology and homeostasis, biochemistry and cell biology, cell injury/repair, histology, hematology, principles of pharmacology
- **Host, Agent, and Defense:** inflammation and infection, immune system and immunopathology, histology, bacteriology and mycology, parasitology, virology, antimicrobial therapy, disease-outbreak investigation
- **Animal Health and Disease:** integration of pathology, applied anatomy, clinical pharmacology, medicine, surgery, nutrition, related clinical disciplines
- **Clinical Rotations:** supervised clinical work includes 12 required core rotations (24 weeks) plus 8 pathway rotations (16 weeks) in the Cornell University Hospital for Animals, in the third and fourth years

There are six different options for the clinical rotation experience—we call these the **Clinical Pathways:**

small-animal	exotics and small-animal
equine	zoo and wildlife
general (mixed)	production animal

For more information see www.vet.cornell.edu/admissions/curricrotations.htm.

- **Animals, Veterinarians, and Society:** physical examination, biomedical ethics and clinical genetics, communication, information management, human-animal bond, health maintenance in individuals and populations, veterinary public health, professional development, societal responsibilities of veterinarians, hospital and practice management

Distribution Courses

These courses, approximately 30 percent of the professional curriculum, are grouped in sets, offering additional flexibility and opportunity to pursue special interests or to develop knowledge about a particular topic or species in greater depth.

Dual DVM/PhD

A dual DVM/PhD Program trains students to become outstanding clinician-scientists. By integrating Cornell's veterinary and graduate curricula in a single program, we give students the skills to excel in basic research, leading-edge medicine, and teaching. Group activities and special training sessions expose students to leaders in science and medicine, while simultaneously building a supportive network of student colleagues and faculty mentors. Preparing students to become leaders in science, medicine, and society, the DVM/PhD Program opens numerous doors for careers in academia, industry, and government service.

All students accepted into the program are guaranteed full support for both degrees for the total duration of their studies, contingent upon continuing successful completion of requirements in both the college and Graduate School.

For more information see www.vet.cornell.edu/OGE/dualDegree.

“To apply the findings of basic science to medicine quickly, you need to understand both how a scientist thinks and how a clinician thinks. By doing the DVM and PhD degrees concurrently, I’m already learning how to think back and forth between those two mind sets.”

—**Karla Stucker, BS '02 (College of Agriculture and Life Sciences), DVM Class of 2008, PhD Class of 2009**

Toronto-born **Lina Mohamed**, shown with Bandito, in the Cornell University Hospital for Animals. Mohamed is “small-animal all the way,” she says, and plans to join a general practice in the Seattle, Washington, area. Her experience in giving physical therapy to small animals came in handy when, on large-animal rotation, she spent 30 minutes every four hours working with a 40-pound, 10-month-old cria (baby llama) who was recuperating from spinal surgery.



“It’s very rewarding. I’ve put in a lot of effort giving this patient massage therapy, flexing and extending his limbs—now he’s able to stand up and take a few steps on his own.”

—**Lina Mohamed, BS '04 (College of Agriculture and Life Sciences), DVM Class of 2008**

CAREERS

Because veterinarians have biomedical training combined with a population perspective—something that many human physicians aren't taught in medical school—our DVM graduates work throughout the world improving the lives of people as well as animals. For example, they:

- work as veterinarians in private primary-care and specialty practices
- own practices and launch entrepreneurial ventures in veterinary medicine
- work in laboratory-animal medicine, on the forefront of identifying and curing human disease
- help establish and run offices for nonprofit organizations working with animal issues, such as the Humane Society in Ecuador
- detect emerging diseases through their work with agencies such as the U.S. Centers for Disease Control and Prevention
- work to conserve endangered species, such as the mountain gorillas of Rwanda
- make house calls in Manhattan to care for sick cats, dogs, and other small animals
- teach farmers in developing countries such as Zambia how to grow crops more effectively
- monitor and identify disease outbreaks in the United States, such as West Nile virus
- serve as pathologists at zoos and animal parks, such as the Bronx Zoo
- conduct field research with organizations such as the Wildlife Conservation Society
- conduct research to design new drugs at pharmaceutical companies
- lobby Congress in behalf of the American Veterinary Medical Association
- run centers that rehabilitate wildlife
- are experts in bioterrorism, working with agencies such as the Philadelphia Health Department
- monitor animal health at places like the New England Aquarium
- monitor rabies outbreaks and other zoonotic diseases for public health agencies such as the New York City Health Department
- serve as executives for pet-food companies
- prevent outbreaks of food-borne illnesses by working with government agencies to monitor food-processing plants
- manage food-production animals at sites such as 3,000-milking-cow dairy farms
- study animal disease in developing countries, such as the incidence of mastitis in yaks in Nepal
- provide veterinary consultations online, in specialties such as radiology
- develop educational materials for people throughout the world who work with animals, such as cattle-management information for farmers in Central America



Stucker, who hopes to one day study bats as vectors for viral diseases of importance in human and animal medicine, is conducting her dissertation project in the evolving molecular structure of canine parvovirus (CPV) in the laboratory of Colin Parrish, the John M. Olin Professor of Virology in the college's Baker Institute for Animal Health. In 1975 Parrish was himself a graduate student in the Baker Institute laboratory of L.E. Carmichael, who, along with Max Appel, first isolated CPV and—in just three years—developed the modified live-virus vaccine against the disease that is still in use today.

“The Wildlife Conservation Society’s main approach to conservation in Zambia is to reduce poverty and increase household security in order to deter poaching and destructive agricultural practices. I worked with people there on how to take better care of their goats.”

—**Tamika Lewis, BS '02**
(College of Agriculture and Life Sciences),
DVM Class of 2009



Hann, shown here with Stella, one of the college's resident teaching cows, is interested in large-animal ambulatory medicine and conservation medicine. During the summer after her first year she rode along with fourth-year students on the ambulatory service where, under the eye of a faculty clinician, she helped with surgery and with administering medicines.

“We were taught how to do a good physical examination at the same time we were studying anatomy, so that within the first couple of weeks we were already learning to apply our knowledge to the practice of veterinary medicine.”

—**Sarah Hann,**
DVM Class of 2010

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Photographs by Alexis Wenski-Roberts
Office of Publications and Marketing
at Cornell University

6/08 11M FLP 080018



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College of Veterinary Medicine

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*As a student I'm cared for by a very
tight-knit group of faculty and alumni
who give back a lot. At Cornell it's
not just four years of vet school, it's
joining a lifelong community.*

**—Julio Lopez, DVM
Class of 2008**



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www.vet.cornell.edu/education/DVM.htm