Students in the “Foundations Course” learn the basics of physical examination and diagnostics, so is animal experience really necessary for admission to veterinary college? See page 2 for an update on this controversial requirement.
THE ANIMAL EXPERIENCE REQUIREMENT

What Does It Mean For Applicants & Students?

THE APPLICATION of every student for admission to the Doctor of Veterinary Medicine professional degree program at the New York State College of Veterinary Medicine is evaluated on several criteria including academic achievement and aptitude, the quality of the applicant’s preparatory program, and personal characteristics and achievements. But because veterinary medicine is an animal-oriented profession the applicant must also show that he or she has had experience with animals.

Until 1969, there was a farm practice requirement for entry into the college’s DVM program for which applicants had to have approximately 20 weeks of full-time work on a farm. In 1969, the requirement was modified to reflect a need for applicants’ exposure to small animals and to the veterinary profession as a lifestyle and business. At that time the requirement was changed to 400 hours of large animal experience and 400 hours of small animal experience, half of which would be completed before admission into the program with the remaining half to be completed before the third year of the professional curriculum. All experience needed to be documented with a summary of the student’s work and letters of evaluation from employers. 1980 saw another change in the animal experience requirement: the specific reference to an exact number of hours was deleted. Instead students were told in the admissions brochure, “...an applicant’s experience in working with animals and an understanding of the veterinary profession are viewed by the admissions committee as important considerations in the selection process.” The brochure goes on to say, “The applicant should be prepared to present evidence of hands-on experience with both large and small animals and sufficient contact with the veterinary profession so that the admissions committee can determine that the applicant has some understanding of the duties and responsibilities of a practitioner and the scope of veterinary medicine.”

According to Marcia Sawyer, director of student affairs and admissions, “Even though a specific number of hours of experience is not required, the equivalent of two summer’s work - one with large animals and one with small animals - is a pretty good guideline for applicants to use.” She suggests that experience with the most common species of animals - dogs, cats, horses and cows - is a good foundation upon which one may add more “nontraditional” experience with laboratory animals and/or exotics. Ms. Sawyer adds, “Animal experience is important for applicants because they should feel comfortable around all species of animals they will come in contact with in veterinary college - not just the ones they want to work with after graduation. It is also important to understand the veterinary profession, and therefore we recommend that some of this experience be gained by working with a veterinarian.”

By far the majority of students competing successfully for places at the New York State College of Veterinary Medicine have experience working with both large and small animals and most have well in excess of 800 total hours of experience. Letters of evaluation from employers and the applicant’s own thoughts submitted in the required essay help the committee decide how well the applicant has related to these experiences.

Stephanie Todd ’87, was a linguistics major as an undergraduate and she credits the animal experience requirement with nudging her into a summer job on a dairy farm. After that, most of her summers were spent working with animals. Being around normal animals has helped her now in veterinary college. Dr. Grant Seaman, ’85, now a resident in anesthesiology, says, “Some working knowledge of animals is necessary if you’re not going to be afraid of a dog, a cat or horse.” While knowledgeable around large animals when she entered veterinary college, Dr. Pamela Livesay-Watkins, ’86, says, “I’d never handled pigs, sheep or goats. Most of my experience was with horses and I wished, several times throughout the program, that I had had a more varied animal experience.”

Brad Burrington, ’87, might typify the ideal; before entering veterinary college he accumulated over 1200 hours working as a kennel assistant and veterinary technician, as a groom at a racetrack and saddlebred barn, and finally, by working on a sheep farm in Idaho. The experience has helped him throughout the last four years. Says Brad, “If you don’t have to deal with a fear of an animal, the sooner you can get on with learning about the animal.”

Dr. Richard Hackett, associate professor of clinical sciences, believes every applicant should demonstrate experience in both large and small animals - for a good reason. “Regardless of what direction you take professionally following graduation,” says Hackett, "while you’re here, you’ll be training with all species.” And, according to Dr. William Rebhun, associate professor of clinical sciences, limited animal experience might have long-term drawbacks. “If you don’t have an understanding of the normal husbandry of a species,” he says, “it’s difficult to make recommendations for its well-being.”

To round out the experience of students who may have concentrated on a limited number of species in fulfilling the requirements for admission, the college initiated a “Foundations of Clinical Sciences” course. A required course for first year students, the course is designed to build the fundamental clinical skills of physical examination and diagnostic reasoning. Laboratories give students the opportunity to practice these skills on dogs, cats, horses, and food animals.

The animal experience requirement may be seen by some applicants as a stumbling block in the path of their veterinary career. For others it is the best and easiest of the requirements to fulfill. For all students, the experience will prove to be one of their strongest assets while in the veterinary curriculum and after graduation.

Small species doesn’t mean small risk. Safely handling a small animal requires much skill and practice.

Students on the Ambulatory rotation gain invaluable experience performing some of the tasks that are part of a large or mixed practice.
EQUINE PROJECTS SUPPORTED BY ZWEIG FUND

EQUINE RESEARCH at the New York State College of Veterinary Medicine will receive $385,000 from the Harry M. Zweig Memorial Fund, a fund supported by state breeding and development monies derived from betting revenues at New York State tracks. The Zweig Fund was established to honor the late Dr. Harry M. Zweig, a well-known and respected figure in the racing industry.

All projects are submitted to the Harry M. Zweig Fund committee by faculty members at the New York State College of Veterinary Medicine at Cornell. Need, priority, and potential benefit to the state’s equine industries are the major criteria on which funds are awarded. Thirteen projects were chosen: $50,000 to Dr. Douglas F. Antczak, Director of the Cornell Equine Genetics Center, for "Immunogenetic Studies of the Horse"; $40,000 to Dr. Judith A. Appleton, James A. Baker Institute for Animal Health, for the "Clonal Analysis of the Equine Immune Response to Influenza Virus"; $10,000 to Dr. John Cummings and Dr. William B. Forsythe for their study on the "Definition of the Enteric Nervous System of the Equine Cecum & Colon"; $20,000 to Dr. Edward J. Dubovi for work on "Equine Arteritis Virus: Characterization of New York State Isolates"; $30,000 to Dr. Norm G. Ducharme for his examination of the "Neuroanatomy of the Equine Larynx"; $40,000 to Dr. John Henion for "The Determination of Anabolic Steroids in Racehorses"; $20,000 to Dr. Robin Gleed and Dr. Alan Dobson for their study of "Bronchial Artery Flow in the Horse"; $40,000 to Dr. Dorothy Holmes of the Equine Infectious Disease Laboratory at Cornell for the "Development of Improved Equine Influenza Virus Vaccines"; $20,000 to Dr. Lennart Krook for a study of "Vitamin D3: Metabolism and Intoxication in Horses"; $30,000 to Dr. Donald Lein, Acting Director of the Diagnostic Laboratory for research on "Applying New Technology Developed at Cornell University for Evaluating and Predicting Fertility of Breeding Stallions"; $50,000 for the continued "Maintenance of Broodmares and Stallions for the Equine Reproduction Unit"; $20,000 to Dr. George Lust and Dr. Susan Fubini for the "Development of a Serologic Test for the Diagnosis of Osteoarthritis in Horses"; and $15,000 to Dr. David O. Slauson for "Studies of Equine Acute Inflammatory Cell Function."

As department chairman, Dr. Smith sees his role as providing leadership and assistance to faculty members in the development of their teaching and research responsibilities. Because so many of the teaching and research activities are based upon Teaching Hospital activities, he also anticipates working closely with hospital personnel. He will emphasize clinically relevant research programs to provide quality research training for post-doctoral and graduate students. Along with his administrative duties, Dr. Smith continues teaching and research in his area of specialization: the anatomic and metabolic changes associated with gastrointestinal obstruction in cattle.

Recruitment of faculty members and some realignment within the department will occur as a result of the new areas such as epidemiology that have recently become part of the department. Within small animal internal medicine and allied areas, the new chairman is aware of the growing need to provide training to New York primary care community practice, including vaccination and healthy animal care. Although vaccination clinics and regular health checkups are part of the current program, instruction will be formalized and a faculty position will be added to coordinate its direction. The growing field of pet bird/zootics will also be recognized with the addition of a faculty position specializing within this area in small animal medicine.

Dr. Smith was born in Picton, Ontario and received his DVM from the Ontario Veterinary College, University of Guelph. He completed an internship and residency in large animal medicine and surgery at the University of Pennsylvania. In 1977 he joined the faculty of the New York State College of Veterinary Medicine as assistant professor of large animal surgery, leaving in 1983 to accept a position as associate professor of surgical sciences at the School of Veterinary Medicine, University of Wisconsin-Madison with a joint appointment in the Department of Veterinary Sciences, College of Agricultural and Life Sciences. From 1986 he has served as chairman of the Department of Surgical Sciences.

A diplomat of the American College of Veterinary Surgeons, Dr. Smith is a member of the AVMA, the Wisconsin Veterinary Medical Association, the Comparative Gastroenterology Society, and the American Association of Bovine Practitioners. He has served on numerous professional and academic committees and has been a member of the editorial board and manuscript review boards of the Compendium for Continuing Education for the Practicing Veterinarian, the manuscript review board of Veterinary Surgery, and the editorial board of Modern Veterinary Practice. He is a member of Phi Zeta and a 1980 winner of the Norden Award for Excellence in Teaching.
DR. JAMES GILLESPIE RETIRES

AFTER FOUR decades of research and service at the New York State College of Veterinary Medicine, Dr. James H. Gillespie has retired; but old habits are hard to break, and he won't be leaving academe completely.

In 1939, Dr. James Gillespie had just received his VMD degree from the University of Pennsylvania and a world war was about to begin. A year later, academic life beckoned at the New York State College of Veterinary Medicine as an assistant professor, working with the chief poultry pathologist, Dr. P. Philip Levine from 1939 to 1948. Meanwhile, Dr. James A. Baker began the Virus Laboratory on Snyder Hill and invited Dr. Gillespie to join as Assistant Professor of Veterinary Bacteriology in the Department of Pathology and Bacteriology in 1948. In 1950 he was appointed Assistant Director of the Veterinary Virus Research Institute, New York State College of Veterinary Medicine, a position he held until 1962.

Dr. Gillespie's first major project was work on cattle diseases and he conducted research on "Q" fever and bovine viral diarrhea. Soon afterwards, he started working on canine distemper and other dog diseases as well. Foot and mouth disease also interested him and when he received a Special N.I.H. Postdoctoral Fellowship for 1953–54, he went to the State Animal Virus Institute, Amsterdam, Holland to learn tissue culture techniques under Dr. Herman Frenkel, a scientist whose methods for the production of foot and mouth virus that infect cattle were still widely used. From 1962 to 1967 he served as Executive Secretary, Committee on Foot and Mouth Disease, National Academy of Science - National Research Council, on a part-time basis on behalf of the Joint Commission.

In 1952, Dr. Gillespie became an associate professor and four years later in 1956 he was named professor. In 1965, he joined Dr. Dorsay Bruner on the main campus in the new Department of Microbiology and a laboratory was built through the assistance of then Dean George Poppensiek, where Dr. Gillespie could begin work in a new area of his research interests. Before that time, there was a void in the area of feline virus research.

From 1960 to 1961, he was a N.I.H. Postdoctoral Fellow on sabbatical at the University of California, Berkeley. A

tinue this work, while finishing research projects and seeing to the publication of papers. He also plans to play more tennis and golf, audit some courses on the Cornell University campus, and spend more time reading and enjoying music and sports activities at Cornell. From a large and very close family, Dr. Gillespie is a devoted family man and hopes to have more time to spend with his three grown children and his grandchild. He and his wife, Virginia, also enjoy traveling, an activity aided in part by his involvement in many international associations.

Dr. Gillespie is past vice-chairman of the Western Hemisphere Committee on Animal Viral Characterization, chairman of the World Health Organization Committee on Comparative Virology, a member of the International Committee on Taxonomy of Viruses, and was a consultant to the Ministry of Agriculture & Rockefeller Foundation, Colombia.

He is also active in professional and scientific organizations and has served as chairman on many committees within the college and also served on innumerable university committees. He was co-chairman of the first colloquia sponsored by the AVMA and other interested institutions dealing with the major infectious diseases of dogs, cats, horses and cattle. He helped organize the first national and international meeting on infectious diseases of cats at Cornell University. At the NIH he was a member and later chairman of the Laboratory Animal Committee Research Resources Division (1971–75), and he also served on the Research Resources Committee, NIAID (1967–71). In the USDA, he was chairman of the Board of Consultants, Plum Island Animal Disease Laboratory for five years.

Dr. Gillespie was awarded the American Veterinary Medical Association's Gains Award in 1971, the American Animal Hospital Association Merit Award in the same year, and in 1984 he was the recipient of the Centennial Alumni Award of Merit from the University of Pennsylvania School of Veterinary Medicine. He is a charter diplomate and board member of the American College of Veterinary Microbiologists, a member of the American Association for the Advancement of Science, the Society of American Microbiologists, the American Society of Virology, the AVMA, and the American Society of Microbiologists.

Like any professional who has led a full and varied career, Dr. Gillespie finds that the demands of work ignore the calendar. He recognized the need to formalize his official retirement on December 31st, 1986, it is the college's good fortune to have Dr. Gillespie continuing his work from a laboratory on Snyder Hill, close to where his virus research began nearly forty years ago.

4-H NATIONAL SCHOLARSHIP WINNER

DOLORES ROEDER, Class of 1987 at the New York State College of Veterinary Medicine, has been selected to receive a $1,000 4-H National Scholarship, one of only two recipients nationwide. Only students enrolled in a U.S. college of veterinary medicine who are former 4-H members were considered for the scholarship. Ms. Roeder was chosen on the basis of her interest and desire to pursue a career in veterinary medicine, financial need, and the leadership abilities and resources developed during her years in 4-H. The third student in the history of the college to win the scholarship, Ms. Roeder also received the Veterinary Science Scholarship from Upjohn in 1980 – the only student ever to win both scholarships.

Ms. Roeder has been active in the 4-H since she was nine years old and so winning the scholarship has special impact. "The money is great, but the award means so much more to me," Says Roeder. "4-H was a big part of what I did growing up. My first job on a dairy farm was through 4-H, and I've spent most summers working as an assistant, then as office coordinator of 4-H. "Her mother is a full-time volunteer 4-H leader and Dolores was also active as a junior and adult leader. One summer, she worked with cooperative extension and organized a pilot program to help New York City children experience farm living. The 4-H emphasis on developing leadership and participating in public presentations helped her, she feels, in her preparation for undergraduate work at Cornell, and entrance to the College of Veterinary Medicine. "I've known since the third grade that I wanted to be a veterinarian and becoming one was tied into my 4-H experience."
EQUINE NEONATE UNIT OPENS

AS THE FOALING season moves into full swing, clinicians in the Large Animal Clinic are readying a suite of stalls in the Large Animal Clinic around the corner from the Reproductive Studies Laboratory. Thanks to the efforts of Dr. Robert Hillman of Reproductive Studies, Dr. Pamela Livesay Wilkins, an intern at the college, and Dr. William Rehbun of the medicine service, the Equine Neonate Unit is now operational and providing intensive care for critically ill foals. Although the unit was designed to accommodate foals up to two weeks of age, it is an option for any foal whose condition requires specialized ‘round the clock care.

The first stall of the unit contains a heated water bed. Far from being a luxury item, the bed helps prevent bedsores in foals that lie for long periods of time while the heated water in the bed helps a foal maintain a constant body temperature. The second of two stalls houses the foal crib, a reinforced couch-size piece of equipment with generous padding down the three high sides. The fourth side is open for access by attendants to the foal. The high sides of the crib maintain the foal in the optimum position for breathing and treatment while protecting the animal from injury. The entire crib is raised approximately 2 feet off the floor, high enough to protect the foal from drafts and potential infection and low enough for the animal’s comfort. And because some critically ill foals will have difficulty breathing due either to a poorly developed respiratory tract or pneumonia, oxygen lines are available in each stall. Multi-positional radiant heat units adjust air temperature to individual needs.

Throughout the suite, an impressive array of equipment - nearly all of it purchased with Alumni Unrestricted Funds and private donations - help clinicians administer therapy and monitor patients. Volumetric fluid pumps deliver a precise amount of fluids intravenously to the foal. Digitalized and computerized, the machines are more accurate than gravity flow methods and have alarms that signal when the flow of fluids has been compromised. A glucometer, first developed for use by human diabetics in the home, will measure blood glucose levels in foals. A ventilator for assisted respiration and a blood pressure monitor with electronic memory for instant replay of blood pressures are also in the unit. In addition, either room can be completely padded to give added protection to any foal that is standing but unsteady. There is also access to a new plasmapheresis machine that makes protective plasma available to foals that may have received inadequate colostrum. A few steps from the suite of stalls, a compact satellite laboratory has equipment for quick assessment tests, ideal for the continual monitoring that is frequently required in critically ill foals. This facility has additional back up from the staff and equipment of clinical pathology. Although the condition of each foal is closely monitored by an attending clinician, veterinary students from the first through third years also maintain the foal in the optimum position for breathing and treatment while protecting the animal from injury.

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Dr. Francois Dudan (photo left) assists Dr. Pamela Livesay-Wilkins with a foal in the equine neonate unit.

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Dr. Susan Wade points out the adult fleas in a membrane feeder.

FLEAS IN THE LAB

FOR MANY pet owners, Ctenocephalides felis (or fleas) are as unavoidable as death and taxes and many times more perplexing. Even in the best of homes they seem to appear mysteriously and resist eradication with stealth and subterfuge. Why then is Dr. Susan Wade, research associate at the New York State College of Veterinary Medicine, raising thousands of fleas in a laboratory? Well, if a way is ever to be found to successfully rid house and animal of fleas, scientists need to know how these pests feed and reproduce, produce allergies in their hosts, and react to chemicals designed to stop them. For effective study, there must be ready access to large numbers of fleas. This is not as simple as finding a friendly cat with fleas. For one, it’s difficult to keep track of a cat’s fleas since they move freely from host to host and their eggs fall off in the carpet. The obvious solution is to perfect an artificial method of raising fleas where the fleas are confined in one place. This is what Dr. Wade has done.

It’s harder than you think to raise fleas. First, eggs produced by fleas living on cats are collected. These eggs are placed on sand in covered petri dishes and placed in an incubator at 27°C and 85% relative humidity. After two days, the eggs hatch into larvae and are fed powdered dried blood. In nature, this process may take considerably longer if the climatic conditions are less than ideal. Within fourteen days the eggs have pupated and developed into adult fleas which are moved to what Dr. Wade calls her “condominiums” for fleas. Each “condo” is a stack of three mesh covered dishes.

The adult fleas live between the meshes of the upper two dishes, and the eggs produced fall into the bottom dish where they are collected and counted.

Fleas begin to reproduce only if they have continual access to fresh blood, just as they would if they were feeding on an animal. This access is provided in each “condo.” The mesh of the topmost cage lies next to the membrane of a glass membrane feeder. This feeder consists of an outer water jacket which keeps the blood the fleas feed on at a temperature of 37°C, and an inner chamber where the blood is placed. The membrane, made of parafilm, is easily penetrated by the flea’s mouthparts. Adult fleas may live several weeks in the laboratory and Dr. Wade presently has one colony where three generations of fleas have lived happily without ever seeing a dog or cat. Some concessions to nature had to be made however. It appears that fleas prefer walking to hopping; they’ll walk on their host’s fur and tire easily if they must hop a lot. Dr. Wade now places a small ball of fur in each flea cage so the fleas may walk and not hop up to the membrane to feed.

Now that Dr. Wade can raise fleas in a controlled setting and estimate with scientific accuracy the normal mortality rate, the actual research begins. She will be testing the effects of certain chemicals on fleas, seeing which chemicals affect what stages in the parasite’s life cycle, along with other investigations. Future work may include learning more about the biology of the flea, and studying what causes flea allergies in dogs and cats.
TOOTIE
FROM A LITTER of ten German shepherds, only Tootie and four puppies were still alive at four months. Concerned over the loss, the breeder brought Tootie to the Small Animal Clinic. Tootie was from a litter that "didn't seem quite as vital," she said and they "appeared to tire easily." In the history related to the clinicians, five puppies had died suddenly: one at birth, three in their sleep soon after birth, and the fifth at four months of age after a brief episode of bloody diarrhea. Why were the puppies dying? Listening to Tootie's heart, Dr. Jay Gould had heard no obvious murmurs. Through a stethoscope, a murmur would sound like a "swish" added to the normal "lub-dub" of the heart. Instead, her heart's normal beats were being interrupted by bursts of irregular beats. After completing the physical examination, Dr. Gould scheduled a cardiological examination with Dr. N. Sydney Moise.

The clinic's cardiologist, Dr. Moise performed an echocardiograph on Tootie - a procedure that uses ultrasound to record the size, motion and composition of various structures in the heart. This showed no evidence of structural abnormalities, no increase in heart size or wall thickness, no obvious narrowing of the cardiac valves, and normal strong contractibility. All these would have indicated something structurally wrong with Tootie's heart. But the irregular heartbeat did have an explanation. An electrocardiogram showed numerous ventricular premature contractions with runs of abnormal beats known as ventricular tachycardia. Tachycardia means "heart hurry," a good description of what was happening to Tootie's heart. A section of her heart was "hurrying" to contract, sending electrical impulses to start contractions that were out of synchronization with the rest of the heart's beating. For Tootie's littermates that did not survive, the premature contractions may have caused ventricular fibrillation, rapid contractions that replaced the normal action of the heart muscle and led to heart failure. Tootie survived because she was luckier or perhaps less severely affected than the other puppies. With treatment that includes anti-arrhythmia medications, perhaps she will live a lot longer.

What caused this defect? According to Dr. Gould the areas of "mis-firing" muscle on the heart might have been caused by a viral infection, or they could be the result of some medication given to the mother. The female was given a heartworm medication during pregnancy, but drug trials have not shown evidence of toxicity or teratogenicity. Because one puppy had diarrhea before death, parvovirus was also considered. However, according to the experts, a parvovirus infection would leave other residual lesions in the heart lining. A genetic cause is now being investigated. Dr. Moise will perform cardiac examinations on the parents, looking for abnormalities in their hearts that could lead to this defect in their offspring.

The first signs of a heart problem in a dog may be "exercise intolerance." Exercise or stress makes the heart work harder than it can and the dog tires easily. In some cases, the dog's tongue turns blue. The owner-breeder had already noted how readily the puppies tired; however Tootie did not seem to be adversely affected by exercise. In fact, the skipped beats could be heard when she was at rest and relaxed. Tootie was fitted with non-invasive telemetry to allow clinicians to monitor her cardiac arrhythmias continuously. Held close to her side by a bandage, the instrument picks up her heartbeat and relays it by radio frequency to a stationary monitor. A print-out can be checked periodically to determine a possible pattern to Tootie's arrhythmias. This may help regulate her medication and improve her condition by anticipating when the abnormal beats are most frequent.

MAKING FISH PAY
THE TROUT, catfish and salmon alongside the steaks, chops and roasts in the foodmarket are a sign of the times, part of the trend toward faster food preparation, fewer calories, and less meat consumption. The fascination with fish and shellfish has reached a point where many people happily eat even fish past - as long as it's shaped to look like pricey crab and lobster. In turn, an aquaculture industry has developed to raise enough fish to meet consumer demands. But raising trout, catfish, oysters, freshwater crayfish, clams and salmon on ponds, raceways, deep water or ocean beds has its pitfalls and problems. The costs of feed, labor, production, transportation and marketing make aquaculture a high-capital industry, and a poor choice for a "get-rich-quick" scheme.

The problems peculiar to New York State aquaculture have the attention of Dr. Paul Bowser, an associate professor in the Department of Avian and Aquatic Animal Medicine at the New York State College of Veterinary Medicine. In addition to running the college's Fish Diagnostic Laboratory, he is charged with the study of diseases of economic importance in fish. One of his current research projects would immediately benefit the state's salmon and trout population. With a grant from the New York Sea Grant Institute, Dr. Bowser is developing a rapid, accurate, diagnostic test for bacterial kidney disease in fish. Carriers of this disease are difficult to detect and once the disease develops it is difficult to treat. The New York State Department of Environmental Conservation could use such a test to screen large numbers of brood fish at their Salmon River Fish Hatchery. Only disease-free fish would be released into New York State waters.

Moving from detection to prevention, Dr. Bowser and fellow researchers are also evaluating a non-drug method of controlling or preventing bacterial kidney disease in fish. By feeding elevated levels of fluoride to fish, they hope to make use of fluoride's ability to protect against some bacteria. This research, involving a challenge to fish with infection then feeding protective levels of fluoride, is presently going through all the protocols required to clear a drug for use in food animals. Fluoride would leave no residues in fish, unlike the antibiotics presently used to treat bacterial infections. In the general scheme from antibiotic use, feeding fluoride is a way to prevent disease through nutritional management as an alternative to treating fish when a disease outbreak occurs.

A recently completed project at the Cornell Biological Field Station on Oneida Lake may have interesting...
implications for human health. Working with Dr. John Forney, Director of the Field Station and member of the Department of Natural Resources at Cornell, Bowser completed a preliminary study of seasonal skin tumors in walleyes. They found that walleyes might serve as an animal model to investigate the interaction of the immune system with the growth and regression of virally-induced tumors. Initial results suggest that tumors develop during the cold season when the immune system is suppressed and regress with warming water temperatures.

Closer to home, at the Teaching and Research Center in Harford, NY, Dr. Bowser and scientists from departments throughout the university are working on a water re-use aquaculture project. They’re using 4-ft.-tall, 21-ft.-diameter, circular tanks to raise fish, then evaluating this water recycling aquaculture system as a possible way to produce fish economically. Dr. Bowser’s part in this experiment is to monitor fish health and disease. Such a high density of fish in a limited volume of water is in precarious balance at the best of times and the inherent stress may easily lead to disease. Dr. Julia Blue in the college’s clinical pathology section is collaborating with Dr. Bowser to identify the clinical chemical parameters of value for the early diagnosis of disease.

According to Dr. Bowser, if the economics of the aquaculture system can be refined, a significant increase in commercial aquaculture would be completely feasible in New York State. The species that could thrive in a recycling water system or other systems include trout and salmon and possibly striped bass, sturgeon, and bait minnows. While aquaculture might not replace the family dairy farm, a profitable system would require much the same level of effort as a successful dairy operation. Someday we may be eating a lot more “farm-raised” fish from New York State, but in the meantime Dr. Bowser has a word of caution, “To be successful, an aquaculturist must use available resources, technical skills, agribusiness knowledge and perseverance.” Some of the resources anyone with an economic dependence on fish might consider are the college’s Fish Diagnostic Laboratory, and Dr. Bowser and his coworkers who can offer assistance on how to maintain fish successfully whether for commercial use or in the laboratory.

LLOYD'S FUNDS

LLOYD'S OF LONDON has awarded $1,000 to Joseph Mankowski, a fourth year student in the DVM program at the New York State College of Veterinary Medicine. Lloyd’s Equine Research and Education Committee makes the funds available as part of a joint education and research program to benefit the American veterinary industry involved with Thoroughbred horses. The Committee, composed of Lloyd's Underwriters, Lloyd's Brokers and Lloyd's Kentucky Agents, was established with funds equally subscribed by the three bodies. Along with monies for research, bursaries are awarded to deserving final-year students at American universities who intend to specialize in some area of work with Thoroughbred horses. Nominations of students to receive awards are made by the veterinary college and applications with letters of recommendation from members of the faculty and administration are submitted for consideration.

Joseph Mankowski, the Committee’s selection for 1986-87, would like to continue his equine studies after graduation. He recently completed an externship with Dr. John Steiner of Mahopac, New York, who combines reproductive work on several large Thoroughbred breeding farms with a general equine practice. The previous summer, Joe earned an Equine Summer Scholarship to work with Rossdale and Associates of Newmarket in England and Dr. W. R. Allen, Director of the Thoroughbred Breeders’ Association Equine Fertility Unit, Cambridge, UK. Before entering veterinary college, Mr. Mankowski also accumulated valuable experience working with racehorses while assisting a veterinarian at Pimlico Racetrack.

RAFFLE AIDS AVIAN CLINIC

A SIGNED ARTIST'S proof by well-known naturalist-artist Robert Bateman was raffled off at the 1986 Annual Conference for Veterinarians, January 13-15 raising over $300 dollars for the Avian Clinic. Dean Robert Phemister drew the winning ticket belonging to Dr. Jay Harvey. The print, "Dipper By The Waterfall," was donated by Mill Pond Press. Robert Bateman’s works have been exhibited worldwide and are represented in collections on four continents.
OLYMPIC HOPES

TO BE AN Olympic athlete, or to be a veterinarian? Most people would consider their lives full if they were one or the other. Jocelyn Kearing wants both, and less than a week after her final examinations in the first semester of veterinary college, she left for Seattle, Washington to begin the long road of trials and training to the 1988 Olympics. But she'll be back. She has received special permission to re-enter the DVM program, class of '92, shortly after the Olympic torch is extinguished at the Games in Korea.

Jocelyn rows. She's probably one of the top 15 women rowers in the country. For over eight years - in college and then for three years before veterinary school - she has trained and competed. The break she needed came when she was invited to Seattle to participate in an exclusive two-week mini-camp under the direction of Bob Ernst, US Team coach and collegiate coach for the University of Washington. The camp brought together selected athletes from across the country and it was a chance to see the competition before the Nationals in June. Until the invitation came, Jocelyn was reluctant to abandon veterinary college to take a chance on making the Olympic team. The invitation made the difference - it meant she had a chance to be one of only 16 young women likely to compete in Korea in 1988.

Of course it didn't come overnight. Last summer she made the '86 US Team and competed in the World Championships in England. Rowing in the 8-oared shell, they came in 4th, behind the U.S.S.R., E. Germany and Rumania. From then on she wanted to make her training count. Last fall Jocelyn rowed alongside her brother, a Cornell undergraduate - but part-time isn't good enough for an Olympic hopeful. Over the next two years, she'll train 6 days a week for 2 hours, lifting free weights every other day and rowing twice a day. With luck, she'll find a part-time job with a veterinarian or in a laboratory. This summer, she'll go to the Nationals, a week-long event where the finals determine the top athletes. The winners will go on to crew the 2, 4, and 8-oared shells in the 1987 World Championships in Copenhagen, Denmark and then in the 1988 Summer Olympics.

What made her go to veterinary college if rowing was this important? Being a veterinarian, like being an Olympic athlete, isn't an option for Jocelyn, it's something she knows she wants to do. Her parents, living in Binghamton, NY, had a small farm with beef cattle and she's worked on a ranch in Colorado tending the cattle. After the Olympic hoopla is past, she knows she'll prefer the day-to-day life of a veterinarian.

The publicity surrounding prepubescent Olympic athletes fosters the belief that a career is over at 20, but Jocelyn, at 25 years of age, has no trouble finding competitors her age. That's due, she says, to the number of people who waited through the boycotted 1980 Olympics for a chance in 1984. The average age in 1984 was 28. Meanwhile, the average age for a first year student is 24 - two years younger than Jocelyn will be when she returns to college in the fall of 1988. Will she be ready to face another tough grind? "It'll be a big jump," Jocelyn admits, "but I've had a taste of vet school and I know what to expect. I don't expect it'll be easy."

NEW & RENEWED GRANTS

Immunobiology of Rapid Expulsion. Principal Investigator: Robin G. Bell, Ph.D. $87,323 from the National Institute of Allergy and Infectious Diseases.

AIDS Model. Principal Investigator: Fernando M. De Noronha, DVM. $83,147 from the National Cancer Institute.

Genetic Functions of Conjugative Streptococcal R Factor. Principal Investigator, Gary M. Dunny, Ph.D. $98,513 from the National Institute of Allergy and Infectious Diseases.

Regulation of Ovarian Follicular Estradiol Production. Principal Investigator: Joanne E. Fortune, Ph.D. $97,971 from the National Institute of Child Health and Human Development.

OPEN HOUSE at the New York State College of Veterinary Medicine is April 11, 1987. Self-guided tours of student-prepared exhibits are featured from 9 a.m. until 4 p.m. Free admission and parking.