

Veterinary Viewpoints

The New York State College of Veterinary Medicine at Cornell University

Vol. 2, 1984



Practicing the Leisure Arts in Veterinary School

Philotherian Prizewinner
by R. Kraybill '85

It goes without saying that veterinary medical students are hard workers. And, for some, there aren't enough hours in the day (or night) for studying, reading and clinic duties. Veterinary students, however, are a resourceful bunch and where there's a will to practice, play or pursue extracurricular activities, they'll find a way to do it.

The photo of the melancholy hound decorating our front cover is a prime example of veterinary students hot on the trail of nonacademic pursuits. It was taken by Robert Kraybill '85 who proceeded to win one-half of this year's Philotherian Photographic Prize. Established by Dr. and Mrs. Hadley Stephenson, the prize goes to the student or spouse who best captures on film a domesticated animal's personality

and the enjoyment of their surroundings. Jadene Bump '86 shared the honors with Mr. Kraybill. (A complete list of the 1984 honor day awards appears on page 2).

What else do veterinary students do? Robert Henrickson '83 played on the U.S. National Lacrosse Team and several students, in their pre-vet days, skied in World Cup class competition. Lenka Babuska '84 is on the ski patrol at nearby Greek Peak and Robin Crossman '84 was a contender in Hawaii's Ironman Competition. Philip Padrid '85 is a black belt in karate and Brad Davis '83 scales mountains to relax. Jeff Wimsatt '85 is a master falconer and Frank Garry '81 is training with the U.S. Crew. Giovanna Sorresso '84, a talented artist and dancer, could lead a successful career in

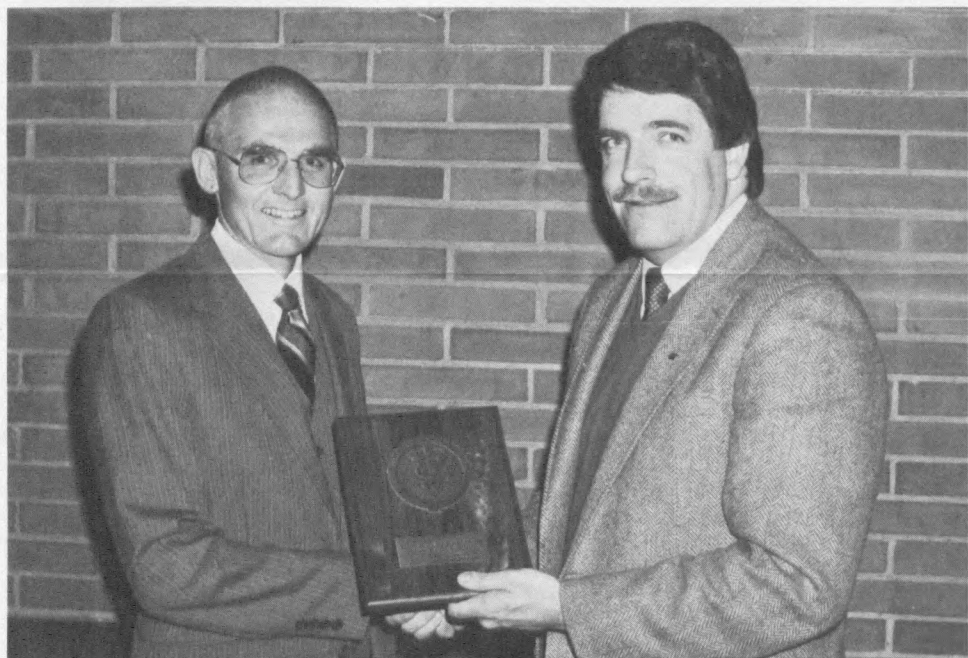
either field. Susan Nolte '84 belongs to a Scottish Dance Club.

If athletics or art won't suffice, music hath charms to soothe even the most harrassed student. Faith Kausman '84 played jazz saxophone with the Cornell Jazz Ensemble prior to graduation and now Bob Kraybill '85 and his trumpet carry on with the group. Other students play violin, flute, and guitar in their leisure moments. One of the more uncommon musical groups is organized by Dr. Wolfgang O. Sack. His chamber music ensemble meets every other week, with Steve Riback '85, Joyce Colbert '85 and Sue Nolte '84 on recorder, Anne Hohenhaus '85 on flute and Jim Zgoda '85 on harpsichord. Charmaine Mosher '87 not only plays the piano, she teaches it too and

Eric Hartelus '86 is second violin in the Cornell Symphony Orchestra. Tom Gill '84 has found a way to make music pay — he's one half of a twosome entertaining with Irish songs at local establishments. For pleasure not profit, James Zgoda '85 sings with the Cornell Chorale while Marcia Campbell '87 is in the Sage Chapel Choir. But to top them all off, we have to go to the movies — way back when Peter Ostrum '84 co-starred with Gene Wilder in the motion picture "Willy Wonka and the Chocolate Factory." Who says veterinary students don't have fun.

Each year, faculty and students meet to honor achievement, acknowledge hard work and reward dedication. A glance at the 1984 Honor Day certificates tells how various the reasons may be for recognition and praise. One honor not included in the official list, but noted in the opening pages of the 1984 Yearbook, goes to two special members of the faculty, Dr. Robert Hillman and Dr. William Hornbuckle. The Class of 1984 wrote, "It is our belief that when we consider the experiences of the past four years, there are two people that appear readily in our minds and conjure up sincere feelings of gratitude and appreciation not only for their efforts on our behalf, but also for their easygoing, good-humored, intelligent, and confident attitudes. It is this contagious spirit of gentle amusement that has helped color our task of understanding science with a more appealing hue."

"It is to these two men, Dr. Robert Hillman and Dr. William Hornbuckle, in appreciation of their efforts and especially for the pleasant, encouraging atmosphere and inquisitive spirits they instill, that we, the Class of 1984, dedicate our yearbook."



Dr. A. deLahunta accepts the Norden Distinguished Teacher Award from the Norden Company representative David Ker (photo right).

Veterinary Viewpoints

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1984 HONOR DAY CERTIFICATES

THE HORACE K. WHITE PRIZE	Lysanne Cape Joshua Atz Mary Eagle David Brummer
THE GRANT SHERMAN HOPKINS PRIZE	David Brummer Kathleen Linn Eric Ehrhardt
THE NEW YORK STATE VETERINARY MEDICAL SOCIETY PRIZE	Diane Blackmore
THE PRIZE OF THE AUXILIARY OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION	Mark Butt
THE JAMES GORDON BENNETT PRIZE	Sarah Lister Lynne Fallon
THE ANNA OLAFSON SUSSEX PATHOLOGY AWARD	Roberta Wallace
THE MARY LOUISE MOORE PRIZE	Joseph J. Tashjian
THE CHARLES GROSS BONDY PRIZE	Kathleen Hall David Brummer
THE AMERICAN ANIMAL HOSPITAL ASSOCIATION STUDENT AWARD	David Waters
THE PHI ZETA AWARD	Edward Gschrey
THE MALCOLM E. MILLER AWARD	G. Sylvester Price
THE JACOB TRAUM AWARD	Joshua Atz
THE P.P. LEVINE PRIZE IN AVIAN MEDICINE	Peter Kintzer
THE FRANK BLOOM PATHOLOGY AWARD	Karen Feibusch
THE JANE MILLER PRIZE	Edward Gschrey Jessica Spitzer
THE ANNE BESSE PRIZE	Gerard Kolb Donald Thompson
THE DONALD D. DELAHANTY MEMORIAL PRIZE	Shawn O'Neil
THE MERCK MANUAL AWARD	Thomas Gill Kathleen Linn
THE PHILOTHERIAN PHOTOGRAPHIC PRIZE	Jadene Bump Robert Kraybill
THE GENTLE DOCTOR AWARD	Kathleen Linn Bonnie Norton
THE AMERICAN ASSOCIATION OF FELINE PRACTITIONERS AWARD	Peter Ostrum
THE A. GORDON DANKS LARGE ANIMAL SURGERY AWARD	Timothy Fallon
THE HILL'S AWARD FOR EXCELLENCE IN CLINICAL NUTRITION	David Waters Kathleen Hefner
THE MYRON G. FINCHER PRIZE	Joseph Tashjian
THE GARY BOLTON MEMORIAL CARDIOLOGY AWARD	Karen Feibusch
THE SHEIDY PRIZE FOR PHARMACOLOGY	David Brummer
THE WILD BIRD RESEARCH & REHABILITATION AWARD	Kathleen Linn Peregrine Wolff Edward Spindel
THE NORDEN DISTINGUISHED TEACHER AWARD	Dr. Alexander deLahunta
THE COLONEL FLOYD C. SAGER EQUINE OBSTETRICS AND PEDIATRICS AWARD	Mary Eagle
THE KLEEN LEEN AWARD IN SWINE MEDICINE	Darice Wiltse



China Delegation Visits College

Five representatives from the People's Republic of China toured the New York State College of Veterinary Medicine during four days in March. Their visit was sponsored by the World Bank for the purpose of evaluating the design, construction and operation of specific pathogen-free animal facilities. The ideas and design concepts they gather here will be used in developing a plan for the creation of national research facilities in Harbin, China.

Ta Weidong from the Information Institute of Agricultural Science and Technology (Beijing) interpreted for the group, translating questions and answers between the Cornell hosts, Dr. Fred Quimby, Director of the Center for Research Animal Resources and Dr. Lloyd Dillingham, Associate Director of the Center for Research Animal Resources, and the delegation. The People's Republic fact-gathering group included veterinarian Meng Xiansong from the Research Administrative Department (Beijing); Zhang Yongjiang, the Director of

the Central Laboratory at Harbin Veterinary Research Institute; Wang Xichuan, Associate Research Scientist, Harbin Veterinary Research Institute, and senior engineer, Li Chengyin, from the Ministry of Agriculture (Beijing).

The visit by the delegation is part of an exchange between the College of Veterinary Medicine and the People's Republic of China. Last October, Dean Edward C. Melby Jr. visited the People's Republic of China as a guest of the Ministry of Agriculture (Beijing). He toured the Peking Bull Station and Artificial Insemination Center, the Harbin Veterinary Research Institute, the Shanghai Fertility Institute and the College of Agriculture, the Jiajiang Academy of Agricultural Sciences (Hangzhou), the Central Veterinary Control Laboratories in Beijing and the Zhajiang Veterinary Research Institute.

Dr. Noronha Honored By Spanish Academy

Fernando Manuel de Oliveira e Noronha, D.V.M., Professor of Virology in the Department of Microbiology, has been elected a member of the Academia de Ciencias Veterinarias de Madrid. The honor is in recognition of Dr. Noronha's work in Portugal and Spain on blue tongue in sheep and African Swine Fever. He was principally responsible for the development of a vaccine against the disease. Dr. Noronha is also a pioneer in the studies of African Swine fever, a disease that has devastated the swine population in Portugal and Spain and is transmissible to humans. He is a member of the AIDS American Task Force. Since his arrival at the College in 1964, Dr. Noronha's work has been with the feline leukemia virus (FeLV) and the feline sarcoma virus (FeSV). His efforts in cooperation with the Cornell research group have led to the isolation and identification of these feline retroviruses in the U.S. Work continues and a safe vaccine for FeLV may be available in the near future.

Dr. Noronha is a member of the American Society of Virology, the American Society for Microbiology, Sigma Xi, and The International Association for Comparative Research on Leukemia and Related Diseases. His research has led to many honors. Dr. Noronha has received a fellowship award from the World Health Organization for studying brucellosis in France. He has been decorated with the medal of "Chevalier du Merite Agricole" from the French government and received a citation from the Portuguese government for his work in Blue Tongue disease. The author of numerous publications, Dr. Noronha has been associated with some of the leading virology laboratories in the world, including the Institut Pasteur of Paris, the Veterinary Laboratory at Weybridge, England, The Bundesforschungsanstalt für Viruskrankheiten der Tiere, the Max Planck Institut für Virusforschung, Germany, the National Cancer Institute, and Harvard and Duke University.

V.I.D.A. Students to Visit India

This summer four students from the College of Veterinary Medicine will have the unique opportunity to study veterinary medicine in India. Joanne Carter '87, Susan Cleary '86, David Ashford '86 and Sarah Ehrenson '87 leave for India on May 22nd for six weeks of study and research at the Veterinary College, Orissa University of Agriculture & Technology in Bhubaneswar, India. Their program will include work with field veterinarians, veterinarians at the Calcutta Zoo, and faculty at Orissa University.

All participants are members of V.I.D.A. (Veterinarians in Developing Areas) and were chosen on a competitive basis for the V.I.D.A. student summer program. Selection was based on participation in V.I.D.A. activities, participation in the elective course, Veterinary Medicine in Developing Nations, and the evidence of thought about the problems of developing nations and need for understanding these. Dr. Prabin Mishra, a native of Orissa and Veterinary Assistant in the Department of Anatomy, (NYSCVM) will lead the group.



Seated: Susan Cleary, Joanne Carter
Standing: David Ashford, Carolyn Prouty (alternate), Sarah Ehrenson, Dr. Prabin Mishra

CORRECTION

In Vol. 1, 1984 of *Veterinary Viewpoints*, the quilt raffle mentioned on page 1 was inadvertently attributed to the Women's Auxiliary. The quilt was made and raffled by members of the Veterinary Circle. The editor apologizes!



Fibronectin: Looking For The Key To Arthritis

Which came first, fibronectin or osteoarthritis? Nancy B. Wurster, Ph.D., at the James A. Baker Institute for Animal Health is interested in the answer. Although at times it resembles the infamous "the chicken or the egg" dilemma, the question is whether the presence of fibronectin is directly involved in the degenerative processes of osteoarthritis, or whether it is a by-product of the degenerative joint disease. Depending on the answers to these questions, Dr. Wurster's research may someday help pinpoint incipient arthritis, or perhaps supply guidelines for a cure. She has already published a paper entitled "Fibronectin in Osteoarthritic Canine Articular Cartilage" in which she presented evidence for the first time of fibronectin in degenerated cartilage of osteoarthritic canine joints. For some of her work, Dr. Wurster had the support of an Arthritis Foundation postdoctoral fellowship and now she continues her research in this field as the recipient of an Arthritis Investigator Award. It is an unusual and significant achievement for an individual at a College of Veterinary Medicine to receive this award.

What is fibronectin? Fibronectin is a high molecular weight glycoprotein normally present in plasma and in extracellular matrix. Recent studies have shown fibronectin's involvement in cell adhesion, migration, morphology, differentiation and metabolism. Fibronectin is present normally in plasma levels. Fibronectin is also involved in granulation tissue and wound healing. Blood vessels have been shown to produce fibronectin in response to injury. Increased amounts of fibronectin have been reported in synovium, or lining of the joint capsule, from patients with rheumatoid arthritis and osteoarthritis. Increased levels of fibronectin were also reported in synovial or joint fluid in patients with rheumatoid arthritis.

Dr. Wurster's research begins with Labrador Retrievers that are genetically prone to hip dysplasia. These dogs have osteoarthritis similar to that experienced by humans. In the earliest stages of this disease, the cartilage and synovium are affected.

Earlier studies in the James Baker Institute laboratories by Dr. Douglas R. Miller, (now assistant professor at the LSU Medical Center), demonstrated that increased amounts of high molecular weight proteins could be extracted from the degenerated cartilage of dogs with osteoarthritis. Could this protein be fibronectin?

Dr. Wurster and her associates began to answer that question by taking normal and degenerated cartilage samples from hip and shoulder joints of the Labrador Retriever dogs. Studies had shown that a combination of heparin and urea extracts cellular fibronectin from lung and placenta tissues, and a similar extraction procedure was used to extract the fibronectin from both the normal and degenerated joint cartilage canine tissues. The protein Dr. Wurster and her associates obtained had a molecular weight and electrophoretic properties similar to the fibronectin isolated from canine plasma. The proteins were positively identified as fibronectin by a monoclonal antibody to fibronectin in an enzyme-linked immunosorbent assay or ELISA tests used to confirm identification.

Dr. Wurster's work was the first report of the presence of fibronectin in canine articular cartilage. Previous studies had not detected fibronectin in the matrix of mature cartilage. Of greater significance was her finding that degenerated cartilage contains markedly greater amounts of fibronectin than normal cartilage. Dr. Wurster hypothesizes that fibronectin may accumulate in response to the loss of matrix (interstitial substance) material which accompanies the osteoarthritic process. In her paper she wrote:

"The accumulated fibronectin may have no further role in the disease process; however, since fibronectin has been shown to affect chondrocyte differentiation and to reduce proteoglycan synthesis, it is plausible that the local presence of fibronectin favors the progression of the disease, possibly impeding repair of the damaged cartilage."*

Dr. Wurster continues to study fibronectin because of its many suggested roles. An apparent increase of cartilage fibronectin with the age of the dog has to be substantiated. Current work studies the biosynthesis of fibronectin by cartilage using radioactively tagged material to discover why fibronectin is produced and where it originates; does it indeed originate in cartilage or is it made by fibroblasts in the synovium. The role of fibronectin in normal cartilage also needs to be explained. Since Dr. Doug Miller, has found a similar increase of fibronectin in human osteoarthritic tissue,

information obtained will be useful for understanding and treating osteoarthritis in humans.



Arthritic Rats In Space

The last space shuttle's passengers included several arthritic rats in an experiment to see if weightlessness slows the spread of arthritis. Although the rats were more comfortable, Daniel J. Weber discovered that space travel is not the cure for the disease. Weber, a Cornell University student, designed the experiment and another Cornellian is examining tissue and bone lesions in the arthritic rats. Lennart Krook, Professor of Veterinary Pathology, conducted the rats' post-mortem within days after they returned to earth and his studies should be completed in the next few months.

Nancy B. Wurster, Ph.D. in her laboratory at the James A. Baker Institute for Animal Health.

*Wurster, N.B., and G. Lust. 1982. Fibronectin in osteoarthritic canine articular cartilage. *Biochem. Biophys. Res. Comm.* 99: 1094-1104.

Arthritis

Name a species with a backbone, and chances are they suffer from some form of arthritis. Those aches and pains you're feeling you share with ducks, pigs, cows, horses, dogs, some birds, and even a few finny creatures. Dinosaurs had their arthritic joints too.

Osteoarthritis is a non-inflammatory disorder of movable joints characterized by deterioration and abrasion of articular cartilage, and also by formation of new bone at the joint surfaces.* It begins with localized areas of softening of the cartilage seen as a fine velvety disruption of the surface. Abrasion of the damaged cartilage takes place with a progressive thinning of the underlying bone. The name Osteoarthritis itself is misleading since "osteitis" means inflammation of bone. But it has entered the vernacular, and "degenerative joint disease", although a more accurate term, is not an easy phrase to drop in conversation.

We seem to know a great deal about human osteoarthritis—unfortunately most of the "facts" are contradictory. Depending on the researcher, weight does or does not have an influence. (To be on the safe side, most doctors will recommend their heavier arthritic patients lose weight). On the other hand, some research shows that weight-bearing joints are not necessarily susceptible to the disorder; in the knee joint, the patella or kneecap erodes first not because of direct load but because of loads due to leverage caused by flexing, such as squatting. Continuing the controversy, reports have also found there is no greater incidence of the disease in either sex; males and females have an equal chance of developing osteoarthritis, but male mice consistently develop more severe osteoarthritis than do females. Another publication disagrees, stating that moderate and severe grades of osteoarthritis were seen to a greater extent in women.

Researchers do agree on some points. Osteoarthritis is frequently the result of a life-long accumulation of insults to joint tissue. The horse with a daily diet of racing, jumping, or other strenuous competitive activity, the dairy cow housed on concrete, bruising knees and hocks, will be susceptible. A dog's normal frisking or walking may be enough to cause the condition in old age. Even the simple strain on a bird's hocks from years of perching may culminate in osteoarthritis. Osteoarthritis may appear at the site of an old injury, for example in a leg with an old fracture, or at the point of an acute or chronic infection. In humans neuropathic disorders, such as diabetes mellitus predispose the victim to osteoarthritis. Studies in humans have also shown that over-use of intra-articular injections of corticosteroids may cause or promote osteoarthritis. This can be a two-fold problem for both man and animal. Relief of the pain by the drugs allows over-

use of damaged joints, while recent studies have demonstrated a direct deleterious effect of corticosteroids on cartilage.

For humans the bad news is that by age 40, 90% of us will have osteoarthritic changes in our weight-bearing joints, even though clinical symptoms are not present. The good news is that those morning twinges probably aren't osteoarthritis. In fact, Cobb, Merchant and Rubin reported that there was no association between morning stiffness and x-ray evidence of osteoarthritis and only about 30% of persons with radiographic evidence of degenerative joint disease complained of pain at the relevant sites.* A horse that is stiff in the morning and warms out of it through exercise is not necessarily arthritic either—some type of lameness problem should be suspected first.

The cure for this pervasive condition is generally the same for human and animals. Rest is important since excessive use may harm the joint. The key word here, however, is excessive. Bed rest, or stall rest, (as the case may be) is not usually recommended. Reducing the strain on the affected joint, either surgically or with braces or proper shoeing, is important. The affected joint should receive physical therapy. Dr. Michael Collier, Assistant Professor of Surgery, in conjunction with the Ithaca College physical therapy program, has instituted a research project to investigate the feasibility for application of physical therapy modalities and other rehabilitation techniques to equine orthopaedic and sports medicine patients. Finally, analgesics and anti-inflammatory drugs may be prescribed to treat osteoarthritis, despite the dangers of over-use and additional joint deterioration.

One final note. Researchers, after studying populations in Northern Europe and America, are suggesting that there is less osteoarthritis farther north. It seems there is a lower prevalence of osteoarthritis among Alaskan Eskimos and natives of Finland than among people in the lower latitudes. For those of us who live through endless winters in the Northeast, this is a comforting finding.

*All information on human osteoarthritis used in this article can be found in *Arthritis and Allied Conditions* by Hollander and McCarty 1979, Section: Osteoarthritis Part III, Ephraim P. Engleman, M.D., Editor. Chapters: "The Pathology and Pathogenesis of Osteoarthritis" by Leon Sokoloff, M.D., National Institutes of Health; "Clinical and Laboratory Findings in Osteoarthritis", Roland W. Moskowitz, M.D.; and "Treatment of Osteoarthritis" by R. Moskowitz.



Grants For Research

Ellis R. Loew, Associate Professor in the Department of Physiology has received a grant totalling \$70,743 from the National Eye Institute for a study on "Vitamin E and Maintenance of Visual Function". Dr. Loew and co-investigators, Drs. Ron Riis and Ben Sheffy, will explore the early consequences of Vitamin E deficiency on the visual systems of newborn pups. The researchers will pay particular attention to the build up of lipopigment in the retinal pigment epithelium (RPE) and investigate possible substitutes for Vitamin E.

With a five year grant totalling \$853,030 from the National Institute of Child Health and Human Development **Peter W. Nathanielsz**, Ph.D., Professor and Chief of Reproductive Studies, will search for effective agents to control premature labor. The funded study is entitled "The Control of the Pregnant Primate Myometrium". Dr. Nathanielsz and co-investigators have determined that in the second half of pregnancy, the primate myometrium exhibits two distinct types of activity with different pressure waves and electrical characteristics, different patterns related to light-dark cycles and different time relations to surgery and duration of gestation. They now hypothesize that changes in estrogen physiology play a causal role in the control of these two types of myometrial activity. They will study and define the role of estrogens in both labor and delivery "contractions" and low amplitude tonic "contractures". Co-investigators with Dr. Nathanielsz are Robin E. Poore, Ph.D., Jorge P. Figueroa, M.D., Dave Frank, Animal Lab Technician, and Lloyd Dillingham, D.V.M.

Donald S. Postle D.V.M., Director of Financial Aid, will continue the Minority High School Student Research Apprentice Program into 1985 thanks to a supporting grant from the Division of Research Resources. The purpose of the program is to provide meaningful experience in various aspects of health-related research in the expectation that some of the apprentices

will decide to pursue careers in research related to health. This is the fourth year the Apprentice Program has been offered at the college.

Geoffrey W. Sharp, Ph.D., D.Sc., Professor and Chairman of the Department of Pharmacology and Director of the Division of Biological Sciences, has received \$92,949 from the National Institute of Arthritis, Diabetes, Digestive & Kidney Diseases, for a study of "The Diarrheal Diseases: Ca++-Calmodulin Phosphorylation." With co-investigator Professor Mark Donowitz of the New England Medical Center Hospital, he will continue his studies on the control mechanisms involved in the regulation of electrolyte transport and water movement in the small intestine. Concentrating on the role of phosphorylating enzymes and cofactors, the work is closely related to the development of new pharmacological agents for the treatment of severe diarrheal diseases.

Bud C. Tennant D.V.M., Professor of Comparative Gastroenterology, is Principal Investigator on the study "Woodchuck Hepatitis, Aflatoxin, and Hepatocarcinogenesis", a project recently funded by the National Cancer Institute. He and his associates will determine if there is combined effect of woodchuck hepatitis virus (WHC) with environmental and/or dietary factors such as aflatoxin that may produce cancer of the liver in the woodchuck. The researchers hope to learn if such factors will enhance development of cancer of the liver in individuals with chronic hepatitis B virus infection. Co-investigators on the project are Juanell N. Boyd, Ph.D. research associate Lois Roth, D.V.M., post-doctoral research associate; and John M. King, D.V.M., Ph.D. Professor of Veterinary Pathology. John L. Gerin, Ph.D., Professor of Microbiology and Director of the Division of Molecular Virology and Immunology, Georgetown University, is also a collaborator



A Will To Live

Anyone could see the odds were against Fancy's Foal. When the two-day old filly was admitted to the Large Animal Clinic she was too weak to stand. Her breathing was labored and examination showed pulmonary edema, an accumulation of fluid in the lungs. In neonates, causes of this fluid build-up can include cardiac disease, infection, inflammation of the lungs, pulmonary overwork from stress, or residual fluid in the lungs following birth. Although her condition was not ultimately diagnosed as such, pulmonary edema is just one of the possible signs of the "neonate maladjustment syndrome" in foals. Stricken at birth or shortly after, the victim may display neurologic signs, depression, blindness, seizures, lack of a nursing reflex, weakness and/or respiratory signs.

As Fancy's Foal's condition continued to deteriorate and death seemed imminent, treatment intensified. On arrival the foal had received diuretics and intravenous dextrose, the former to reduce excess fluids, the latter to provide direct energy. Steroids were given to counteract shock and inflammation. If given in time, the drugs would help the lungs reverse their "water-logged" condition.

Foal and mother bedded down for that first night with company. Dr. Karen Baum stayed with her patient, administering oxygen through a mask and watching for any sign of improvement. At midnight, the foal was barely breathing. But against all reasonable expectations, the filly was still alive at first light, in fact her breathing actually seemed to be easier. Despite the improvement, she continued to lie comatose in the stall.

On the afternoon of the second day, Fancy's Foal took a turn for the better and stood on her own. Still extremely weak, she wandered aimlessly before halting in a corner with her head pressed against the wall. In this lethargic state she lacked even the reflex to suckle and fourth year veterinary students tube-fed her repeatedly. Perhaps sensing there was an easier way, she struggled to nurse from her dam and by the evening of the second day tube-feeding was discontinued.

From that point, Fancy's Foal's improvement was continual. Over the next two days she learned to nurse effectively and as her lungs cleared, her appetite increased and she moved about the stall. By the fifth day, encouraged by her progress, attending veterinarians discontinued the intravenous electrolytes and Lasix. Day 6 brought a relapse of severe pulmonary edema. Previous therapy and treatments were maintained.

By the ninth day, her heartbeat was strong, however some rales (sounds in the lungs indicating fluid build-up) could still be heard.

Fourteen days after her admission to the clinic, Fancy's Foal was filling out, frisking and bucking in her stall. When let out into the paddocks with her mother, she played like any normal foal. The only lingering indication of illness was a slight shortness of breath after too much exercise.

She was sent home after eighteen days of Equine Clinic care and the little filly continued to make an uneventful recovery. The amount of daily exercise was gradually increased and antibiotics were continued as part of the treatment.

Seven months after her dramatic recovery, the filly was back at the Equine Clinic—this time for a recheck examination. After examining the now very feisty foal, Dr. Baum wrote in the record, "With her desire to survive and the spirit she displayed, she is going to be a ball of fire." Along with a clean bill of health, the filly received a new name for the medical records. Impressed by the same qualities Dr. Baum had noted and by her amazing recovery, her owners decided to rename her "Talitha cumi", Tally for short. It means, "Little girl, arise," an altogether appropriate choice.

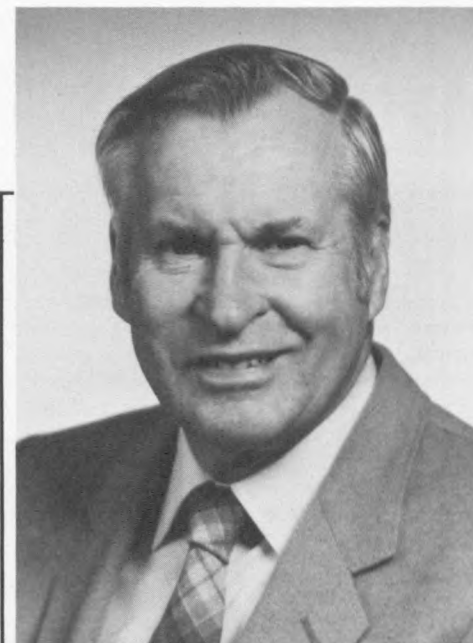
"Courage is the willingness to play even when you know the odds are against you."

Thomas S. Szasz



Dr. Karen Baum and "Tally" a few days after admission (above) and after recovery (photo left).

SAMPLES NEEDED: Dr. Karen Baum, medicine resident in the Large Animal Clinic, needs fecal samples from equine diarrhea cases for anaerobic culture as part of an on-going study by Dr. Baum and Dr. Shin. Referring veterinarians may send samples: ATTN: Dr. Shin, NYS Diagnostic Laboratory, Cornell University. If results are requested in return, a fee must be charged. Please include age, sex and breed of the horse sampled, as well as a brief history on duration and treatment.



Dr. Hogg Begins Swine Veterinary Extension—Field Service Program

The first Swine Veterinary Extension—Field Service Program at Cornell has begun under the direction of visiting professor Alex Hogg. At the invitation of the New York State Diagnostic Laboratory Dr. Hogg will spend three months establishing the program and speaking with pork producers and veterinarians. Dr. Hogg is on academic leave from the University of Nebraska where he is a swine extension and research veterinarian.

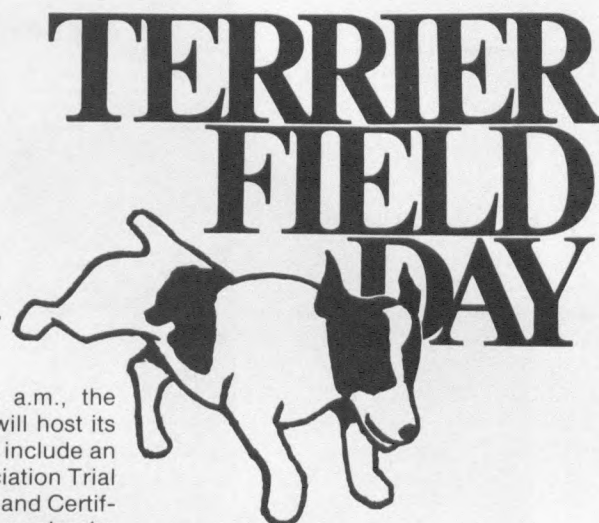
An internationally recognized authority on swine veterinary practice, Dr. Hogg was a private practitioner for twenty years in Iowa, specializing in swine diseases and management. In 1972 he received a masters degree in Veterinary Pathology from Iowa State University for his research on swine arthritis. Since that time he has served as the swine extension veterinarian at the University of Nebraska, where he is well-known for his extension work and his activities in national and international swine programs. The recipient of many industry and professional awards and honors, Dr. Hogg is past president of the American Association of Swine Practitioners. He received both the Nebraska Veterinarian of the Year and the National Extension Veterinarian of the Year Award in 1980.

During his stay, Dr. Hogg will hold special seminars and workshops for practicing veterinarians and interested veterinary students. Topics to be discussed will include swine medicine and diseases, and practical problem solving on swine farms. He also plans to speak with pork producers on the importance of working with their veterinarian in the development of an effective swine herd health program. Dr. Hogg will be available for consultation by calling 607/256-6541. Visits to swine farms may also be arranged.

Dr. Kirk Receives Association Honors

Robert W. Kirk, DVM, director of the Veterinary Medical Teaching Hospital, received the American Animal Hospital Association's Northeast Region Outstanding Service Award, at the region's recent annual meeting in Cape Cod. Dr. Kirk was honored for his outstanding service to students, and his important involvement with the American Board of Veterinary Practitioners, which

he served most recently as its President, and as a member of the ABVP's Organizing Committee and Board of Regents. Dr. Kirk is also a Diplomate of the American College of Veterinary Dermatology and the American College of Veterinary Internal Medicine. He is a 1946 graduate of the New York State College of Veterinary Medicine at Cornell.



On June 17, 1984, at 9:00 a.m., the Cornell Equine Research Park will host its annual Terrier Field Day. Events include an American Working Terrier Association Trial with Go-to-Ground Competition and Certificates of Gameness. Terriers may also be entered for the conformation events, and flat and hurdle races. Refreshments will be available and a wine and cheese hour is planned. Between events, terrier-fanciers can browse in the Terrier Boutique. Profits

from the competition benefit the Cornell Equine Research Park. For more information, contact Audrey Lowe, 136 Snyder Hill Road, Ithaca, NY 14850 or call at 607/272-5163 or 607/256-7753.

FOOTNOTES



HAPPY BIRTHDAY! Dr. Ellis P. Leonard, Professor Emeritus, celebrated his 80th birthday on April 6, 1984. The author of

several books, including two volumes on the history of the college, Dr. Leonard is now collecting material for yet another piece. At the request of the New York State Veterinary Medical Society, he has agreed to write a history of the Society in celebration of its 100th Anniversary in 1990. Anyone wishing to donate old records, photos, letters, etc. of veterinarians practicing anytime between 1890 and the present in New York State should contact Dr. Leonard at the New York State College of Veterinary Medicine.



AVIAN ROUNDS

Avian Rounds to Be Published

A free 8-page newsletter for the bird-loving public will be available from the Office of Public Information at the College. The first issue features articles on respiratory disease in pet birds by Dr. William Olkowski (COR '82), feeding your pet bird, and what to do (and not to do) when you find a wild fledgling. Future issues will discuss cuttlebones, de-oiling wild birds, lead poisoning in household birds, supplying your backyard feeder, pet bird parasites, rehabilitation, and many other interesting topics.

Avian Rounds is written with a lay audience in mind and is published quarterly. Articles are contributed by students and faculty in the Cornell community and veterinarians in avian practice. All information is reviewed by the newsletter's editorial advisors, Dr. David Graham, Professor of

Avian and Aquatic Animal Medicine, Dr. Lloyd Dillingham, Director of Laboratory Operations and the Avian Clinic, and Drs. Christopher (COR '83) & Joanne Paul-Murphy (COR '82). Dr. Paul-Murphy begins a residency this year in Zoological Medicine with Dr. Murray Fowler at the University of California at Davis, where Dr. Christopher Murphy will also start his residency in ophthalmology.

If you'd like to receive *Avian Rounds* please send your name, and address to:

Avian Rounds
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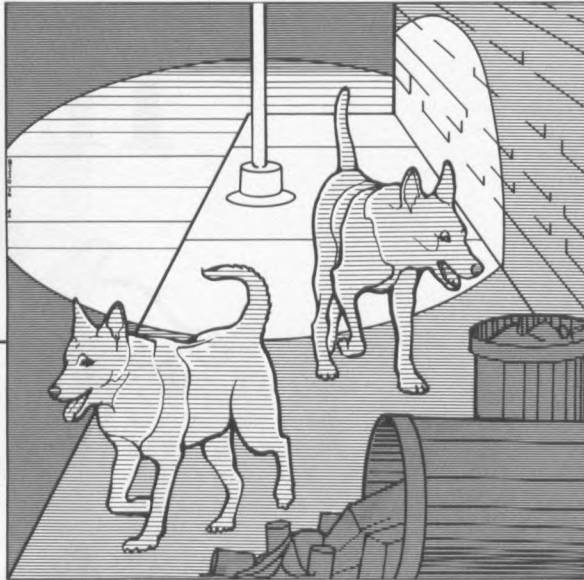
Zoo Emu

In mid-April, the Ross Park Zoo in Binghamton sent an emu to the teaching hospital. A half-size version of its relative the ostrich, the emu is native to Australia, lives in flocks and cannot fly. Our emu arrived at the clinic acutely lame and in sternal recumbency. Echocardiography revealed a mass on the aortic valve and bacterial endocarditis was suspected. In this type of endocarditis, blood clots formed by infection have a tendency to travel along the arteries until they lodge in an arterial branch or in a constricted pathway. This blocks the blood supply to a limb or organ. According to Dr. John F. Randolph, the clinician-in charge, the emu may have experienced such a blockage in the arteries supplying the legs, thus her inability to stand. The photo was taken during diagnostic tests; Mary Wopperer '84 monitors the emu under anesthesia.

Lost Dog

By Kenneth L. Marcella,

DVM (COR '83)



Your local veterinarian or S.P.C.A. should be able to provide you with a list of established national pet registries. Or contact the American Kennel Club, NY, NY. (212/481-9292), The National Dog Registry, Carmel, NY. (914/277-4485), Where's Heather, Scottsville, VA. (804/256-3317) or the Field Dog Stud Book, Chicago, IL., (312/372-1383).

It's late at night and your pet still has not come home. He has never strayed before, but now he has been missing for over thirty-six hours. You're worried, frightened, and you're not alone. Each year thousands of people lose their pets. Their animals stray from home and disappear for variable periods of time. Unfortunately, a large number of the stray pets will never be seen again.

Some of these pets simply wander away on their own and become part of the increasingly large number of stray animals roaming our cities and suburbs. Some pets stray for variable periods and then find their way home. This tends to become a pattern for these animals, and their absences become longer and longer, often up to a week at a time. During these absences, many pets join stray packs and rummage for food, chase livestock, attack other animals and occasionally, man. The number of animal bites, particularly from dogs, is estimated to account for 1% of all hospital emergency department visits. Figures from a paper written by physicians at the University of Pennsylvania Medical School puts the number of animal bites in humans at close to two million per year. Undoubtedly the growing stray population contributes to this figure.

Many strays are killed. Any animal chasing livestock can be shot on sight, and many private citizens exercise this legal right to protect their property. Strays that avoid disease, gunshots, poisoning, and traffic accidents, usually find their way into the hands of the local dog warden.

Dog wardens differ in background and training. The attitude towards, and support for the dog pound system also differs from

county to county so the care and attention an animal receives varies greatly. Legally, the dog warden must hold each animal for a specific period of time (a week in most states). If not claimed in that time, the animal may be destroyed by the approved method for that state. Seven days is not a very long time, and if your missing pet has a history of occasional "vacations", you might not begin to worry until it is too late.

If that weren't enough, the number of animal thefts is increasing. Valuable dogs and cats, especially purebreds, have been stolen from fenced-in yards, out of cars and from almost every other conceivable place. These pets are frequently sold to the unsuspecting public by disreputable dealers. More disturbing than this however, is the practice of selling these pets to institutions where they are then used for research. *TIME* magazine recently reported on criminals in West Germany who had abducted up to 500 cats each week for research.

In this country, the situation is nowhere near as bleak. There are numerous organizations whose main function is to monitor the care and treatment of animals used in research. The Animal Welfare Act, passed

in 1966 and amended in 1970 and 1976, requires every federally regulated business, institution, or agency to record the name and address of each person from whom it buys a dog or cat. Extensive records are kept that enable individual animals to be traced through the system. The Animal Welfare Act is enforced by the U.S. Department of Agriculture (USDA) whose veterinarians and officers conduct regular inspections of all licensed pound and research facilities. Many research institutions make exhaustive attempts to determine prior ownership of an animal and to reunite pet and owner.

This is where you, as the owner, can do the most for your pets. Do not let your pets roam. They should be on a leash or in an enclosed area if unattended. Spay or castrate your pets. Ninety percent of all castrated dogs show a reduction in straying behavior. Castrated or spayed cats are also less likely to prowl the neighborhood.

Tattoo your pets. This is a simple procedure done by your veterinarian. Some local SPCA's also offer this service. Your animal will be lightly tranquilized to reduce anxiety and movement while the tattoo is made on

the inner surface of the thigh. In the procedure, india ink is spread over the area to be tattooed. The instrument (a hand-held pen with a very fine needle) carries ink into the upper layers of skin. The procedure is quick, bloodless and painless (animals react more to the irritating sound of the instrument than to the needle). It is also very effective. Your animal is permanently identified.

But what should you have tattooed on your animal? Telephone numbers or owner's names are occasionally tattooed, but are useless if the owner then moves, or if the lost animal is found in another state. Some think the social security number is ideal—but privacy laws protecting the private citizen also prohibit a trace on a number. It is therefore a good idea to register your animal with a reputable national pet registry. For a fee, these organizations register your pet's tattoo and identification and, if your pet is lost or stolen, this information can be circulated nationally. More importantly though, a dog warden or research supervisor finding a tattoo could call these pet registry organizations and be given the owner's name and address. You might also take several good quality, clear photographs of your pet that accurately show hair color, coat markings and any other distinguishing features. If your pet is lost or stolen, you'll have the photos on hand to reproduce and distribute to dog wardens, SPCA facilities and research institutions.

No system is foolproof but you have a responsibility to your pet to do the best you can. There are ways of finding lost animals and most people involved with the care and handling of strays enjoy reuniting owners and their pets.

A new space-age development may make tattoos and registries obsolete. Identification Device Inc. (IDI) of Colorado has developed a microchip sealed in biomedical epoxy. This chip can be implanted under the skin and is capable of 34 billion code combinations. The electronic information on the chip is picked up when a read-out device is passed over the skin, much like the sensing of computerized prices on grocery items. This permanent I.D. system has been used in many species and will be expanded to the dog and cat in the near future. The manufacturers point to its advantages such as ease of implantation,

the ability to record a lot of information per chip, safety (since subcutaneous implantation can be done under local anesthesia), and durability—the chip has a 100 year life span. The only disadvantages to date are the slightly high price (which should decrease as technology improves) and the problems associated with standardization of the information on each chip. Other uses for the chip include placement of Medic Alert bracelet or tag information on implantable chips for humans. This technology will undoubtedly lead to other more varied uses but for now it's good to know that science may be helping to bring home that lost dog.

Veterinary
Viewpoints

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