

James A. Baker Institute for Animal Health Cornell University Annual Report, 1988

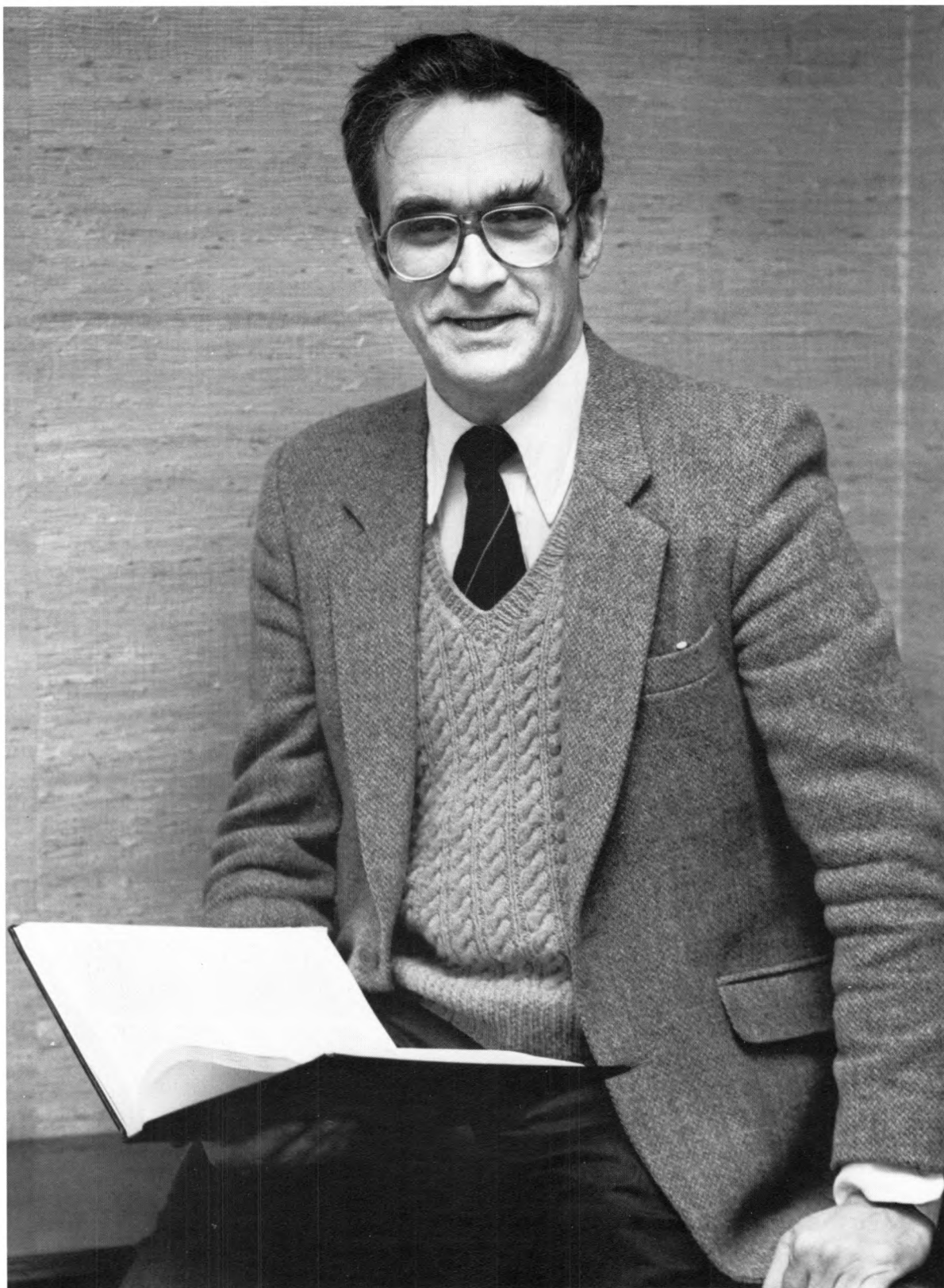
*New York State
College of
Veterinary Medicine
Volume 38*



*This report honors those
whose generosity
sustains the Institute's
independence and
commitment to
excellence and the
pursuit of truth.*



*For nearly forty years,
the Baker Institute has
been an innovator and a
significant participant in
animal health research.*



Douglas McGregor

A Message from the Director

Research has been a decisive factor in shaping our society. Nowhere is that more clearly evident than in the biomedical sciences. For nearly forty years, the Baker Institute has been an innovator and a significant participant in animal health research. Immediately after the Institute's founding in 1950, novel methods of cell and tissue culture were used to isolate infectious agents, grow these agents in quantity, and modify them for use in vaccines. Baker Institute scientists still employ these methods to advantage; however, they are also using contemporary methods of molecular biology to address fundamental questions about life processes. The principal areas of their research are in three areas in which the Institute has a historic and ongoing commitment: infectious diseases, arthritis, and reproductive biology. Their most recent achievements are described in this report.

The technology on which modern science depends has many applications in animal health research, but it is also expensive. Last year I commented on the significant investments we have made in facilities and equipment. In September we completed a major capital improvement program that addressed the Baker Institute's immediate space and instrument needs. The centerpiece was a new research wing that contains two laboratory suites and badly needed space for offices and shared equipment. Coincident with construction of the new wing, three laboratories were refurbished and supplied with instruments provided by the National Science Foundation, the SURDNA Foundation, the Robert W. Woodruff Foundation, and several private benefactors.

While facilities and equipment are required to conduct research, they alone are not sufficient. People with skill, energy, and imagination are needed to use these resources in practical and creative ways. It is therefore with great pride and gratitude that I can report to you that the Baker In-

stitute received two gifts this year that will directly assist our faculty. A Career Development Award established by Mr. Elliot Donnelley, Mr. Strachan Donnelley, and Ms. Laura Donnelley in honor of their mother, Mrs. Dorothy R. Donnelley, will provide assistance for and continuing support of new faculty and established scientists who are making major shifts in the direction of their research. As chairwoman of our advisory council, Mrs. Donnelley has lent guidance and encouragement that have contributed to the unprecedented growth of the Institute during the past decade. In addition, the trustees of the Marilyn M. Simpson Charitable Trusts made a gift in honor of Mrs. Simpson, whose concern and affection for animals have been recognized in earlier awards to the Institute. We are deeply grateful to the individuals who made these gifts, and we are confident that their investment will be richly rewarded in accomplishments that will benefit the health of dogs and horses.



Anita Hesser

*The Baker Institute has
a staff of talented men
and women, a dedicated
advisory council, and a
growing number of
concerned benefactors.*



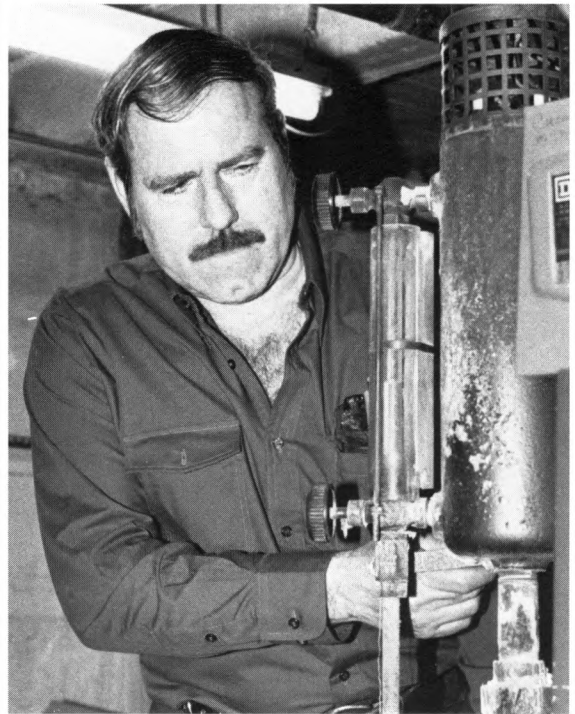
Susan Hamlin

At the annual meeting of the advisory council, Mr. Atherton Bristol was named recipient of the 1988 Arthur F. North, Jr. Canine Service Award. The award recognized Mr. Bristol's generosity and foresight in establishing the Bristol Fund for Canine Research. Created in memory of his Dandie Dinmont Terrier, Queechy, the fund will provide ongoing assistance for research conducted in our Cornell Research Laboratory for Diseases of Dogs. Other individuals and clubs have made similar investments in the future. I wish to express special thanks to those individuals and kennel clubs who contributed to the Muriel and Herbert Kaye Memorial Fund for Canine Research for their leadership in establishing named endowments. Their gifts are testimony to the kind of bond created by a shared concern for dogs and form a lasting tribute to the Kayes.

As we reflect on the significant events of 1988, a basic lesson to consider is that the Baker Institute can be no better than those who staff it or those who promote its research and training missions. The Institute is well endowed in that respect. It has a staff of talented men and women, a dedicated advisory council, and a growing number of concerned benefactors. An institution could wish for no greater asset.



Douglas D. McGregor



Arthur Howser



Carlene Furch

Staff of the Baker Institute

Administration

Douglas D. McGregor, director: B.A., M.D., U. of Western Ontario; D. Phil., Oxford U.
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Carlene M. Furch, development assistant
Nancy D. Combs, accounts coordinator
Lorelei J. Dyess, administrative aide: B.S., West Texas State U.
Anita S. Hesser, secretary to the director
Florence C. Huth, administrative aide
Sharon E. Morrow, accounts assistant
Jeanne G. Truelsen, assistant director for development: B.A., M.A., Miami U.
Robert D. Wakeman, office assistant

Emeritus

Ben E. Sheffy, Caspary Professor of Nutrition, Emeritus: B.S., M.S., Ph.D., U. of Wisconsin

Laboratories

Giralda Laboratory for Canine Infectious Diseases

Leland E. Carmichael, John M. Olin Professor of Virology: A.B., D.V.M., U. of California; Ph.D., Cornell
Maria Fernandez-Maillo, graduate research assistant: D.V.M., U. Complutense, Madrid
Catherine Y. Linder, graduate research assistant: Baccalaureate, European School (Brussels); D.V.M., Veterinary School, Toulouse
Jean C. Joubert, research support specialist

Hadley C. Stephenson Laboratory for the Study of Canine Diseases

Max J. G. Appel, professor of virology: Dr. med. vet., U. of Hannover; Ph.D., Cornell
Mary Beth Matychak, research technician: U. of Evansville
Susan E. Pearce-Kelling, laboratory technician: B.S., M.S., Cornell

John M. Olin Laboratory for the Study of Canine Bone and Joint Diseases

George Lust, professor of physiological chemistry: B.S., U. of Massachusetts; Ph.D., Cornell
Nancy Burton-Wurster, senior research associate: B.A., M.S., Ph.D., New York U.
Harry R. Leipold, graduate research assistant: B.S., Cornell
Rory J. Todhunter, graduate research assistant: B.V. Sc., Sydney U.; M.S., Michigan State, Dip. ACVS, Cornell
Juergen Steinmeyer, postdoctoral fellow: Ph.D., U. of Bonn
Elizabeth Grisanzio, laboratory technician: B.S., U. of Vermont
Margaret S. Peery, laboratory technician: B.S., Ohio State U.
Raymond O. Recchia, laboratory technician: B.S., State U. of New York, Fredonia
Alma J. Williams, laboratory technician: B.A., U. of Pennsylvania; M.S., Cornell; AALAS accreditation

Immunology Laboratory

Robin G. Bell, associate professor of immunology: B.Sc., Australian National U.; Ph.D., John Curtin School of Medical Research
Ching-hua Wang, research associate: M.D., Peking Medical School; Ph.D., Cornell
Ali Ahmad, graduate research assistant: D.V.M., M.Sc., U. of Agriculture (Faisal Abad, Pakistan)
Karen M. Trotter, postdoctoral associate: B.S., M.S., Ph.D., Cornell
Duzhang Zhu, graduate research assistant: M.D., Anhui Medical College
Lincoln S. Adams, research technician: B.S., Hobart College; AALAS accreditation

Mucosal Immunity Laboratory

Judith A. Appleton, assistant professor of immunology: B.S., Indiana U.; M.S., Ph.D., U. of Georgia

Melissa S. Carlisle, graduate research assistant: B.V.Sc., U. of Queensland

Lucille F. Gagliardo, laboratory technician: B.S., Southhampton College

Lynn A. Usack, laboratory technician: B.S., Cornell

Equine Genetics Center

Douglas F. Antczak, associate professor of immunology: B.A., Cornell; V.M.D., U. of Pennsylvania; Ph.D., Cambridge U.

William L. Donaldson, graduate research assistant: B.V.Sc., U. of Queensland

Julio G. Oriol, graduate research assistant: D.V.M., U. Nacional de Buenos Aires

Chong-Hui Zhang, graduate research assistant: M.S., Nanjing Agricultural U.

Debra A. Dougherty, research support specialist: B.S., U. of Rhode Island

Christine L. Pelkaus, laboratory technician: B.S., Cornell

Donnelley Laboratory of Immunochemistry

Douglas D. McGregor, professor of immunology: B.A., M.D., D. Phil.

Alan D. King, graduate research assistant: B.S., U. of Alabama; D.V.M., Auburn U.

Mark D. Hulsebosch, laboratory technician: B.S., St. Joseph U.

Bostwick Laboratory of Molecular Biology

Colin R. Parrish, assistant professor of virology: B.Sc.; Massey U.; Ph.D., Cornell

Research Service Laboratories

Thomas M. Bartol, Jr., research support specialist (flow cytometry): B.S., Cornell

Paul J. Lutwak, research support specialist (chromatography): B.A., B.S., Miami U.

Glassware

Jeannette R. Carney, laboratory attendant

Barbara J. Kokke, laboratory attendant

Animal Care

Roy L. Barriere, vivarium supervisor: AALAS accreditation

Jack H. Arcangeli, Jr., animal technician

William Campos, animal technician: AALAS accreditation

Raymond M. Combs, animal technician: AALAS accreditation

Raymond J. Corey, animal technician: A.A.S., State U. of New York Agricultural and Technical College, Delhi; AALAS accreditation

Kevin T. Draiss, animal technician: B.S., Cornell; AALAS accreditation

Louise E. Eller, animal technician

James C. Hardy, animal technician: B.S., Cornell; AALAS accreditation

Laura M. Michel, animal technician: A.A.S., State U. of New York Agricultural and Technical College, Farmingdale; B.S., Cornell; AALAS accreditation

Anastasia E. Newell, animal technician: AALAS accreditation

Maintenance

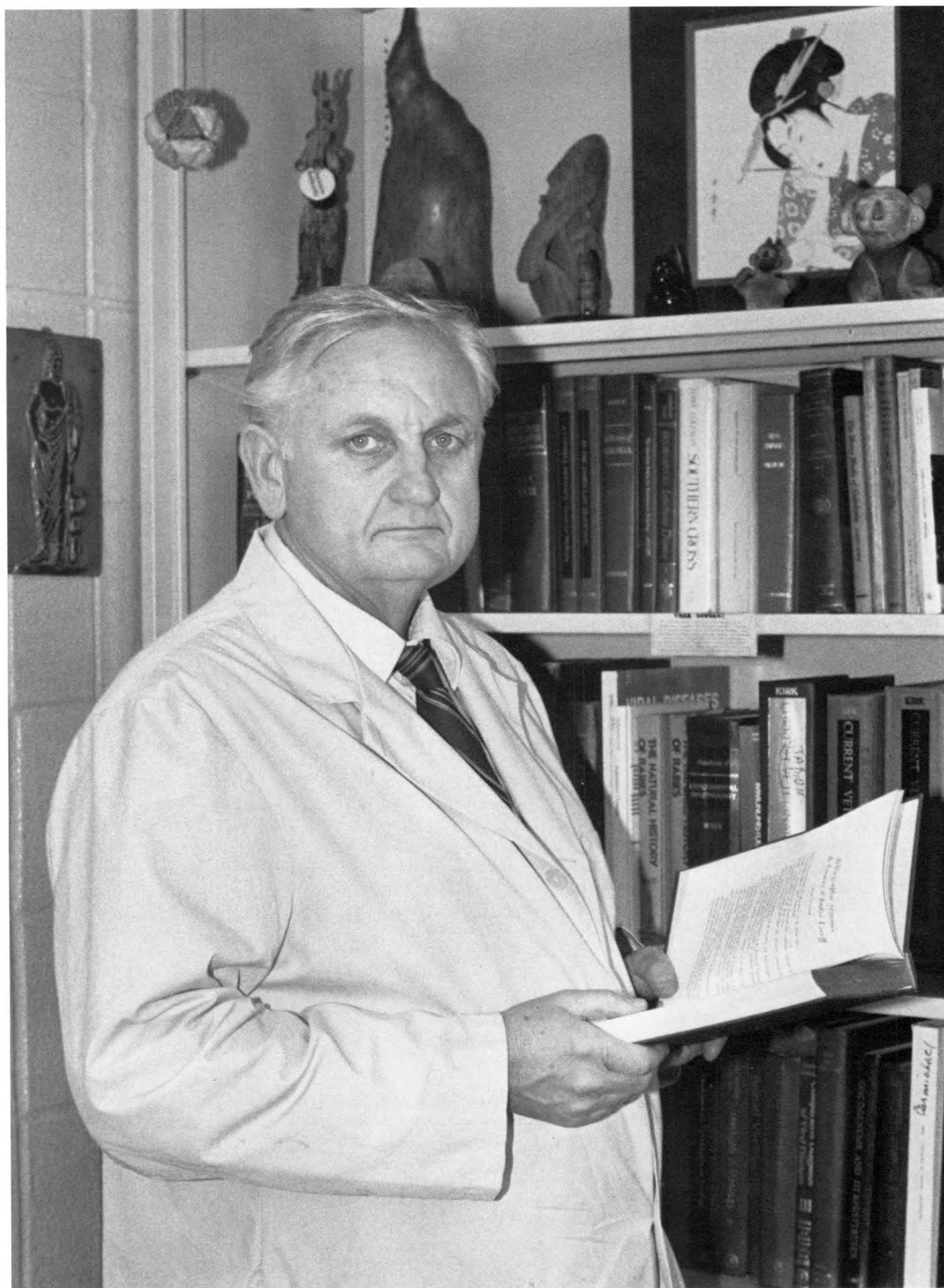
Arthur D. Howser, maintenance supervisor, buildings and grounds

Richard E. Daniels, maintenance mechanic

Robert A. Foux, maintenance mechanic

Russell F. Haus, maintenance mechanic

We are attempting to
define the role of minute
virus of canines (MVC)
as a cause of enteric
illness in young pups
and its effects on the
pregnant bitch.



Leland Carmichael

Giralda Laboratory for Canine Infectious Diseases

One aspect of our research entails the characterization of a little-known parvovirus of dogs, the minute virus of canines (MVC). This year we reported that MVC is distinct from canine parvovirus type 2 (CPV-2), the highly pathogenic virus of dogs that was first identified ten years ago. Dr. Maria Fernandez-Maillo, a Ph.D. candidate in this laboratory, has developed improved methods for detecting the virus. She also has prepared a library of monoclonal antibodies that will allow further characterization of MVC and its relationship to other parvoviruses.

Major objectives of our research are to determine whether MVC (also known as CPV-1) can cause reproductive disease or enteric illness in dogs. Approximately 80 percent of tested animals have been found to have antibodies to MVC, yet it has only recently been linked to enteric illness and death of pups less than two weeks old. The association was unexpected because experimental infections were mild. Since other parvoviruses can cause fetal infections, we are now focussing our attention on MVC infection of pregnant bitches and its effects on their newborn pups.

Canine Parvovirus Type 2: The Well-known Killer

As part of our continuing investigation of CPV-2, we examined several ill-founded views regarding CPV-2 infection and immunization strategies that have been advocated in commercial advertisements and dog fancy magazines. Our findings led to the following conclusions:

- Attenuated live vaccines vary in their capacity to immunize. They differ with regard to the minimal immunizing dose and to the rate and level of protective antibodies they induce in vaccinated dogs. Most live vaccines immunize satisfactorily. None of those tested caused clinical illness.
- Neither virulent nor vaccinal strains of CPV suppress or interfere with the immune response to other components of multiple vaccines such as distemper, hepatitis, or parainfluenza virus.
- None of several attenuated CPV-2 vaccines that we tested immunized dogs at a time when they were susceptible to infection with virulent viruses. However, individual vaccines did differ in their capacity to immunize pups with different levels of maternal antibodies. To reduce the prevalence of infection in breeding kennels, it is necessary to both isolate and vaccinate pups.
- Although Dobermans and Rottweilers appear to be especially susceptible to severe parvoviral disease, their antibody responses to CPV-2 vaccines are not significantly different from those of other breeds that receive the same vaccine.



Florence Huth

*We examined several
ill-founded views
regarding canine
parvovirus type 2
(CPV-2) infection
and immunization
strategies.*



Jean Joubert

- "Booster" responses did not occur with any vaccine in dogs that had hemagglutination-inhibiting antibody titers greater than 1:80. Dogs with lower antibody titers had variable responses after revaccination. Four- to eightfold differences in antibody titers were reported on samples of the same serum submitted to different laboratories.
- "New" vaccines are not needed to protect dogs against CPV-2. All currently licensed vaccines contain viruses similar to strains isolated in 1978. Living vaccines, chemically inactivated vaccines, and nonliving recombinant vaccines prepared from 1978-type viruses all protect against virulent CPV-2 strains,

including recent variants that are more virulent than those isolated several years ago.

Canine Herpesvirus

The major immunogenic proteins of canine herpesvirus (CHV) were partially characterized by Catherine Linder, who completed her M.S. degree in the fall. By knowing which proteins are significant in inducing immunity, it will be possible to analyze CHV strains for use as vaccines. Another potential benefit would be to develop monoclonal antibodies that can protect newborn pups against CHV in kennels where fatal infection is common.

Leland E. Carmichael



*We have tested a panel
of monoclonal antibodies
specific for canine
distemper virus (CDV).*



Max Appel

Hadley C. Stephenson Laboratory for the Study of Canine Diseases

Distemper

In 1988, a distemper epidemic killed approximately 1,000 Huskies in the Canadian and Greenland Arctic and about 80 percent of the harbor seals in the North Sea. To better study such epizootics, reagents are needed to distinguish different strains of virulent distemper virus. Monoclonal antibodies, exquisitely specific antibodies that can detect very slight differences among molecules, may be the tools we seek. Therefore, we have tested a panel of monoclonal antibodies specific for canine distemper virus (CDV). We have not yet found antibodies with the distinguishing power we need; however, we are now testing other monoclonal antibodies obtained from Dr. Erling Norrby of the Karolinska Institute of Stockholm.

The antibodies provided by Dr. Norrby have a high capacity to neutralize CDV. We have found that dogs treated during the incubation period up to eight days after infection with virulent CDV were fully protected from the disease; antibody treatment had no value thereafter. We concluded that such monoclonal antibody treatment might be useful in protecting unvaccinated dogs that have been exposed to CDV but would not benefit animals that already developed clinical signs of illness.

In related work, we have been studying the effect of distemper infection on myelin, a lipid-rich material that insulates nerves in the brain and spinal cord much the way that insulating materials coat the wire of an electrical cord. Distemper in dogs and multiple sclerosis in humans are associated with a loss of myelin. In collaboration with Dr. Brian Summers, we have, using the electron microscope, examined the very early changes in CDV-infected dogs. We observed that in myelin-rich areas the virus first infects glial cells, causing the myelin sheaths to swell and disorganize. Macrophages, the immune system's scavenger cells, then move in to remove the damaged myelin.

Lymphocytes are latecomers to the scene. They appear to attack virus-infected glial cells rather than the myelin sheaths. These studies suggest that the loss of myelin is a consequence of CDV infection producing glial-cell injury rather than an autoallergic response, as has been suggested in multiple sclerosis.

In the meantime, a morbillivirus that appears to be related to CDV has been isolated from cattle. Although it is not known whether the virus causes disease, a sero-epidemiological survey is underway to determine its distribution in healthy dairy and beef cattle in the United States.

Synthetic Materials for Surgical Implants

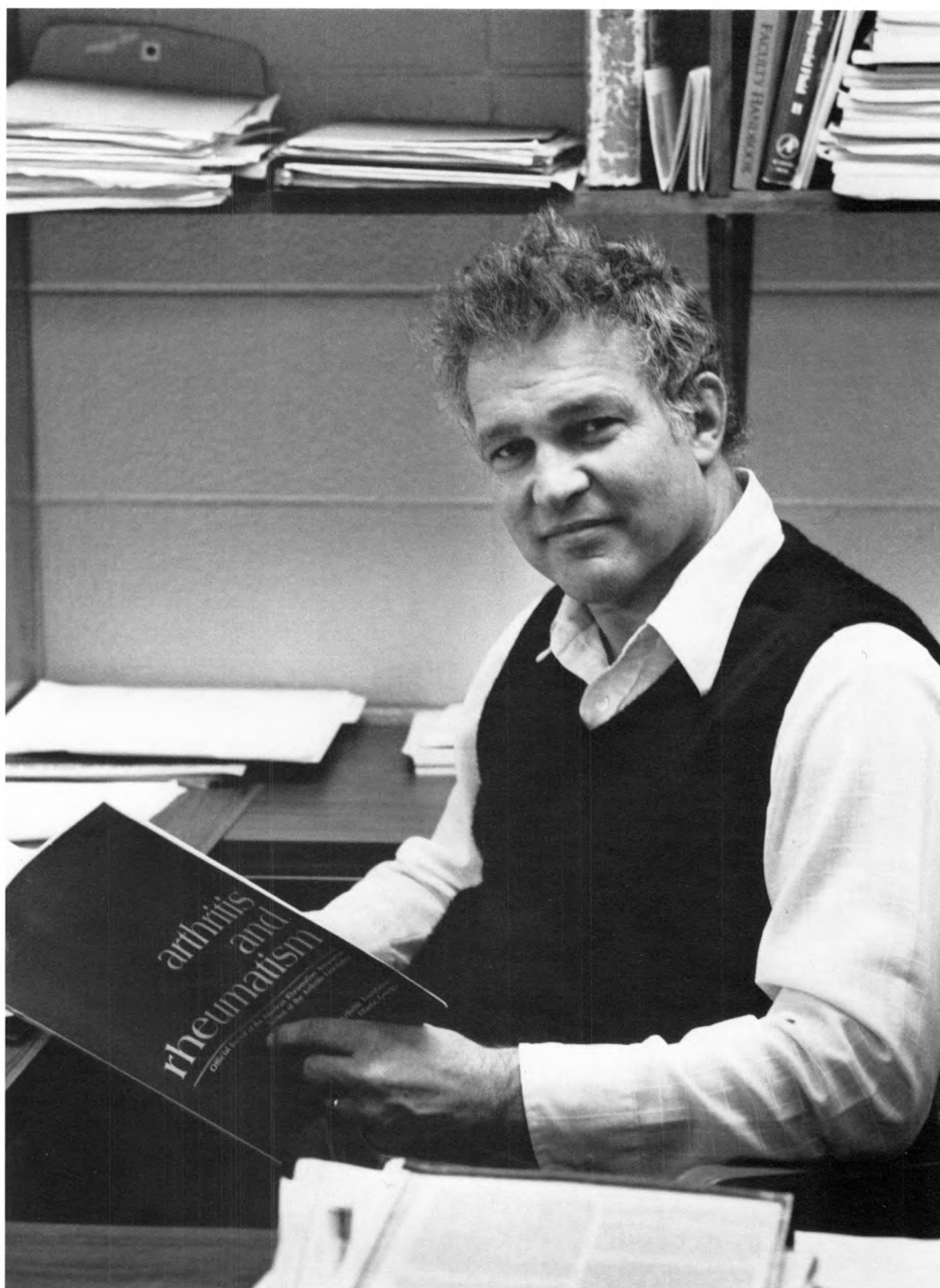
Typically, synthetic materials used in vascular surgery, hernia repair, or heart-valve replacement, for example, are rejected by the body as foreign substances. Once the materials are enveloped by the body's own fibroblasts and endothelial cells, however, they are no longer recognized as foreign. Macrophages, the first cells attracted to such "grafts," are responsible for sending out signals that provoke fibroblasts to attach and multiply. In collaboration with Drs. Chu and Jeong Lim, we have been testing the attachment and activation of macrophages and fibroblasts on thirteen synthetic fabrics. We have noted significant differences among them that could prove important in choosing materials for the fabrication of surgical implants.

New Book

Virus Infections of Carnivores (to be volume one in the series *Virus Infections of Vertebrates*) was completed this year. We contributed chapters and edited the book, which covers virus infections of dogs, cats, mink, ferrets, nondomestic carnivores, and pinnipeds.

Max J. G. Appel

A new position for pelvic X rays of dogs looks promising in helping to predict whether pups will later develop hip dysplasia.



George Lust

Hip Dysplasia

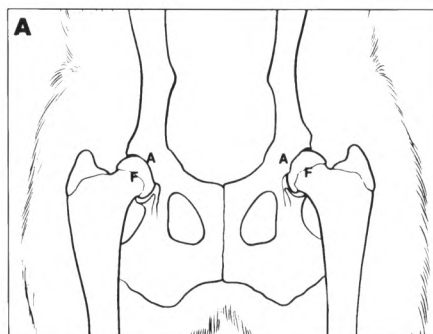
A new position for pelvic X rays of dogs looks promising in helping to predict whether pups as young as four months old will later develop hip dysplasia.

Although a standard pelvic X-ray examination is useful with adult dogs, it is less accurate in diagnosing dysplasia in growing dogs. We have had encouraging results with a new position for hip-joint X rays developed by Drs. Gail Smith and Darryl Biery of the University of Pennsylvania Veterinary College in Philadelphia. Instead of the standard legs-extended position, anesthetized dogs are placed with their hind limbs perpendicular to the tabletop. While an object is put between the thighs, inward pressure is exerted at the knees. This manipulation forcibly displaces the femoral head (ball) from the acetabulum (socket) of the joint. By measuring the distance that the femoral head is displaced from its normal position, the hip can be assessed as either normal or pre-dysplastic.

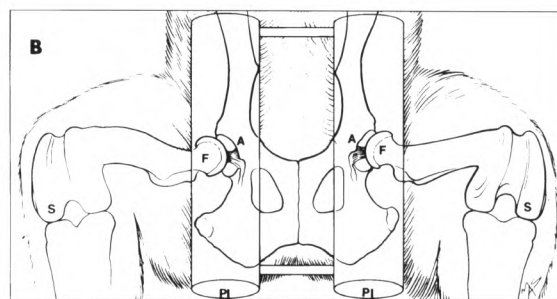
Using Labrador Retrievers, we have been comparing the new method with the standard leg-extended position. Adults considered normal when examined by the standard procedure showed femoral head displacements ranging from 1 to 3 millimeters when the new method was used. Hip joints rated as dysplastic by the standard method showed displacements ranging from 3.5 to 8.0 millimeters in the new procedure.

The most provocative findings, however, were in pups four to six months old. All had normal hips according to the conventional X rays, yet the pups fell into two groups when examined by the new procedure. One group showed displacements of 1 to 3 millimeters, the same as normal adult dogs; the other group, however, showed greater hip joint laxity with displacements of 4 to 6 millimeters (see illustration).

These observations suggest that while some pups appeared normal on the standard X rays, they in fact had abnormal displacements and may later become dysplastic. Although these preliminary results are promising, the pups must be observed for several years to determine whether those with greater joint laxity are, indeed, more susceptible to hip dysplasia than their counterparts with relatively tight joints.



A. Drawing of the conventional pelvic X ray taken with the dog's legs extended. According to that X-ray method, the hip joints are normal. Note that the femoral heads (F) fit snugly in the acetabula (A).



B. Drawing of a pelvic radiograph in which the same dog was positioned with its legs perpendicular to the tabletop. An adjustable plastic instrument (PI) was placed between the thighs, and inward pressure was applied at the stifle joints (S). The maneuver displaced the femoral heads (F) from the acetabula (A), revealing joint laxity that was not evident in the conventional X ray. The round ligament, which is not visible in a radiograph, joins the femoral head to the acetabulum.

*We have been observing
differences between
normal cartilage from
healthy canine joints
and cartilage from dogs
with osteoarthritis.*



Nancy Burton-Wurster

Osteoarthritis

In other work in the laboratory, we have been observing the metabolic and biochemical differences between normal cartilage from healthy canine joints and cartilage from dogs with osteoarthritis, a disease which afflicts many animals, including dogs, horses, and humans.

Although various differences between healthy and osteoarthritic cartilage have been observed, two are of particular interest. Osteoarthritic cartilage contains an accumulation of the glycoprotein fibronectin and a loss of proteoglycan, a structural element of the cartilage matrix. By using methods to differentiate among fibronectins from plasma, cartilage, and synovial fluid, we have concluded that the increased fibronectin does not come from plasma but is produced locally within the joint. At least some of it is made in the cartilage.

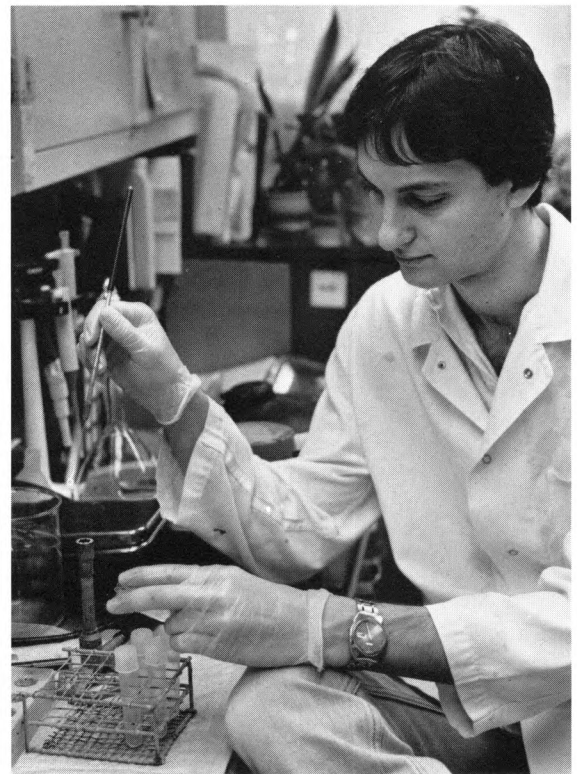
Preliminary evidence suggests that cartilage may contain a form of fibronectin found in very few other tissues. If so, this form of fibronectin may play a special role in maintaining the health of cartilage and in interacting with other components of the tissue, such as proteoglycan and collagen. By better understanding these roles, we hope to learn how the accumulation of fibronectin is related to the osteoarthritic process.

Studies conducted with other species, including humans and horses, reveal metabolic changes in cartilage that are similar to those observed in dogs. In collaboration with Dr. Robert Brown of Stanmore, England, we are conducting biochemical and electron-microscopic studies of canine and human cartilage from normal and diseased joints. Dr. Rory Todhunter, a graduate veterinarian from Australia, is examining the effects of selected drugs on cartilage repair in joints of horses.

We are also characterizing and quantifying various aspects of cartilage metabolism using an *in vitro* method developed in our laboratory. Dr. Juergen Steinmeyer, a postdoctoral fellow who received his earlier training in Germany, is attempting to determine whether mechanical stress alters cartilage metabolism in ways similar to those observed in tissue from osteoarthritic joints. He is using an instrument developed by Dr. Peter Torzilli at Cornell Medical College. Using this device, controlled static and intermittent compressive forces up to ten times the body weight can be applied to cartilage.

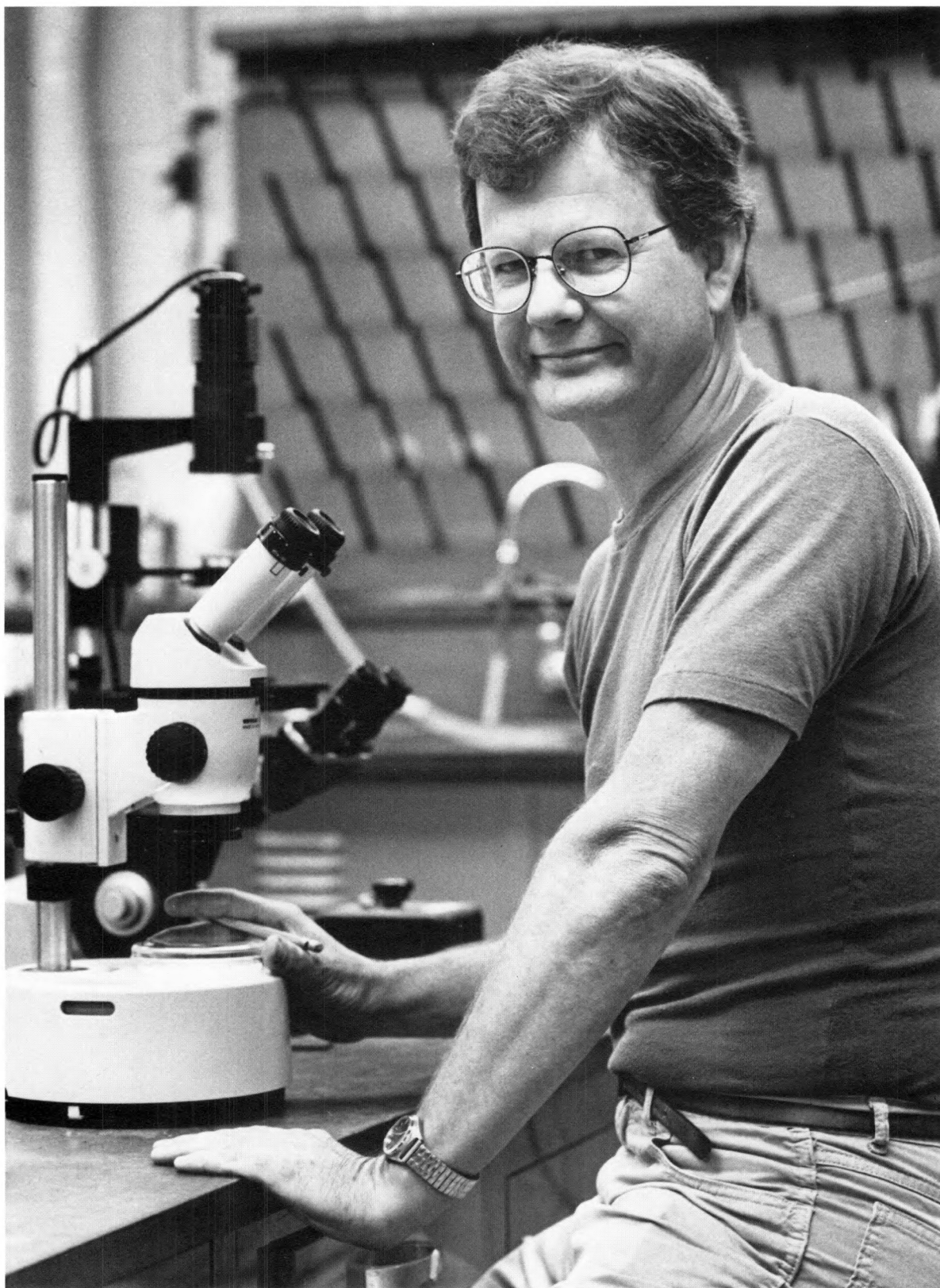
George Lust

Nancy Burton-Wurster



Harry Leipold

*Our findings indicate
that the gut is capable of
initiating protective
responses in areas that
do not contain organized
lymphoid tissue.*



Robin Bell

Our work this year showed that lymphocytes triggered in an intestinal infection originate in the intestine and that populations of lymphoid cells throughout the intestine are capable of initiating and mounting their own local immune responses against invading pathogens. Previously it was believed that many immune responses in the gut were launched in collections of organized intestinal lymphoid tissue called Peyer's patches.

Immunity in the intestine, as in other tissues, depends on the purposeful interaction of various immune cells, including lymphocytes, macrophages, eosinophils, and mast cells. Some of these cells are generated locally, but many are recruited from the blood. To develop ways to boost the immune response of animals, it is important to learn where these cells are formed, how they reach the intestine, and how they interact in that tissue.

Much of our work has been with the infectious multicellular parasite *Trichinella spiralis*, which causes trichinosis. Last year we reported that lymphocytes, which have a helper function in immune responses, are released into the blood in substantial numbers for approximately thirty-six hours beginning about three days after an animal has eaten a meal containing *T. spiralis* larvae. Although these cells were known to enter the blood from the thoracic duct, it was not known whether the cells originated in lymph nodes draining the intestine or in the intestine itself. The answer was important because it would help determine certain functions of the cells and provide the initial step in understanding the stimulatory processes.

To find the answer, we surgically removed the mesenteric, or intestinal, lymph nodes from a group of rats before infecting them with *T. spiralis*. We found that this made little difference in the number of T-helper lymphocytes (those that bind antibodies that recognize distinctive molecules on the

cell membrane) in the thoracic duct. Intestinal lymph nodes, therefore, are not a significant source of helper lymphocytes in this infection. These lymph nodes are also unnecessary for the expression of the immune response, for their removal did not impede the development of strong immunity against *T. spiralis*.

Immunity is triggered elsewhere in the intestine shortly after infection. Since helper lymphocytes divide at an early stage of the immune response, we enumerated dividing lymphoid cells in three different areas of the gut: the intestinal epithelium, the underlying lamina propria, and Peyer's patches.

To our surprise, we found that cell division increased twenty- to thirtyfold in the first two locations but not at all in Peyer's patches. Our findings indicate that the gut is capable of initiating protective responses in areas that do not contain organized lymphoid tissue. Our next step is to characterize these protective cells more precisely.

We suspect that the same cell interactions that initiate local immune responses against *T. spiralis* may be similar in a variety of other diseases. Chronic inflammatory bowel diseases, for example, are often associated with vigorous cell proliferation in the lamina propria.

We believe that the findings described above afford an opportunity to examine naturally induced immunity in the lamina propria and in the epithelium of the gut.

Robin G. Bell

*Understanding how
the immune system
protects against
infectious agents is the
first step toward
developing better
vaccines.*



Judith Appleton

Mucosal Immunity Laboratory

Intestinal and respiratory tract infections take a great toll on animal health and result in significant economic loss. Understanding how the immune system protects against infectious agents that cause diseases such as trichinosis and influenza is the first step toward developing better vaccines and other methods that offer long-term protection against these debilitating diseases.

Trichinosis: A Model for Intestinal Immunity

Last year we reported that antibodies in rats previously infected with *Trichinella spiralis*, a multicellular parasite that causes trichinosis in carnivorous animals, will protect the animals and their suckling young from further infection. This year we have learned that not all classes of antibodies immunize the pups.

Both an antibody's class (its structure and functional characteristics) and its specificity (where it binds to a foreign molecule) are important. We have discovered that for antibodies to offer protection against trichinosis, they must bind to critical sites on the surfaces of the parasitic worms; antibodies that bind to a different part of the same antigenic molecule will not protect.

In related work, we found that when parasites are expelled from the intestine, they are entrapped in mucus. Yet that entrapment is not necessarily the most essential feature of protection; it appears to be secondary to the attack by antibodies. Dr. Melissa Carlisle, a graduate student in our laboratory, has shown that parasites already established in the intestinal tissue can be forced out by antibodies administered after the infection has developed. This implies that to offer protection, antibodies need not interact with the parasite as it enters the intestine from the stomach.

Our findings raise important questions about the function of the parasite's surface molecules against which the antibodies are directed and underscore the importance of isolating and characterizing those antigens.

Equine Influenza

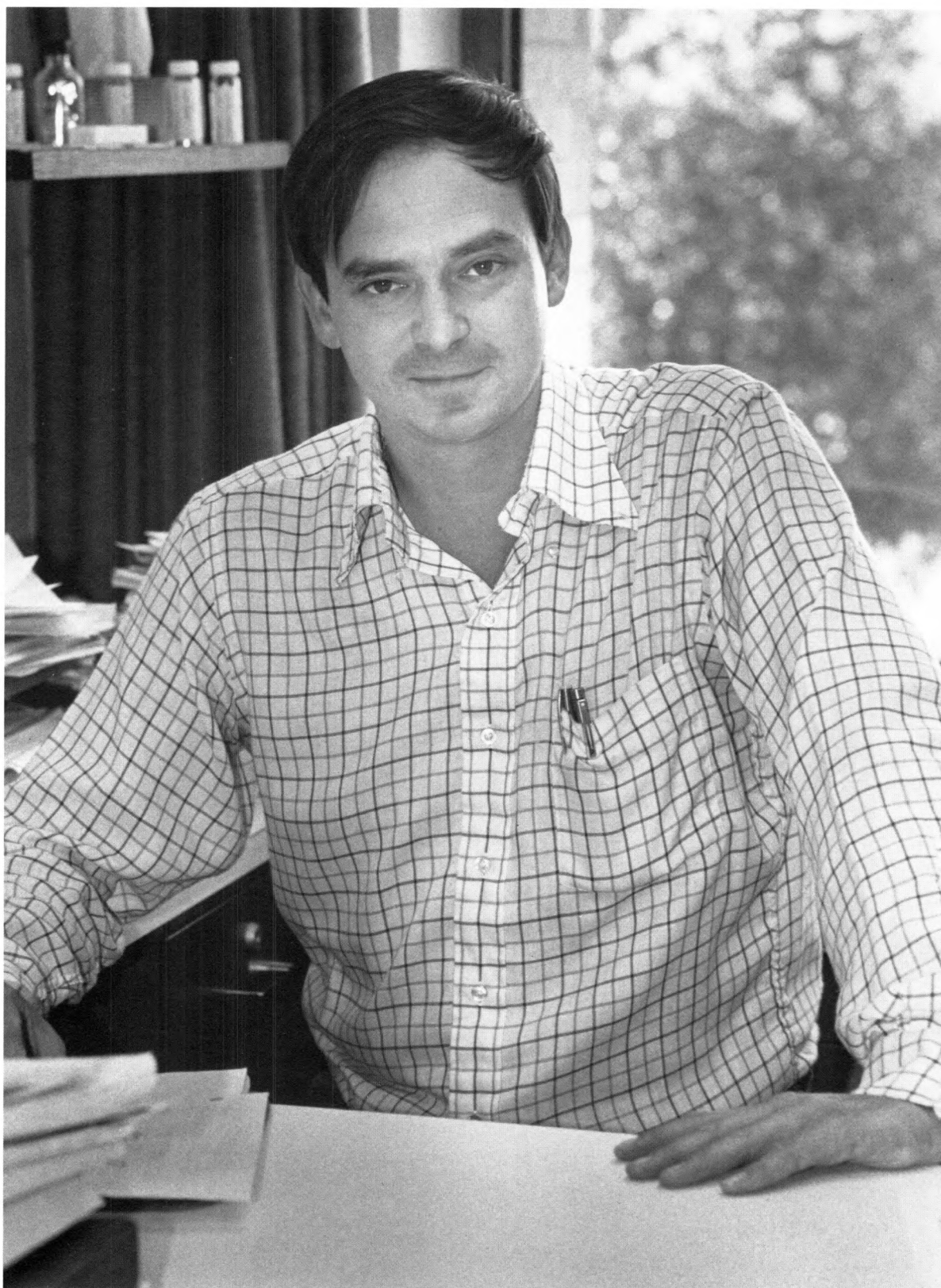
Current equine influenza vaccines fail to produce long-lasting protection. We have previously reported that this ineffectiveness is not caused by the invading viruses mutating over time; in fact, we have shown that the two major strains are relatively stable when compared with their human counterparts. The inefficiency of equine influenza vaccines, therefore, cannot be ascribed to the strains used in commercially available products.

To better understand the poor immune response of the horse, we have developed a method to isolate individual cells that produce virus-specific antibodies. It allows us to determine the exact specificity of equine antiviral antibodies and may reveal whether there are important sites on the virus that are not attacked by the antibodies. The roles of various cells of the immune system in producing antibodies are also being investigated.

These studies will help to elucidate how the immune response is regulated, and particularly whether the antibody response is turned off before strong, long-lasting protection can be obtained.

Judith A. Appleton

*During the Equine
Genetic Center's past
decade, our studies of
reproductive physiology
have expanded.*



Douglas Antczak

Highlights Marking the Center's Tenth Anniversary

Our laboratory for equine studies at the Baker Institute was established a decade ago to study the major histocompatibility complex (MHC), a genetic region which controls several aspects of immune function in horses. Since then our studies have expanded to related aspects of reproductive physiology. Some highlights from the past decade include:

- Production and characterization of alloantisera defining Class I and Class II MHC antigens.
- Establishment of a breeding band of horses selected for their MHC types. These animals represent a unique resource, allowing many studies that could not be performed otherwise.
- Renovation of a historic barn complex, renamed the McConville Barn, in recognition of the generous support of Mrs. Dorothy Havemeyer McConville for this project. The College of Veterinary Medicine was awarded a certificate of merit from Historic Ithaca, a local landmark-preservation society, for the restoration work.
- Establishment of the first laboratory for monoclonal antibody production at Cornell and production of antibodies to a large number of equine cell surface molecules.
- Production of pregnancies in sterile mules and cross-species equine pregnancies by embryo transfer. This work has been conducted as part of a long-term collaboration with the British Thoroughbred Breeders Equine Fertility Unit, directed by Dr. W. R. "Twink" Allen.
- Organization of a continuing series of international workshops and symposia,

sponsored by the Dorothy Russell Havemeyer Foundation on various topics in equine medicine.

- Establishment of a summer research fellow program for veterinary students, which is also sponsored by the Dorothy Russell Havemeyer Foundation. Two students are awarded fellowships each year for independent study at the Baker Institute.

Trophoblast Cells and the Expression of MHC Molecules

During the past year, graduate student Bill Donaldson continued his work on the expression of MHC molecules by the placenta. He devised methods that should facilitate the development of an *in vitro* model of trophoblast differentiation in the horse.

Previously, Dr. Donaldson had discovered that only the specialized and invasive trophoblast cells of the chorionic girdle region express MHC molecules, and that they do so only between days 30 and 45 of pregnancy. Taking advantage of the relative ease with which chorionic girdle cells can be grown in artificial media, Dr. Donaldson began to investigate the expression of MHC antigens by trophoblast cells in culture. The *in vitro* model will allow him to use drugs and chemicals to elucidate the cellular mechanisms that girdle cells use to switch off production of MHC antigens.

In the meantime, Dr. Julio Oriol, also a graduate student, has produced a monoclonal antibody that reacts with all forms of horse trophoblasts but with no other fetal, placental, or adult tissues. The unique expression of the target molecule by the trophoblasts suggests that it has an important function in early pregnancy and that it might be useful as an antigen for an experimental anti-fertility vaccine.

*We expect to gain
insights into complex
immunoregulatory
mechanisms.*



Monoclonal Antibodies to Equine Lymphocyte Antigens

Chong-Hui Zhang, a graduate student from the People's Republic of China, has been producing and characterizing monoclonal antibodies to equine lymphocyte antigens with the goal of generating antibodies that can identify lymphocyte subsets of the horse. Such reagents will be used to characterize complex cellular reactions, such as the accumulation of maternal mononuclear cells around endometrial cups in normal horse pregnancies. Although the identity and function of these lymphocytes are not yet known, they represent the most striking example of a cellular immune response to the developing fetus described in any species.

As we unravel the significance of this response, we expect to gain insights into the complex immunoregulatory mechanisms that allow mothers to carry to term offspring that express foreign paternal histocompatibility genes.

Sarcoid: Equine Skin Tumors

In other work, the genetic and virological aspects of the common equine skin cancer known as sarcoid were studied by John Angelos, a graduate student working jointly in this laboratory and with Dr. Carmichael in the Giralda Laboratory for Canine Infectious Diseases. Retrospective epidemiological studies revealed that Standardbred horses are highly resistant to sarcoid while Thoroughbreds and Quarter horses are quite susceptible. Mr. Angelos has also shown that virtually all sarcoid tumor tissue contains DNA that is closely related, if not identical, to bovine papilloma virus DNA. We are currently trying to identify equine MHC genes that could account for the differences among breeds in sarcoid susceptibility.

A Library of Horse Genes

While on sabbatical leave at the British Agricultural and Food Research Council's

Institute of Animal Physiology in Cambridge, I developed a library of horse genes using recombinant DNA technology and DNA isolated from the senior stallion at the Equine Genetics Center. This stallion is homozygous for genes in the equine MHC and, therefore, a very useful donor for these studies.

Through the use of special strains of bacteriophage (viruses that infect bacteria) that can continue to function when long stretches of their DNA molecules are removed and replaced with equivalent lengths of DNA from other species, a library of about one million recombinant bacteriophage was developed. Each bacteriophage contains a different segment of horse DNA. Having screened the library for bacteriophage that contain equine MHC genes, I am now beginning to characterize the genes I selected. These genes will eventually be used to study the mechanisms that control MHC gene expression in the horse placenta.

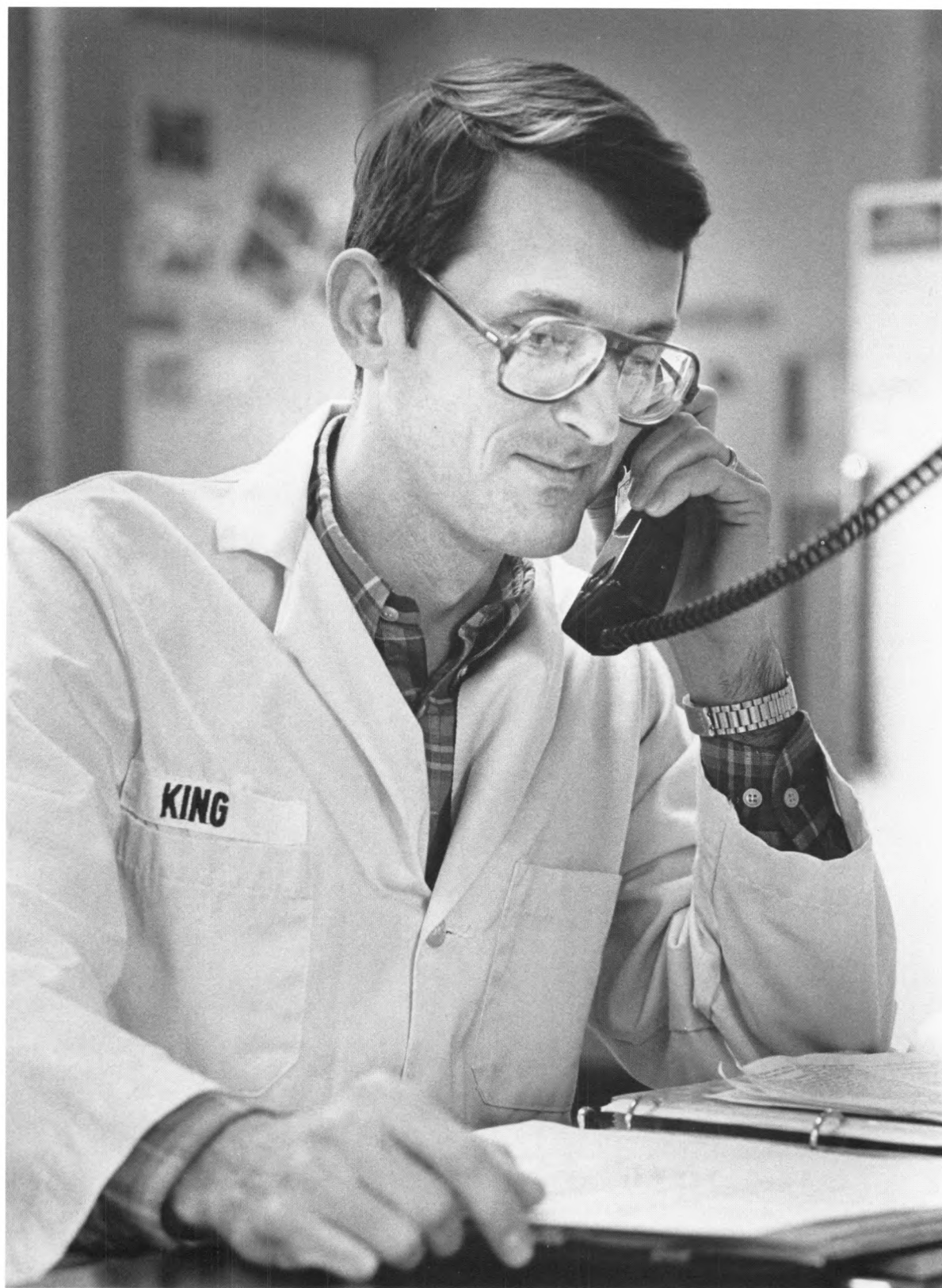
The "gene jockeys" at the Equine Genetics Center are off and running!

Douglas F. Antczak



Lorelei Dyess

*If cytotoxic cells
contribute to the
host's defense against
infection, it is mainly
due to thymus-
dependent lymphocytes.*



Alan King

Donnelley Laboratory of Immunochemistry

Certain bacteria have evolved in ways that enable them to thrive in their infected hosts' cells. Once the bacteria are protectively enveloped within their intracellular habitat, antibodies are powerless against the infection. While macrophages are the only cells capable of destroying intracellular parasites, they need signals from other cells, particularly thymus-dependent (T) lymphocytes, to promote their local recruitment and activation.

When rats are infected with the intracellular bacterium *Listeria monocytogenes*, thymus-dependent lymphocytes that have protective properties can be found in the animals' blood or thoracic duct lymph. Previously, we reported that the lymph of such animals also contains cytolytic cells—those with the capacity to attack and destroy other cells, including the ones harboring *Listeria* organisms. Yet the identity of these killer cells and their relationship to lymphocytes with protective properties remained a mystery.

Since several types of lymphocytes can destroy other cells but attack in different

ways, we set out to determine which kind are present in the lymph of *Listeria*-infected rats, and whether they have protective value. The principal candidates were T lymphocytes and so-called natural-killer (NK) cells.

This year, veterinarian Alan King, who is pursuing doctoral research in our laboratory, demonstrated that rats could be severely and specifically depleted of cytotoxic (cell-destroying) T lymphocytes while retaining normal levels of NK cells. The T-cell-deficient rats were vulnerable to a *Listeria* infection, and lymphocytes obtained from them had absolutely no protective value when transferred to normal rats.

This finding implies that NK cells have little, if any, role in acquired resistance to listeriosis. We conclude that if cytotoxic cells contribute to the host animal's defense against infection, it is mainly, if not exclusively, due to T lymphocytes.

Douglas D. McGregor



Lucille Gagliardo



Paul Lutwak

*We are working to
organize and create
central resources that
will facilitate the
performance of
experiments using
molecular biological
methods.*



Colin Parrish

Bostwick Laboratory of Molecular Biology

How do viruses, one of the simplest life forms on earth, evolve and adapt to new hosts? What changes allowed canine parvovirus type 2 (CPV-2) to emerge suddenly in 1978 and rapidly become a deadly threat to dogs worldwide? How can recombinant-DNA technology be applied to develop novel vaccines for CPV-2 and feline panleukopenia virus (FPV)?

These questions underpin our research, which seeks to define the relationships between the molecular structures of CPV-2 and similar viruses of cats and mink and their capacity to cause disease and adapt to new host species.

Viruses that infect animals, including humans, have well-defined host ranges. The individual parvoviruses that infect dogs, cats, and mink do not cause disease in the other species. Using the molecular biological techniques of DNA cloning and sequencing, and by analyses with antiviral monoclonal antibodies, we have shown that only very small differences exist between the viruses.

The evidence obtained suggests that CPV-2 evolved from FPV or mink enteritis virus (MEV), which were the causes of disease in cats or mink for years before CPV-2 burst on the scene. It also appears that a small region of the genome that codes for part of the virus coat protein is responsible for several unique properties of CPV-2, including its ability to replicate in dogs and its unique antigenic characteristics. Just a few mutations in this critical region appear to explain how CPV-2 derived from either the cat or mink virus. As the virus adapted to dogs, it lost its ability to replicate in its former host. The studies we are conducting are expected to reveal the molecular basis of that change.

In 1979 and 1980, a new variant of canine parvovirus emerged in the American dog population. This variant, CPV-2a, differs from the original type of CPV-2 in both antigenic characteristics and DNA

sequence. In collaboration with researchers in Japan, Denmark, Australia, and Washington State, we have shown that CPV-2a is now distributed globally and has replaced the original type of virus, except in "closed" kennels where exposure to "new" viruses is limited. Clearly, CPV-2a has a strong selective advantage over CPV-2, although the basis of that advantage has not yet been defined.

By analyzing sequence differences in the genomic DNA of CPV-2 and CPV-2a, we will attempt to define how specific differences contribute to the behavior of the viruses and try to identify which sequence differences and determine the selective advantage of CPV-2a over CPV-2.

In collaboration with Dr. Hussni Mohammed of the Department of Clinical Sciences in the College of Veterinary Medicine and Dr. Charles Aquadro of the Section of Genetics and Development in the Division of Biological Sciences, we are studying the evolution and variation of CPV isolates collected over the years from Japan, Australia, Europe, and the United States. We expect to gain new insights not only into the emergence and selection of CPV-2 but also into how CPV-2a evolved from the prototype CPV-2.

So far, all attempts to develop commercial vaccines against CPV or FPV using recombinant-DNA technology have failed. We are, however, examining some novel expression systems, including one in which the coat protein of CPV or MEV is expressed in an insect virus (baculovirus) that makes large amounts of the viral protein.

The molecular biology laboratory is also assisting other investigators at the Baker Institute by organizing and creating central resources that will facilitate the performance of experiments using molecular biological methods.

Colin R. Parrish

Publications

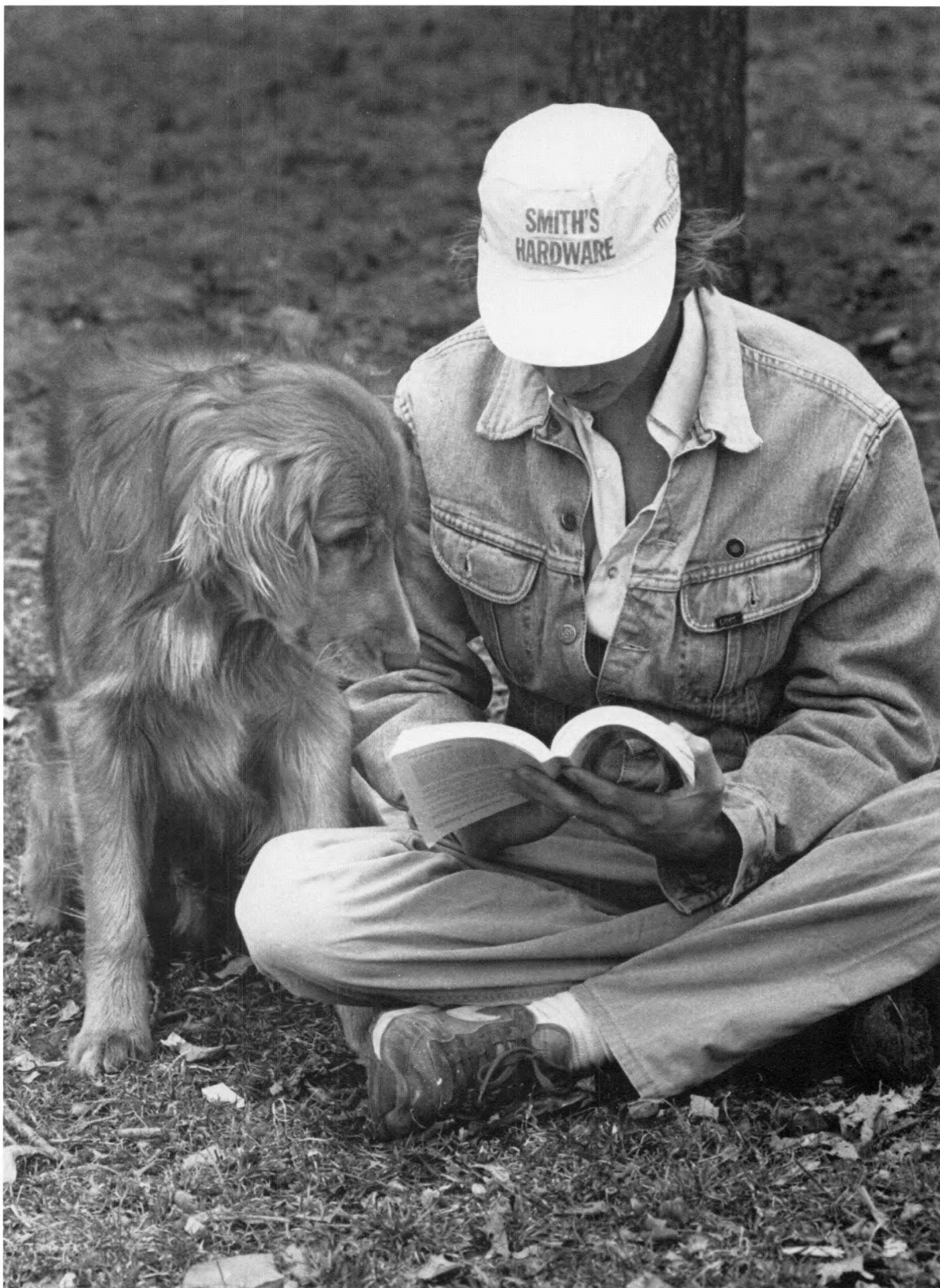
The following is a list of manuscripts published by staff members of the Baker Institute in 1988.

Publications listed as in press in last year's report are repeated this year, with their original numbers, to record their full bibliographic details.

- 697 **Bell, R. G., and C. H. Wang.** 1987. The *Trichinella spiralis* newborn larvae, production, migration, and immunity *in vivo*. *Wiad. Parazytol.* 33:453-78.
- 723 **Appel, M. J. G., and W. Harris.** 1988. Antibody titers in domestic ferret jills and their kits to canine distemper virus vaccine. *JAVMA* 193:332-33.
- 724 **Appel, M. J. G., and E. Paoletti.** 1988. Immune response to vaccinia virus and recombinant virus products in dogs. *Am. J. Vet. Res.* 49:1932.
- 727 **Bell, R. G.** 1988. Genetic analysis of expulsion of adult *Trichinella spiralis* in NFS, C3H/He and B10.BR mice. *Exp. Parasitol.* 66:57-65.
- 728 **Bell, R. G., and W. M. Liu.** 1988. *Trichinella spiralis*: Quantitative relationships between intestinal worm burden, worm rejection, and the measurement of intestinal immunity in inbred mice. *Exp. Parasitol.* 66:44-56.
- 729 **Burton-Wurster, N., V. J. Horn, and G. Lust.** 1988. Immunohistochemical localization of fibronectin and chondronectin in canine cartilage. *J. Histochem. Cytochem.* 36:581-86.
- 731 **Carmichael, L. E., and J. C. Joubert.** 1988. Transmission of *Brucella canis* by contact exposure. *Cornell Vet.* 78:63-73.
- 732 **Chunekamrai, S., L. P. Krook, G. Lust, and G. E. Maylin.** In press. Changes in articular cartilage after injections of methyl-prednisolone acetate into equine joints. *Am. J. Vet. Res.*
- 735 **Macartney, L., C. R. Parrish, L. N. Binn, and L. E. Carmichael.** 1988. Characterization of minute virus of canines (MVC) and its pathogenicity for pups. *Cornell Vet.* 78:131-35.
- 737 **Parrish, C. R., G. Burtonboy, and L. E. Carmichael.** 1988. Characterization of a nonhemagglutinating mutant of canine parvovirus. *Virology* 163:230-32.
- 738 **Steinetz, B. G., L. T. Goldsmith, H. J. Harvey, and G. Lust.** In press. Plasma relaxin and progesterone in pregnant, pseudopregnant, and ovariectomized, progestin-treated pregnant dogs: Relaxin as a marker for pregnancy. *Am. J. Vet. Res.*
- 740 **Summers, B. A., and M. J. G. Appel.** 1987. Demyelination in canine distemper encephalomyelitis: An ultrastructural analysis. *Neurocytol.* 16:871-81.
- 743 **Wang, C. H., and R. G. Bell.** 1988. Antibody-mediated *in vivo* cytotoxicity to *Trichinella spiralis* newborn larvae in immune rats. *Parasite Immunol.* 10:293-308.
- 744 **Wang, C. H., and R. G. Bell.** 1988. Host immunity against newborn *Trichinella spiralis* larvae of different ages. *J. of Parasitol.* 74(5):880-82.
- 745 **Williams, E. S., E. T. Thorne, M. J. G. Appel, and D. W. Belitsky.** 1988. Canine distemper in black-footed ferrets (*Mustela nigripes*) from Wyoming. *J. Wildlife Dis.*, 24:385-98.
- 746 **Allen, W. R., J. Kydd, and D. F. Antczak.** In press. Xenogeneic donkey-in-horse pregnancy created by embryo transfer: Immunological aspects of a model of early abortion. In *The immunology of the fetus*, ed. G. Chaouat. Boca Raton, FL: CRC Press.
- 747 **Angelos, J., Y. Oppenheim, W. Rebhun, H. Mohammed, and D. F. Antczak.** 1988. Evaluation of breed as a risk factor for sarcoid and uveitis in horses. *Animal Genetics* 19:185-93.
- 748 **Antczak, D. F.** 1988. Biology of the major histocompatibility complex. In *Veterinary Clinical Immunology*, ed. R. E. W. Halliwell and N. T. Gorman, 473-92. Philadelphia: Saunders.
- 749 **Antczak, D. F., and W. R. Allen.** 1988. A nongenetic developmental defect in trophoblast formation in the horse: Immunological aspects of a model of early abortion. In *Early pregnancy loss: Mechanisms and treatment* (Proc. 18th Study Group of the Royal College of Obstetricians and Gynaecologists, October 1987), ed. R. W. Beard and F. Sharp, 123-40. Ashton-under-Lyne, Lancs., England: Peacock Press.
- 750 **Antczak, D. F., and W. R. Allen.** 1988. Maternal immunological recognition of pregnancy. *J. Reprod. Fert. Suppl.* 37:69-78.
- 751 **Antczak, D. F. and N. T. Gorman.** 1988. Cellular interactions in immune responses. In *Veterinary Clinical Immunology*, ed. R. E. W. Halliwell and N. T. Gorman, 107-34. Philadelphia: Saunders.

- 752 Appel, M. J. G. 1988. Animal viral diseases which impair immune function. In *Proc. B.I.O.P. Ottawa Symposium*, 23–27.
- 753 Appel, M. J. G. 1988. Does canine coronavirus augment the effects of subsequent parvovirus infection? *Vet. Med.* April:360–66.
- 754 Appleton, J. A., and D. D. McGregor. 1988. Characterization of the immune mediator of rapid expulsion of *Trichinella spiralis* in suckling rats. *Immunology* 62:477–84.
- 755 Appleton, J. A., L. R. Schain, and D. D. McGregor. 1988. Rapid expulsion of *Trichinella spiralis* in suckling rats: Mediation by monoclonal antibodies. *Immunology* 65:487–92.
- 756 Bell, R. G. 1987. *Trichinella spiralis*: Differences between “early” and “late” expulsion evident from inhibition studies using cortisone and irradiation. *Exp. Parasitol.* 64:385–92.
- 757 Burton-Wurster, N., H. R. Leipold, and G. Lust. 1988. Cyclic AMP decreased expression of ED-A fibronectin by chondrocytes. *Biochem. Biophys. Res. Comm.* 154:1088–93.
- 758 Burton-Wurster, N., and G. Lust. In press. Fibronectin in cartilage. In *Fibronectin in health and disease*, ed. S. Carsons. Boca Raton, FL: CRC Press.
- 759 Burton-Wurster, N., and G. Lust. In press. Molecular and immunologic differences in fibronectin from articular cartilage and plasma. *Arch. Biochem. & Biophys.*
- 760 Carlisle, M. S., D. D. McGregor, H. O. Mohammed, and J. A. Appleton. In press. The kinetics of antibody mediated mucus entrapment and rapid expulsion of *Trichinella spiralis* muscle larvae. In *Proc. Seventh International Conference on Trichinellosis*.
- 761 Carmichael, L. E. In press. Canine brucellosis. In *Animal Brucellosis*, ed. K. Nielsen and J.R. Duncan. Boca Raton, FL: CRC Press.
- 762 Carmichael, L. E., J. C. Joubert, and L. Jones. In press. Characterization of *Brucella canis* protein antigens of polypeptide antibody responses of infected dogs. *Vet. Microbiol.*
- 763 Crump, A. L., W. Davis, and D. F. Antczak. 1988. A monoclonal antibody identifying a T-cell marker in the horse. *Animal Genetics* 19:207–15.
- 764 Donaldson, W. L., A. L. Crump, C. Zhang, J. Kornbluth, M. Kamoun, W. Davis, and D. F. Antczak. 1988. At least two loci encode polymorphic class I MHC antigens in the horse. *Animal Genetics* 19:195–206.
- 765 Korenaga, M., C. H. Wang, R. G. Bell, D. Zhu, and A. Ahmad. In press. Intestinal immunity to *Trichinella spiralis* is a property of OX-8⁺ OX-22⁺ T-helper cells that are generated in the intestine. *Immunology*.
- 766 Lazary, S., D. F. Antczak, E. Bailey, T. K. Bell, D. Bernoco, G. Byrns, and J. McClure. 1988. Joint Report of the Fifth International Workshop on Lymphocyte Alloantigens of the Horse. *Animal Genetics* 19:447–56.
- 767 Leipold, H. R., R. L. Goldberg, and G. Lust. In press. Canine serum hyaluronate and keratan sulfate concentrations: Relationship to age and osteoarthritis. *Arth. and Rheumat.*
- 768 Parrish, C. R., C. W. Leathers, R. Pearson, and J. R. Gorham. 1987. Comparisons of feline panleukopenia virus, canine parvovirus, raccoon parvovirus, and mink enteritis virus and their pathogenicity for mink and ferrets. *Am. J. Vet. Res.* 48:1429–35.
- 769 Parrish, C. R., P. Have, W. J. Foreyt, J. F. Evermann, M. Senda, and L. E. Carmichael. 1988. The global spread and replacement of canine parvovirus strains. *J. Gen. Virol.* 69:1111–16.
- 770 Parrish, C. R., C. F. Aquadro, and L. E. Carmichael. 1988. Canine host range and a specific epitope map along with variant sequences in the capsid protein gene of canine parvovirus and related feline, mink, and raccoon parvoviruses. *Virology* 166:293–307.
- 771 Summers, B. A., J. N. Whitaker, and M. J. G. Appel. 1987. Demyelinating canine distemper encephalitis: Measurement of myelin basic protein in cerebrospinal fluid. *J. Neuroimmunol.* 14:227–33.
- 772 Zhu, D., and R. G. Bell. In press. IL-2 production, IL-2 receptor expression and IL-2 responsiveness of spleen and MLN cells from inbred mice infected with *Trichinella spiralis*. *J. Immunol.*

Although dogs and horses continue to be the immediate beneficiaries of research at the Baker Institute, our findings touch on our own lives in immediate and palpable ways.



The Institute in Perspective

As you glance through this report you will detect an atmosphere of optimism and appreciate the depth and sophistication of the research now being conducted at the Baker Institute. The progress made this year can be ascribed in part to a continuing emphasis on health problems that have been a traditional concern of Institute scientists and also to the capacity of Institute staff to use resources in new and creative ways.

Dogs and horses continue to be the immediate beneficiaries of research conducted at the Institute. The findings described in our report, however, have wider relevance; they touch on our own lives in immediate and palpable ways. The reasons are not far to seek. Animals and humans are subject to many of the same diseases. That reality explains why so much of the research conducted at the Institute is sponsored by the National Institutes of Health. But the Institute is unusual and exceedingly fortunate inasmuch as it also enjoys the support and encouragement of a large and growing number of individual benefactors. Those individuals, either directly or collectively through dog clubs and other associations, have provided the margin of excellence and contributed in a meaningful way to the many discoveries that have emanated from the Institute over the past few decades. Our report honors those individuals and acknowledges their participation in our continuing effort to ensure happier, healthier lives for animals while simultaneously enriching our own.

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carry out our mission.*



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 Mr. and Mrs. Thomas V. DeStasio (in memory of Schaeffer)
 Ms. Scotti Devens (in memory of Abbye and Tristan)
 Mr. and Mrs. Joseph I. deVille
 Dr. Thomas DeVincentis
 Mr. and Mrs. Michael J. DeVito
 Mr. and Mrs. Robert L. Devlin (in memory of Rorie)
 Mr. and Mrs. Robert DeVore (in memory of Mrs. Pat Harper)
 Dr. John F. DeVries
 Dr. Marjorie A. Dewey
 Mr. Darrell D. Dey (in memory of Jake and Desi)
 Ms. Dorothy E. DeYoung (in memory of Butch)
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 Dr. Herbert C. Dietrich
 Mr. and Mrs. John DiLullo
 Dr. Bruna M. Dinetz
 Dr. Scott I. Dinetz
 The Distasio family
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 Mr. and Mrs. Alexander Dmytriw (in memory of Mimi)
 Dr. J. F. Doles
 Dr. Scott Dolginow
 Mr. and Mrs. Alan Donald (in memory of Meg)
 Mr. and Mrs. Gerald Donaldson (in memory of CoCo)
 Mr. and Mrs. Joseph Dondiego (in memory of Muffin)
 Mr. and Mrs. Edward Donley (in memory of Bubbles and Run)
 Ms. Eleanor R. Donovan
 Ms. Marion Dorman (in memory of Shu Shu)
 Dr. Elaine Dornton
 Ms. Elaine Ann Dormmann (in memory of Jazzy)
 Dr. Michael E. Doty
 Ms. Grace L. Dougherty (in memory of Catherine A. Morgan)
 Dr. Kathleen L. Dougherty
 Mrs. Cynthia C. Doughty
 Mrs. Marian R. Downey
 Mr. and Mrs. Jack E. Downs (in memory of Puffie)
 Mr. and Mrs. Ralph Downs (in memory of Jaid)
 Mrs. Nella C. Downward (in memory of Cleo, Trigger, and Peppe)
 Mrs. Ingrid Doyne
 Mr. Ernest E. Drake
 Mr. Lorretto H. Drake (in memory of Lady)
 Ms. Ann Drew
 Mr. and Mrs. Theodore H. Drews (in memory of Patsy)
 Dr. Donald Dries
 Mr. Albert Du Bell (in memory of Noodles)
 Dr. R. A. Dubensky
 Dr. Daniel Duberman
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 Mrs. C. P. Dubose, Jr.

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Dr. Mary S. Girtz		
Dr. Peter Glassman		
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Dr. Stuart I. Gluckman		
Ms. Christine T. Glynn (in memory of Poochie)		

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Ms. C. Gutwein (in memory of Holly)	Dr. James G. Hayden	Dr. Ronald Hirschberg
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Dr. Brian Hall	M. and Mrs. Russell Hedrick (in memory of Dr. John Jackson)	Dr. Frederick M. Holmes
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 Dr. Ann L. Huntington
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 Chief, and Tuffy)
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 of Zeke)
 Dr. James R. Jackson
 Dr. Raymond Jackson
 Dr. Robert G. Jackson
 Dr. and Mrs. S. W. Jackson (in
 memory of Mickey and
 Timothy)
 Ms. Colleen Scully Jacobs (in
 memory of Bruce)
 Mr. Billy Jacobson (in memory of
 Britt)
 Ms. Pat Jacobson (in memory of
 BoBo)
 Mr. John Jacobucci
 Mr. and Mrs. Justin Jacobucci
 Mr. Edward Jahngen
 Mrs. Judith Janas (in meory of
 Fritz)
 Mrs. Barbara Javarone (in memory
 of Freckles)
 Mr. and Mrs. Donald Jayson
 Mrs. Martha Jelley (in memory of
 Ch. Irena Vom Mimosenweg)
 Ms. Marjorie E. Jenifer
 Mr. David L. Jennings (in memory
 of Buttons)
 Mrs. Millie M. Jennings (in
 memory of Dorothy Ellis)

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 Mr. and Mrs. Edward G. Johnson
 (in memory of Thumper)
 Dr. Gary W. Johnson
 Mr. Melvin E. Johnson (in
 memory of Mikie)
 Dr. M. T. Johnson
 Dr. Richard Johnson
 Mr. Robert O. Johnson
 Mr. and Mrs. William E. Johnson
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 Dr. Herbert Jonas
 Mr. and Mrs. Douglas Jones (in
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 Ms. Kristine Lima (in memory of Jason)

Captain and Mrs. Donald Lindberg	Dr. Robert F. McClung	Mrs. Helen F. Malgarinos
Mrs. Helga Lindemann	Dr. Anne McComb	Dr. Kenneth Malm
Ms. Kathy Linderholm	Mr. and Mrs. George E. McConnell, Jr. (in memory of Becky)	Dr. Nancy W. Maloney
Ms. Barbara Lippe (in memory of Clipper)	Dr. James A. McCormack	Mrs. Helen F. Mandelcorn (in memory of Kelly)
Dr. Janet L. Lipman	Ms. Edith C. McCormick	Dr. Donna M. Manderino
Ms. Judith L. Litt (in memory of Leader)	Dr. Molly McCullough	Dr. Teresa Mandracchia
Mr. James B. Little	Mr. and Mrs. William S. McCullough (in memory of Woodstock)	Dr. Michael Lee Manheim
Mr. and Mrs. Marion Livezey (in memory of Wendy)	Mr. and Mrs. James L. McDaniel (in memory of Fritz)	Manheim Pike Veterinary Hospital
Ms. Helen Lobel	Mr. and Mrs. Charles W. McDermott	Mr. and Mrs. Joel E. Mann (in memory of Anna and Casey)
Mr. Sy Lobel (in memory of Yaffa)	Ms. Eileen McDonald	Dr. Mary Ann Mann
Mrs. Marilyn D. Loden	Ms. Kathleen McElhill (in memory of Pickles)	Mrs. Ruth Mann (in memory of Misty)
Mr. John K. Loecher	Mr. Samuel W. P. McGill, Jr. (in memory of Brandy)	Dr. James L. Manning
Mrs. Helen B. Longo (in memory of Paul Berkowitz and Norjean O. Chiclet)	Mrs. Candice McGlade	Dr. Robert V. Manning
Dr. Robert Lopez	Mr. and Mrs. David P. McIntyre	Mr. James W. Manousos (in memory of Holly)
Miss Irene Longley	Ms. Barbara McKeever	Mr. Robert S. Mansfield
Mr. and Mrs. Peter Lotz	Dr. Janet I. McKim	Mr. and Mrs. Mark A. Mara
Mr. and Mrs. Edward J. Loud (in memory of Bootsie)	Dr. R. E. McKinney	Miss Violet A. Marano (in memory of Frances II)
Dr. John W. Love	Mrs. Ursula McKinney (in memory of Daphne)	Mr. William Marchak (in memory of Molly, Holly, Joyce, and Buff)
Ms. Alice Lovely (in memory of Sir Higgins)	Mr. and Mrs. David McKinnon (in memory of Sunshine)	Ms. Rita Marcus (in memory of Katie)
Dr. Greg S. Lovgren	Ms. June A. MacLean (in memory of Bo-Bo)	Mrs. Janet Marinaccio
Mrs. Herine A. Lubbers (in memory of Holly)	Dr. D. Kelly MacManus	Mr. and Mrs. Joseph Markauskas (in memory of Puppy)
Mrs. Eula G. Lucia	Dr. Deborah McMichael	Ms. Wendie Markman
Dr. William Lucker	Dr. and Mrs. Harry T. McMillan	Mr. Stanley E. Marquis (in memory of Patty)
Dr. Charles Lumley	Dr. Mac H. McMillan	Ms. Leda Marrano
Mr. and Mrs. Irving M. Lustig (in memory of Chuckles)	Ms. Janice E. McMillen	Dr. Cathie Sue Marshall
Mrs. Enid Lutz (in memory of Happy Susie)	Mrs. Eleanor B. McNally	Ms. Diane P. Marshall
Mr. and Mrs. Daniel Lynch	Dr. and Mrs. Alexander McPhedran (in honor of Dr. John F. Gross)	Mr. and Mrs. Arthur Martel (in memory of King)
Mr. and Mrs. Donald W. Lynch (in memory of Noodles Roni and Rice-A-Roni and in honor of Honey Buns)	Mr. and Mrs. John F. McSharry	Dr. John Martin
Mr. and Mrs. Rob Lyon (in memory of Mikie)	Mrs. Emma D. McSweet (in memory of Tori)	Mr. and Mrs. Norman Martin (in memory of Folley)
Mr. and Mrs. Albert R. Lyons (in memory of Peanuts)	Mr. and Mrs. Alfred R. McWilliams	Ms. Rae T. Martin
Mr. and Mrs. Harry B. Lyons (in memory of Roger and in honor of Dr. Steven Cohen)	Mr. and Mrs. Edward D. Maday (in memory of Susie)	Mr. Charles J. Martineck (in memory of Earl)
Mr. and Mrs. Marc D. Lyons (in memory of Mitzi)	Mr. and Mrs. David Madore (in memory of Jenny)	Ms. Josephine Martini (in memory of Princey and Georgina)
Mr. Eugene J. Lyszcarsz	Mr. Michael Maguire	Dr. V. J. Martinisi
Mr. Edward A. McAdam	Mr. and Mrs. Robert J. Maher (in memory of Thunder and Mouchette)	Dr. Robin Marx
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Mrs. Carolyn McCarthy	Mr. and Mrs. George A. Makrauer (in memory of Hobbie)	Dr. Judith Mason
Mrs. Diane McCarthy	Ms. Alma C. Maler (in memory of Mimi)	Ms. Mildred Masterson
Dr. Francine McCaslin		Mr. and Mrs. William Masterson (in memory of Charlie)
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		Mr. Ross H. Matheson
		Ms. Susan B. Matheson

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Mr. and Mrs. Raymond Matey (in memory of Maxi)	Mr. Martin A. Minor (in memory of Red and Sugah)	Mr. and Mrs. Joseph B. Munro, Jr. (in memory of J. R.)
Mr. and Mrs. William B. Matlack (in memory of Inchapooch)	Mr. and Mrs. Clarence F. Miotke (in memory of Fritz)	Mr. and Mrs. Joseph S. Munyer
Dr. Lawrence C. Mauer	Mrs. Paula B. Mir (in memory of Murphy)	Mrs. Arlene Murphy
Dr. George E. Maurice	Mr. John Mireiter	Mrs. Suzanne C. Murphy (in memory of Bucky)
Mr. Jack May	Mr. and Mrs. Arthur R. Mitchell	Dr. Colleen Murray
Mr. and Mrs. Sol Mayer (in memory of Holly)	Mr. Joseph B. Mitchell	Mr. and Mrs. Robert W. Murray (in memory of Dutchess)
Ms. Margaret O. Mazziotti	Dr. Jeffrey S. Moak	Mr. and Mrs. Thomas I. Murray (in memory of Gretchen and Taffy)
Mrs. Claire H. Mead	Mr. Robert Moering (in memory of Sam and Jim-Jim)	Mr. and Mrs. Charles J. Muscato
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Dr. David Medic	Ms. Lieta Moffei	Mr. and Mrs. Terrell C. Myers (in memory of Brownie)
Dr. Christopher B. Meehl	Dr. Georgia Molek	Mr. and Mrs. William H. Myers, Jr.
Dr. William E. Meehl	Mr. and Mrs. Steven J. Molinsky	Mr. and Mrs. Delmar Nadeau
Dr. Ronald A. Meeks	Mr. and Mrs. Dan T. Montgomery (in memory of Samantha)	Ms. Dorothy Schless Nadherny (in memory of Oliver)
Ms. Jo Meglen	Dr. Calvin Moon	Dr. Jolene Nagakura
Mr. Neil Meinzer	Dr. Harold Mooney (in memory of Mickey)	Mr. and Mrs. Richard J. Naish (in memory of Frosty and Simba)
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Dr. Brian H. Melius	Ms. Anna Moore (in memory of Tasha)	Dr. Hal Nass
Dr. Henry C. Melius	Dr. John Moore	Mr. and Mrs. Ives B. Nathan (in memory of Dee Dee)
Dr. Thomas W. Melius	Mr. and Mrs. John R. Moore (in memory of Lucifer)	Ms. Nattie K. Natter (in memory of Duke and Oscar)
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Dr. David Merry	Ms. Barbara A. Moran	Near North Animal Hospital
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Dr. Cindy Meyer	Mrs. H. S. Morgan	Mr. and Mrs. Frank J. Nelson
Mr. Frederick W. Meyer, Jr.	Dr. Lee A. Morgan	Dr. Karen Nelson
Ms. Greta H. Meyer	Dr. Thomas Morganti	Ms. Sherry S. Nelson
Mr. and Mrs. Carl H. Meyers	Mrs. Alexandria I. Mormilo	New England Veterinary Clinic
Dr. David Meyers	Dr. Alan S. Morris	Mrs. Victoria Newhouse (in memory of Holly)
Mr. Roy A. Meyers	Dr. Eric N. Morris	Mr. and Mrs. Andrew B. Newman
Dr. Taber Meyers	Mrs. Lotta A. Morris (in memory of Ruffles)	Newman Animal Clinic
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Mid-Island Animal Hospital	Mrs. Kathleen M. Morse (in memory of Shanna, Jasper, and Hobo)	Ms. Renee H. Newman (in memory of Mandi)
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Dr. Bruce R. Miller	Mr. James E. Moyler III	Dr. Keith Niesenbaum
Mrs. Ida F. Miller	Mr. Milton Muchnick (in memory of Rusty)	
Mrs. J. Marlene Miller (in memory of Missy)	Dr. Herbert C. Mueller	
Mrs. Marcia L. Miller		
Mrs. Marion S. Miller (in memory of Zak)		
Mr. and Mrs. Nathan Miller		
Dr. P. Morey Miller		
Ms. Sarah Ann Miller		
Ms. Marie J. Millington (in memory of Mittens)		
Dr. Michael H. Milts		
Mr. and Mrs. Frank Minichello		

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Mr. and Mrs. William J. Nissen	Mr. and Mrs. Ben Orlowski (in memory of Licorice)	The Patterson family (in memory of Tippy)
Mr. and Mrs. J. J. Nixon (in memory of Lucky)	Mr. Daniel M. O'Shaughnessy (in memory of Bronson)	Mr. Randolph M. Paul
Mr. and Mrs. John G. Noakes	Ms. Cheryl Osmer (in memory of Shannon)	Ms. Teri Lynn Paul
Dr. Charles Noonan	Dr. Kenneth Ostroff	Mr. John M. Paulsen
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Norwell Veterinary Hospital	Mr. and Mrs. Samuel R. Overton	Dr. Richard Payne
Norwich Veterinary Hospital	Mrs. Anna W. Owen (in memory of Hobo)	Dr. Jerome Payton
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Mrs. Irene Novotny (in memory of Buttons)	Dr. Dore Charlotte Ozdy	Dr. James F. Peddie
Mrs. Frances M. Nowell (in memory of Princess, Randy, and Tony)	Mr. Harold Paatsch	Dr. Linda Reeve Peddie
Dr. and Mrs. J. Michael Nuspl (in memory of Duane)	Mr. and Mrs. Ralph Paccico	Dr. Vince Pedroia
Dr. Charles W. Nydam	Dr. Joe Packheiser	Mr. and Mrs. William Peil (in memory of Mandy)
Ms. Geri Obletz (in memory of Petey)	Dr. Joseph E. Paddock	Ms. Louise C. Pembleton (in memory of Pudge)
Mrs. Betty O'Brien	Mrs. Albert Padget (in memory of Albert Padget and Laddie)	Dr. Mary Pencin
Mr. and Mrs. James C. O'Brien	Dr. S. Howard Padwee	Mr. and Mrs. Rudolph Pennacchia
Dr. Kathleen J. O'Brien	Dr. Kenneth R. Page	Mr. and Mrs. Richard E. Percival (in memory of Shana)
Dr. Mary Chris O'Brien	Dr. Philip G. Page	Mr. and Mrs. Thomas G. Percival (in memory of Lady)
Dr. Robert O'Brien	Dr. Raymond Pahle	Mr. Raymond A. Perkins
Ms. Ellen O'Byrne	Mr. John G. Palache, Jr.	Dr. R. Gordon Perkins
Mr. and Mrs. Gregory Ochalek	Mr. Paul M. Paladino	Mrs. J. Gordon Perlmutter
Mr. Daniel D. O'Connor	Mr. and Mrs. John J. Palka (in memory of Keoni)	Perring Animal Hospital
Mr. Kevin C. O'Connor (in memory of Clyde)	Mr. and Mrs. Richard C. Palman (in memory of Cognac)	Mr. Charles Peter (in memory of Buffy)
Mrs. Rita H. O'Connor (in memory of Tess)	Mr. and Mrs. Allen L. Palmer (in memory of Spooks)	Mr. and Mrs. Charles G. Peters (in memory of Pepper)
Ms. Maureen O'Donnell (in memory of Queen)	Mr. and Mrs. Harry K. Palmer (in memory of Dart)	Dr. James R. Peters
Mr. and Mrs. Joseph F. O'Keefe	Pal O'Mine Clinic	Dr. Alan Peterson
Ms. Louise M. O'Keefe	Mr. and Mrs. Robert A. Paolillo (in memory of Heidi)	Dr. Arthur Peterson
Mr. and Mrs. Robert E. O'Keefe	Ms. Thera A. Papa	Mr. Peter Kjeld Peterson II
Olde Towne Animal Hospital	Dr. Patrick Paradis	Dr. Roy H. Peterson
Dr. William O'Leary	Mr. Dean Paradise	Pet Haven Animal Hospital
Dr. Charles S. Olinger	Park Cities Animal Hospital	Mr. Peter J. Pezzella, Jr.
Dr. Theresa Olivo	Mr. and Mrs. Donald H. Parker (in memory of Blackie and Tippy)	Mr. Alan G. Pfund
Dr. Keith Olson	Mr. Clark H. Parkhurst, Jr. (in memory of Misty)	Mr. and Mrs. James T. Phillips, Jr. (in memory of Peri)
Mrs. Lorraine Olson (in memory of Max)	Ms. Julia K. Parkhurst	Dr. Carol S. Pierce
Mr. and Mrs. Rick Olson (in memory of Nicki)	Mrs. Patricia T. Parmele	Pine Tree Veterinary Hospital
Ms. Dorothy M. O'Neil	Ms. Belgica Pastrana	Mrs. Julie Place
Mr. and Mrs. Brian C. O'Neill (in memory of Lilly)	Mrs. Kathryn Patota (in memory of Heidi)	Ms. Judith G. Pliska
	Dr. Gail Patrick	Mr. and Mrs. George A. Pochos (in memory of Mr. Pooh)
	Ms. Tammany A. Patrick	Dr. Michael Podolin
	Mr. John M. Patterson	

Mr. William Poe (in memory of Schotzie)	Mr. and Mrs. Richard E. Rebolledo (in memory of Schnooks)	Mr. and Mrs. George Ricucci (in memory of Pepper)
Dr. L. Richard Poggi	Dr. Glen Redeker	Dr. Henry Riehle
Mr. and Mrs. William L. Pohlmann (in memory of Springer, Buffy and Humphrey)	Dr. Howard Redlus	Mr. and Mrs. Gary D. Riggs
Ms. Leona Pollard	Mrs. Marianna A. Rees (in memory of Lulu)	Mr. and Mrs. Dan Riley
Mr. Jerome J. Pollitt	Mr. and Mrs. Cyril A. Regan	Mrs. Vincent Riley (in memory of Tracy)
Dr. William Pomper	Ms. Elizabeth A. Regan (in memory of Topper)	Ms. Linda Rinaldi (in memory of Biscuit)
Dr. Roy V. Pollock	Mrs. Irene Regimbald (in memory of Hondo)	Dr. Brian Rind
Mr. and Mrs. Joseph Pontes (in memory of Amigo)	Mrs. Norma Reich (in memory of Heidi)	Ms. Elise Rindlaub (in memory of Pat)
Mrs. Dana Porraro	Mrs. H. C. Reichert (in memory of Zonker)	Dr. Andrew S. Ritter
Ms. Marie G. Porter	Dr. Barbara Jean Reid	Dr. Michael Rizzo
Ms. Shirley A. Posner	Ms. Kathleen Reilly (in memory of Samantha)	Ms. Robin K. Robbins
Dr. Joan Poster	Ms. Janet S. Reider	Mr. and Mrs. Leonard C. Robel (in memory of Bandit)
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Mr. and Mrs. Eugene M. Powell (in memory of Titus and in honor of Dr. Howard Gittelman)	Mr. and Mrs. William Reiter (in memory of Gus)	Mr. and Mrs. Maurice Robinovitz (in memory of Shayna and in honor of Dr. Stephen Schwirck)
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Dr. Raymond S. Pray	Ms. Joyce Rendano	Ms. Maureen A. Roche
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Mr. and Mrs. Steven J. Price	Ms. Carole E. Reynolds (in memory of Brydie)	Dr. George Roegge
Ms. Jane H. Pritchard (in memory of Clem)	Mrs. Christine M. Reynolds	Mr. William Roehrick
Ms. Dorothy Protheroe	Ms. Dianna N. Reynolds (in memory of Miss Minnie)	Mr. and Mrs. Harold F. Roemer
Mr. and Mrs. Charles S. Pyski	Mrs. Therese M. Rhoades (in memory of Cinder)	Dr. John C. Roemmelt
Ms. Lucy M. Puccia (in memory of Monique)	Ms. Joyce E. Rhodes (in memory of Daquiri)	Mr. and Mrs. Robert N. Roeters
Mr. and Mrs. Robert H. Purple (in memory of Sasha)	Mr. and Mrs. James V. Rhoney (in memory of Fluffy)	Mr. George M. Rogers, Jr.
Mr. Michael V. Pytlinski	Mr. Frank T. Ricci	Ms. Joan E. Rogers
Mrs. Marie Qualter	Mr. and Mrs. James E. Rice (in memory of Brandy)	Dr. Jay Rogoff
Dr. David Rabkin	Ms. Joan L. Richards (in memory of Oliver and in honor of Dr. Jeffrey Moll and Dr. Richard Guelzow)	Ms. Louise Rogozinski
Mr. and Mrs. Richard Ramsay (in memory of Dusty)	Mrs. Rosalette E. Richi (in memory of Sasha)	Dr. R. Gary Roop
Dr. Martin Randell	Mr. Leonard Richman	Mr. and Mrs. Alan Roopenian
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Mr. Francis Raposa (in memory of Napoleon)	Mrs. Edith M. Rickert (in memory of Holly)	Mr. Clio Rosazza (in memory of Wrecker)
Dr. Franklin W. Rapp		Mr. and Mrs. Raymond L. Rose (in memory of Aussie)
Mr. Alvin Rasmussen		Mrs. Barbara Rosen (in memory of Patches)
Dr. Jack O. Rasmusson		Miss Deborah Rosen
Mrs. Maria Rato		Mr. Douglas Rosen
Mrs. Elizabeth V. Raub (in memory of Toby)		Mr. and Mrs. Martin N. Rosen
Mr. and Mrs. Douglas Reading		Dr. David Rosenberg
		Dr. James Rosenberger
		Mr. Warner A. Rosenthal
		Dr. Donald J. Rosinski
		Ms. Liliana G. Rossi

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Dr. Michael C. Roth	Mrs. Shirley Saperstein (in memory of Beau)	Mr. and Mrs. Charles B. Sclar
Ms. Rhoda Roth	Mr. Emilia Sapienza (in memory of Nickie)	Mr. and Mrs. Michael L. Sclar (in memory of Fortune Cookie Favor)
Ms. Susan Roth (in memory of Thyjs)	Dr. Deborah Sarfaty	Ms. Ann Scott (in memory of Gatsby)
Ms. Eleanor Rothamel	Ms. Patricia Sarson (in memory of Daisy May)	Ms. Bernice Scott (in memory of Toby)
Mrs. Annelise Rothe (in memory of Bailey)	Dr. James R. Saunders, Jr.	Dr. Beverly J. Scott
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Dr. Howard Rothstein	Mr. George R. Savage	Mr. and Mrs. Robert J. Scott, Sr. (in memory of Bunky)
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Dr. Nolan Rubin	Ms. Val Schaleben (in honor of Bess and in memory of Jeb)	Dr. Mark Sebetic
Mrs. Julia E. Rudacille	Dr. Ronald Scharf	Mr. and Mrs. Gene Seeber
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Dr. William Ryan	Mr. and Mrs. Henry W. Schmidt (in memory of Bentley)	Mrs. Judie Sentf
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Dr. Mary Beth Rymer	Ms. Louise Schmidt	Mr. and Mrs. Edward Serrano (in memory of Maurice)
Mrs. Eleanor A. Sabo	Ms. Catherine T. Schmitt (in memory of Tobin, Adam, Tina, and Kris)	Mr. Richard Severo
Mr. Mark Sack	Dr. Allen M. Schoen	Ms. Barbara Sevigney (in memory of Kiltie)
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Ms. Michelle L. Salvatori (in memory of Tami)	Dr. H. E. Schraw	Dr. Kevin J. Shanley
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Dr. George B. Salzmann	Dr. H. James Schroll	Dr. Martin P. Shapiro
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Dr. Arnold K. Samter	Mr. and Mrs. Harold Schulman and family (in memory of Cher)	Mr. and Mrs. Sheldon Shapiro (in memory of Major)
Mr. Reginald D. Sanborn	Mr. and Mrs. Terry L. Schultz (in memory of Puppy)	Mr. Harry Shappell (in memory of Judy Lee)
Ms. Julia Sanchez (in memory of Spunk)	Mr. and Mrs. Darwin Schulz	Dr. Robert T. Sharp
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 Dr. William Shek
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 Mrs. Joyce M. Sherwood (in memory of Candy)
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 Dr. Lewis L. Smith
 Mr. Louie D. Smith, Jr.
 Dr. Marcia Smith
 Miss Marion Smith
 Ms. Marjorie A. Smith (in memory of Tiger, Tye, and Beau)
 Mr. and Mrs. Maurice J. Smith (in memory of Misty)

Mr. and Mrs. Nelson R. Smith (in memory of Carlo)
 Mr. and Mrs. Raymond F. Smith
 Mrs. Susan Smith (in memory of Mandy)
 Mr. Thomas E. Smith
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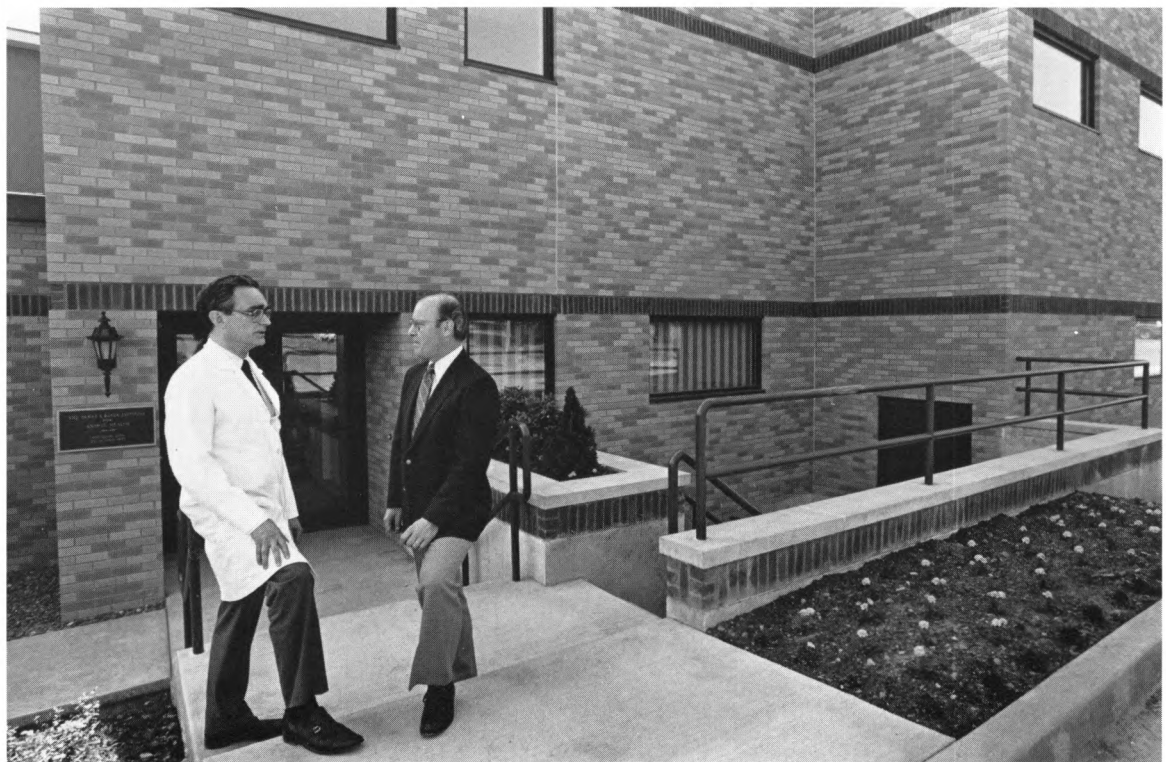
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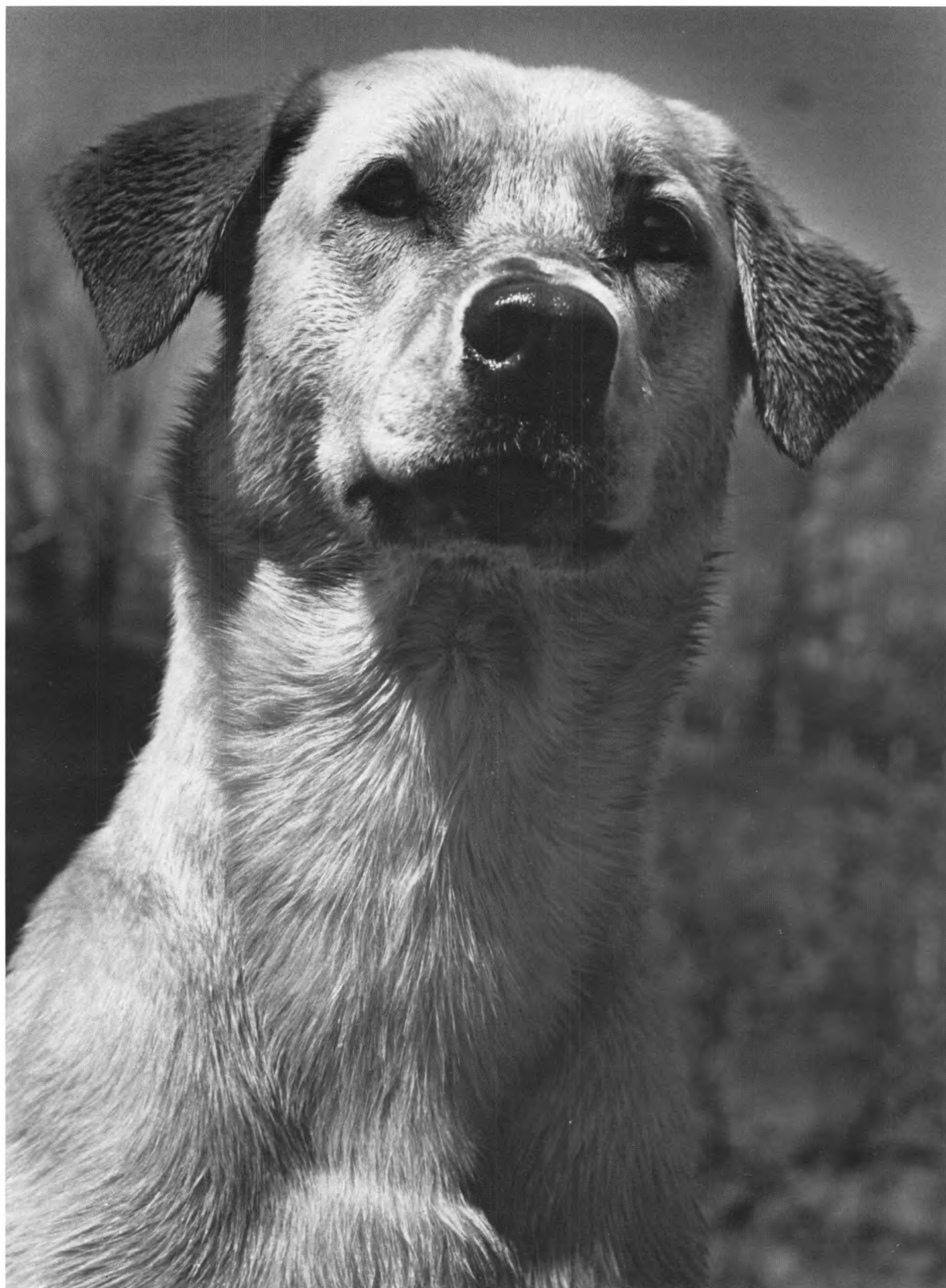
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Dr. Douglas McGregor and Dean Robert Phemister at the entrance of the new research wing.

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