Alan Kelly Named School’s Acting Dean

Alan Kelly, professor of pathology and chairman of the Department of Pathobiology at the University of Pennsylvania’s School of Veterinary Medicine, has been named Acting Dean of the School, effective January 1, 1994.

Dr. Kelly will head the School until a permanent replacement for Edwin J. Andrews can be found. Andrews, Dean of the School since 1987, announced last June that he would be stepping down from the post on December 31, 1993. The search committee for Andrews’ replacement has been appointed.

Dr. Kelly completed his undergraduate work at the University of Reading, England, and took his veterinary degree at the University of Bristol, also in England. After deciding on a research career in pathobiology, Kelly earned a Ph.D. in Pathology in the Graduate School of Arts and Sciences at Penn in 1967.

His research projects have been funded by the Muscular Dystrophy Association of America, the National Cancer Institute, the NIH, and other sources.

Dr. Kelly is author of numerous research papers and book chapters, and is in demand as a speaker at scientific symposia around the world. He is a past recipient of the Lindback Distinguished Teaching Award at the University.

From the Dean

Presently the School and the University are in states of transition as we change from one administration to another. President-Elect Judith Rodin will assume office on the first of July and will be joined by her newly nominated provost, Dr. Stanley Chodorow. Dr. Chodorow is associate chancellor for academic planning at University of California, San Diego, and dean of its School of Arts and Humanities. We welcome them both and enthusiastically look forward to expanding the academic excellence of our School under their leadership. Dr. Chodorow is a particularly interesting choice as provost; he is a medieval historian but started his academic career as a pre-veterinary student at Cornell. He has a love of animals, has worked on farms, and knows a good deal about our profession.

Within the School, the search committee for the Gilbert S. Kahl Dean of Veterinary Medicine is making good progress and hopes to be able to offer a list of candidates to President Rodin by late summer.

The School’s new leadership will immediately have to face many issues that are critical to our future. In anticipation of this, the faculty is now involved in the creation of a long-range strategic plan that will outline the School’s development needs for the remaining years of this century. Our fiscal stability and the level of tuition are major concerns. For FY ’94-’95 we are included in Governor Casey’s budget for the amount of $14.2 million. Although we are grateful to the Governor for this amount, it means we must apply to the University for $5.1 million of additional funding to balance next year’s budget.

Now we must start to devise ways of obtaining more adequate and stable funding from the General Assembly for FY ’95-’96 and beyond. We must also address a level of tuition that is approaching $20,000 per annum and is prohibitive for too many students. An additional issue is the level of specialization that is available for students in the professional curriculum and the directions veterinary medicine is likely to take in the next century. Over the next several months, the faculty will debate these issues and attempt to build a consensus about what must be done in the future to preserve the preeminence of our School. We hope this blueprint will ease the transition for our new dean and eagerly await the appointment.

Alan M. Kelly, B.V.Sc., M.R.C.V.S., Ph.D.
Acting Dean

William Kilbourne, a co-executor of the estate of Elizabeth Lowe presents a check to William Schimmel, chairman of the School’s Board of Overseers, and Dean Edwin J. Andrews.
Veterinary School’s Deanship Endowed

Gilbert S. Kahn of Miami, Florida made a gift to the University of Pennsylvania to endow and name the deanship of its School of Veterinary Medicine. Kahn, a member of the Annenberg publishing family, is a well known breeder and exhibitor of purebred dogs.

The Gilbert S. Kahn Dean of Veterinary Medicine at Penn is the first endowed deanship in North America. An international search for a Veterinary School dean is under way as Dean Dr. Edwin J. Andrews stepped down at the end of December.

“Gilbert Kahn’s gift is important for the future of the Veterinary School and couldn’t have come at a more opportune time,” said Claire Fagin, Penn’s Interim President. “An endowed chair lends prestige to the deanship at a time when we are searching for a new dean of the Vet School, and will help us to attract the very best leader to hold this important position.”

Kahn said that he is very happy to follow the family tradition of supporting the University of Pennsylvania and that helping the School of Veterinary Medicine reflects his interest in animal welfare and canine health issues.

Kahn, an internationally known judge of toy dogs and a number of terrier and non-sporting breeds, exibits and breeds Japanese Chins, long-coated Chihuahuas, and Shih Tzu. He is the delegate of the Japanese Chin Club of America to the American Kennel Club and a member of the board of directors and executive committee of The Dog Museum. He is one of the few American members of The Kennel Club (England).

Through his Charing Cross Research Fund, Kahn has supported research at Penn’s Veterinary School on granulomatous meningo-encephalitis, an inflammatory disease of the central nervous system; epilepsy; and kidney disease. He is a major contributor to the Dr. M. Josephine Doubler Dean’s Scholars fund in the Veterinary School.

Kahn serves as president of the Animal Welfare Society of South Florida, Inc., an organization that established and supports a low cost spay/neuter clinic and a hospital that provides full service veterinary care. He is a member of the executive committee of the Concert Association of Florida, Inc., a group that brings the best in the world of dance and music to South Florida.

Kahn’s gift created the 15th endowed chair at the School of Veterinary Medicine and the 132nd chair endowed during The Campaign for Penn.

Veterinary School announces Mari Lowe Center for Comparative Oncology

The largest gift ever to the University of Pennsylvania School of Veterinary Medicine has provided the endowment for the School’s new Mari Lowe Center for Comparative Oncology. A gift of more than $4 million was made by the Estate of Elizabeth Lowe, an animal lover from Silver Spring, MD. Ms. Lowe, over the years, had brought several of her dogs to the Veterinary Hospital of the University of Pennsylvania for treatment. She stipulated that the program endowed at the School be named for Mari, her beloved Afghan Hound.

“The Mari Lowe Center for Comparative Oncology will be the first fully endowed center at the School,” said former Dean Edwin J. Andrews. “The center will be multidisciplinary and will bridge a number of specialties within the School, such as oncology, radiation oncology, surgery, medicine, and immunology, as well as basic research and will strengthen the School’s leadership in small animal oncology.”

An important component will be the Mari Lowe Radiation Oncology Facility with a low energy orthovoltage radiation therapy unit and a megavoltage, high energy linear accelerator which will greatly enhance the ability to treat a variety of tumors in animals.

The Mari Lowe Center for Comparative Oncology will support cancer research in dogs and cats. “The endowment will provide the critical resources to create a national center of excellence to support the research of top veterinary oncologists and their colleagues with overlapping interests in medical genetics, immunology, pathology, molecular biology, toxicology, environmental medicine and other fields,” said Andrews.

Dr. Narayan G. Avadhani, Harriet Ellisson Woodward Professor of Biochemistry, has been appointed director of the Center and an advisory board has been formed. The members are: Dr. Michael Atchison, assistant professor of biochemistry, Department of Animal Biology; Dr. Ralph L. Brinster, Richard King Mellon Professor of Reproductive Physiology, Department of Animal Biology; Dr. Urs Giger, associate professor of medicine and medical genetcs, Department of Clinical Studies, Philadelphia; Dr. Dean Richardson, Charles W. Raker Assistant Professor of Equine Surgery, Department of Clinical Studies, New Bolton Center; Dr. Michael Goldschmidt, professor of pathology, Department of Pathobiology; Dr. John Glick, professor of medicine, director, Cancer Center, School of Medicine; and Dr. Peter Nowell, Gaylord P. Harnwell Professor of Pathology and Laboratory Medicine, School of Medicine.

The first objectives of the Center are:

1. To consolidate the comparative oncology effort in the Department of Clinical Studies. Philadelphia and to supplement it by recruiting an international level oncologist.
2. To stimulate clinical and basic research interest and bring together basic research and clinical scientists.
3. To establish a molecular diagnostic facility for cancer.

The Mari Lowe Center for Comparative Oncology is the first of several endowed centers the School hopes to create in the future in areas such as medical genetics, infectious diseases, equine sports medicine, environmental medicine, and critical care, among others.
Computer Models for a Farm Eco-System

Today's dairy farmer must be a superb livestock and business manager, an agronomist, economist, soil, water, and waste management expert.

Awareness of the long-term impact of agricultural run-off on streams, rivers and ground water has led to legislation governing the number of animals a farmer can keep on a given piece of land and how the disposal of animal waste is handled. The farmer has the formidable task of maintaining a profitable dairy herd with minimal impact on the land.

This complex task is only possible with the aid of computer models. Researchers at Penn's Center for Animal Health and Productivity at the New Bolton Center campus, who earlier developed a feeding strategy model for dairy herds, are now looking to create a more complex model to integrate not only feeding strategies but also cropping and planting strategies to keep the production and health of a herd at a maximum while reducing its environmental impact.

"We are looking at the entire dairy farm, its soil composition, and the feed crops that can be grown economically utilizing the animal wastes," said Dr. James Ferguson, assistant professor of nutrition. "At first we looked mainly at feeding strategies for production and health, and we didn't worry too much about the waste products and their composition. However, manure and urine contribute to nitrate pollution of soil and water and we began to develop feeding formulas to reduce the level of nitrates in dairy cow wastes."

Cows have a complex digestion system where food is broken down with the aid of bacteria and bacterial products are absorbed by the cow in its intestines. When feeding a cow, the bacteria must be kept in mind, in essence cow and bacteria must be fed. "We must look at what happens to the feed in the cow's rumen," said Dr. Ferguson. "The bacteria need protein for the fermentation process that breaks down the cellulose into volatile fatty acids and starch to provide energy sources. Bacteria break down protein into ammonia which is then converted to microbial protein that is absorbed by the cow in the intestine. But if there is too much protein excess ammonia is produced and is excreted in urine and manure. Where, over time it is converted into nitrate by another set of bacteria. This nitrate then is discharged into the soil to enter the ground water."

The issue is further complicated by the fact that microbial protein alone is not enough to keep a cow in good health and high milk production. The feed must be balanced in such a way to provide carbohydrates that supply energy, just enough protein to be utilized by the bacteria, and additional protein that can be absorbed by the cow in the intestines. To add to the complexity, it must be taken into account what kind of feed crops can be raised economically by the farmer.

"We look at the composition of the soil and the plantings it will support," said Dr. Ferguson. "Then we build a feeding and a cropping program. The cropping program is not just for one year but for three to five years, considering crop rotation and fertilizing with manure. The land may be ideal for alfalfa, but alfalfa fixes nitrogen in the soil from the air and when fed as silage, contains too much protein. We may recommend that the alfalfa be fed as hay and that a rye cover crop follow the alfalfa to take up the nitrogen in the soil."

The model also has to take into account the requirement of other feed plants, such as corn, beets or grass and the nutrient properties of the manure that will be applied to the fields. "If you use reasonably fresh manure the urea in it has not been converted to nitrates. Such fresh manure is best for rapidly growing plants because they can easily convert urea to nitrogen. On the down side, urea in a lagoon or on the ground is converted by bacteria to ammonia that evaporates. If you use aged and solidified manure as fertilizer, you add nitrates which are available more slowly to the plants and can leach into ground. In planting cropping strategies one must take into consideration the nature of the soil and the farming methods. Today fields are not plowed but disked and fertilized by manure injection to reduce the exposure of manure to air."

"We are examining many different models," said Dr. Ferguson. "Our aim is to build integrated models that utilize information on soil, agronomy, water, and feeding efficiency so that a program can be tailored to the individual farm. We also need to integrate into this the lactation cycle of the various groups in the herd because nutrition requirements vary depending on the stage in the cycle of lactation. Such a model must do its calculations rapidly, it can't take all day."

Modern computers and advanced software make this a feasibility.

The New Bolton Center researchers have developed a reduced protein feeding program that increased milk production and decreased nitrate output. It also reduced the feed costs for a 400-head herd by $100,000 annually. This is just the first step. By developing a computer model that encompasses the entire cycle from growing feed crops to milk production to fertilizing croplands to planting, the New Bolton Center researchers hope to develop a strategy that will enable the farmer to have maximum milk production with minimal environmental consequences while making a profit.

The work at Penn is supported by USDA/CRS moneys, Pennsylvania Farm Bureau, Friends of Pennsylvania Agriculture, Pennsylvania Department of Agriculture, Center for Animal Health and Productivity at New Bolton Center, and a number of corporations.
**Toxicologist joins diagnostic laboratory**

Housing and industrial developments are encroaching on farm land, exposing food animals and horses to more natural and man-made toxins. Depending on the toxin, they may cause, for example, a mild illness and subsequent reduction of meat, milk or egg production, or they may be fatal. But trying to figure out the precise toxin requires a veterinary toxicologist and series of sophisticated tests.

The Agriculture Animal Health Diagnostic Laboratory at New Bolton Center now has such a specialist on staff and will be setting up a toxicology diagnostic laboratory. Dr. Robert Poppenga came to Penn in December from the veterinary school at Michigan State University where he served as assistant professor of toxicology.

"The potential for poisonings in animals is great," said Dr. Poppenga. "Animal poisons include plant and mold toxins, metals, agrochemicals such as insecticides, feed additives and veterinary drugs. Our task will be to try to prevent exposure of animals to such toxins, or, if exposure has occurred, ensure that the substance is identified and removed to protect other animals on the farm. In addition, the toxicology laboratory will be an information and referral resource for veterinarians and the agriculture community in Pennsylvania.

Dr. Poppenga will set up the toxicology laboratory at the School as part of the tri-partite laboratory system established by the Pennsylvania Animal Health and Diagnostic Commission in 1992.

"While the Pennsylvania Department of Agriculture Diagnostic Laboratory at Summerdale will continue to offer basic toxicology analyses, the toxicology laboratory at New Bolton Center will be the primary laboratory for the diagnosis of animal poisonings within the Commonwealth," he said.

Vetinary toxicology is not simple as so many different species are involved. "For example," Dr. Poppenga explained, "monensin, an anticoccidiatot routinely added to chicken feed, is highly toxic and potentially fatal to horses; or, cows can tolerate high copper levels in water while sheep will become extremely ill at such levels. Ordinary substances like salt, too, can act as a toxin if they are consumed in excess."

While Dr. Poppenga's base will be at New Bolton Center and his main focus will be on food animals and horses, he will be available for consultation by small animal practitioners.

Dr. Poppenga received his veterinary degree from the University of Illinois in 1978 and his Ph.D. degree in veterinary toxicology in 1987 from the same institution. He worked at the Michigan State University School of Veterinary Medicine from 1987 until 1993. He is a diplomate of the American College of Veterinary Toxicology.

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**VHUP to construct Harold H. Fehr Emergency Service Pavilion**

Harold H. Fehr, a 1923 graduate of the University’s Wharton School, made a major planned gift to the School of Veterinary Medicine to renovate the Emergency Service. The Emergency Service, one of the busiest areas of the hospital, is the cornerstone of the Center for Veterinary Critical Care (CVCC) — the first wholly integrated small animal veterinary critical care unit in the world. More than 8,000 visits are made to the Emergency Service annually.

The Harold H. Fehr Emergency Service Pavilion will significantly enhance the hospital’s ability to provide the finest emergency care to seriously ill and injured small animals.

Dr. Joan Hendricks, Vice Chair of the Department of Clinical Studies in Philadelphia and Co-Director of the CVCC, says of the gift: "All of us at VHUP are thrilled by Mr. Fehr's generosity. Although VHUP has the best Emergency Service at a veterinary school, renovations have been needed for some time to accommodate our large caseload. With the Harold H. Fehr Emergency Service Pavilion, our facility will now rival the most advanced trauma/emergency treatment and diagnostic centers in human medicine."

Dr. Kenneth Drohan, director of VHUP's Emergency Service, Barry Stupine, director of VHUP, and Mr. and Mrs. Harold H. Fehr during a visit to VHUP's Emergency Service.

The renovation is expected to be completed later this fall. The Emergency Service will temporarily relocate to another part of the hospital while the renovations are underway and remain open for business.
IL-12 shows promise as adjuvant in vaccines

Scientists at the University of Pennsylvania School of Veterinary Medicine and The Wistar Institute have shown that Interleukin-12 (IL-12) dramatically enhances the effectiveness of a vaccine against leishmaniasis in laboratory mice and suggests that IL-12 may be extremely useful as an adjuvant in vaccines against other infectious diseases. An adjuvant is a substance that when added to a vaccine is capable of strengthening its effectiveness in protecting an individual against a disease. The findings were published in the January 14, 1994 issue of Science.

"Leishmaniasis is a tropical disease that can cause severe disfigurement and even death, and in the last six years has been targeted by the World Health Organization for the development of a vaccine," says Dr. Phillip Scott, assistant professor at the University of Pennsylvania School of Veterinary Medicine and senior author of the article. "In addition, experimental infections with the protozoan parasite causing this disease, known as Leishmania major, have frequently been used to understand basic immunologic responses associated with many different infections."

"IL-12 has a key role in regulating the immune system and may also be involved in several diseases," says Giorgio Trinchieri, M.D., professor at Wistar and a discoverer of IL-12. "It appears that IL-12 helps to regulate inflammation and the immune response to bacteria and other infectious agents, and possibly to HIV."

The finding is important because, by using IL-12, scientists may be able to boost immune responses to other diseases, such as tuberculosis and leprosy. It has even been suggested by Dr. Jonas Salk (Science, May 1993) that IL-12 might be used as an adjuvant in preventive or post-exposure vaccination to AIDS. The work of Dr. Trinchieri has previously shown that in a test tube IL-12 can indeed correct some of the immunological deficiency of blood cells taken from HIV patients (Journal of Experimental Medicine, March 1992), and these results have recently been extended by a study at the National Cancer Institute (Science, December 10, 1993). Genetics Institute, Inc. in Massachusetts hopes to begin Phase I trials of IL-12 in HIV-positive patients soon (Science, October 8, 1993).

Protective immunity induced by vaccination is dependent upon the capacity of the vaccine to elicit the appropriate immune response to either resist, control or eliminate the pathogen (disease-causing organism). Depending upon the pathogen, protection may require very different types of immune responses.

One type of immune response is associated with the development of cells that destroy the pathogen, and is referred to as cell-mediated immunity, while the other requires the production of antibodies, and is known as humoral immunity.

It is now known that particular CD4+ T cell subsets determine which of these responses develop following immunization. The CD4+ T cells that direct the development of cell-mediated immunity are known as Th1 cells, while those responsible for the development of humoral immunity are known as Th2 cells.

An essential role of adjuvants in vaccines is to direct the development of these CD4+ T cell subsets: such that the appropriate Th subset expands and a protective immune response is generated. However, in the past it has been poorly understood how adjuvants perform this role. Based on the current study, it has now been established that IL-12 primes animals for the cell-mediated type of immune response. Since elimination of the parasite, Leishmania, requires cell-mediated immunity, inclusion of IL-12 with the vaccine leads to the development of protection.

IL-12 was first discovered at Wistar in the late 1980's by a research group led by Dr. Trinchieri, and later was purified and cloned in 1989 in collaboration with Genetics Institute.

Martha Lubell

A veterinarian and her clients reach out

From time to time we report on unusual activities of one of our alumnae.

Following is a report by Eileen Rowan, V'77, who, together with her clients, has reached out to the Lakota Sioux of South Dakota.

It all started 4 years ago when I visited Taos, New Mexico on a ski trip, and began reading up on the local Pueblo Indian culture. We began sending feathers and an occasional fur pelt to the Taos Pueblo Indians, for use on their Native American dress. It has progressed to our sort of adopting the Lakota Sioux of South Dakota, since they are by far the poorest of all our North American Indians. The reservation runs 85% unemployment and 50% welfare. There are no major cities anywhere close by. Their reservation lacks rich mineral deposits, and there is no tourism. Forget gambling casinos...there is no population to pull from.

So now we have an ongoing commitment to send out badly needed warm clothes for the bitter cold winters. Old ski clothes are prized, and given to...
teenagers who live in remote areas of the reservation where they have to bring in wood and water. We also send any type of bird feathers, and old fur coats, muffs, etc. Even fake fur is sent for the younger children’s dress costumes. To a school art teacher we send costume jewelry that can be taken apart for the beads, tupperware containers for clay, old dense wool blankets for printing projects, and old hair dryers that blow (heat not needed). Hard back books are sent to a middle school library that had practically no books on the shelves during my visit in September 1993. Fiction for the 5-8th grade is needed.

There are 12 Headstart programs where we send wooden puzzles, toys, stuffed animals and clothes for 3-5 year olds. The director of Headstart also distributes clothes to adults and other age children for us, as well as the fur to fancy dancers, since she is a traditional Indian herself and participates in Pow Wow dances.

Our special project for 1993 was to raise the money needed to bring two Lakota Sioux children and a Sioux teacher to Orlando, Florida for a week. The teacher bought another two tickets, one for her husband (also Sioux) and one for her four year old child. We were able to raise $585.00 to pay for the food for everyone. I donated a time share condo week just outside Disney World, and paid for the minivan. Clients donated midyear passes to Disney, and Sea World agreed to sign everyone in for a day, thanks to a Florida veterinarian arranged more passes to Disney, and Sea World agreed to sign everyone in for a day, thanks to a Florida veterinarian arranged more passes to Disney. I went to Florida with two full suitcases of donated clothes, and another suitcase half full of toys and stuffed animals, bubble bath, candy, etc., they were used to decorate the condo prior to their arrival.

During the week we saw the Magic Kingdom, EPCOT Center, Sea World, the Kennedy Space Center, Merritt Island Wildlife Refuge, the Atlantic Ocean and an outlet mall. We even had two tickets to a Knicks/Orlando basketball game donated by a Florida lawyer we met down there, who liked what we were doing. The same lawyer also took our Sioux father to play golf. Needless to say, they were thrilled with it all.

Our special project for 1994 is to bring a Sioux high school student to Long Island for part of the summer. Edy Harrison, a 5’11” girl, wants to be a veterinarian. She has two ponies that live loose on the prairie behind her trailer home, in addition to three dogs, some chickens and many cats. Our clinic counter top cookie jar accepts donations from our clients, and clients also sign up to take Edy to work with them for a day to see other career options. So far we have lined up a day with an M.D. radiologist, a dialysis nurse, a physical therapist, a wildlife biologist, a teacher of retarded and handicapped children, an equine veterinarian and a house appraiser, as well as the time she’ll spend at the Bayville Animal Clinic. Other clients have agreed to take Edy into Manhattan, to the ocean, out sailing, fishing and even to a day at the beauty parlor. The University of Pennsylvania School of Veterinary Medicine has offered to give her a tour of the Small Animal Hospital, as well as New Bolton Center. We are still looking for a frequent flyer ticket for Edy, or a sizable donation to purchase one.

For Christmas 1993 we ‘adopted’ 65 Sioux Indians on the Rosebud Reservation, with presents being sent out of both wrapped new gifts, as well as clean, good used clothes and toys. We had all ages represented from just born to senior citizens. The thank you notes are coming in now, and we put them up on the clinic walls for everyone to read. The children pictures are a hit. Pen-pal relationships are starting, and birthday presents are planned to go out next.

Two clients are currently planning a trip to the reservation this summer to look up their new Indian friends. They have been invited to share a sweat lodge ceremony, go to a Pow Wow, and observe a Sun Dance ceremony, a very special event usually closed to non-Indians.

The experience of doing all this has been a great way to learn about another culture and another way of life. By bringing Edy Harrison to Bayville this summer, we will expose her to suburban and urban life for the first time. She will see traffic, crowds, friendly strangers and many different careers. We hope to give her a headstart on college so that when she leaves the reservation for college, she’ll finish college with a good career choice, and not return home within months of matriculation, scared off by the “big city scene”. In our tiny way we are trying to make a difference in one town on the prairie reservation.
Canine Reproduction

Understanding the physiology of reproduction is the first step in ensuring the health of breeding bitches and their offspring. Dr. Margret I. Casal, medical genetics and pediatrics resident at the School, described normal canine reproductive cycles and abnormalities affecting fertility, pregnancy and parturition, and she presented some basic principles of sound breeding management in dogs.

At about 6-12 months of age, small to middle-sized male dogs reach puberty and bitches experience their first heat cycle: small to middle-sized bitches cycle every 6-8 months throughout life.

Proestrus in the bitch lasts seven to nine days and is marked by rising estrogen levels and bloody vaginal discharge. During the nine day estrus (heat) phase which follows, estrogen levels peak, and the bitch allows mating.

The easiest way to determine that the dog is in heat is to follow its behavior, said Dr. Casal, "but not all dogs act like they're in heat, so it is important to use other methods too."

Dr. Casal recommended combining progesterone assays with vaginal smears to pinpoint the optimal time for breeding. As the estrogen prepares the ova for ovulation and the uterus for pregnancy, luteinizing hormone (LH) begins to rise. Progesterone levels begin their ascent, and ovulation occurs about two days after the LH surge. Progesterone, which maintains the pregnancy, remains elevated throughout the next stage, diestrus, and then falls during the quiescent anestrus phase.

Before mating dogs, said Dr. Casal, it is important to assess their breeding suitability. Male dogs and bitches should come from thrifty litters and from a bitch who has cycled regularly and experienced no problems during parturition and whelping. Fit breeding dogs show no signs of genetic defects and test negative for the bacterial infection, brucellosis. Male dogs should undergo semen evaluation prior to breeding.

Pregnancy, accompanied by a fall in estrogen and a rise in progesterone, can often be detected by palpation as early as day 18. After about day 24, ultrasound can be used to monitor fetal heart rate and growth.

Gestation generally lasts 58-72 days and, about one week before parturition, the bitch’s temperature, normally 101.5 degrees, starts to drop. A sudden plunge in temperature to as low as 95 degrees typically occurs 12-24 hours before birth. Dr. Casal recommended measuring the bitch’s temperature regularly, beginning about two weeks before the expected due date and monitoring behavioral signs, which may include restlessness, appetite loss and nesting. The first puppy is normally born three to six hours after labor begins, with a 30-60 minute interval between puppies.

Fertility in the male dog and the bitch may be impaired by chromosomal aberrations, abnormalities in sexual development, malnutrition, obesity, hypothyroidism, autoimmune diseases and infections of the reproductive organs. Both brucellosis and canine herpes virus may be sexually transmitted and can mar fertility in dogs; neither shows obvious clinical signs and both can lead to spontaneous abortions.

Tumors in sex organs, persistent frenalum and testicular torsion may diminish fertility in the male dog, as can ovarian cysts, pyometra and vaginal hyperplasia in the bitch.

Abortion and abnormal fetal development may result from trauma, vaccinations and certain medications given during pregnancy, as well as from spontaneous drops in progesterone.

Dysfunctional hormone systems of either the bitch or the puppies can obstruct the normal cascade of events which induces labor. One of the most common birthing problems, said Dr. Casal, is uterine inertia, a condition in which the uterus fails to contract; it may be caused by calcium deficiency, hypoglycemia, large litter size and acute fatigue. The presence of oversized, malformed and dead fetuses may also interrupt parturition.

Multiple factors play a role in successful breeding, said Dr. Casal, and veterinary attention should be sought if problems develop during mating, pregnancy or birthing. "Many of the causes of infertility and problems during birth can be avoided with proper management."
Genetic Diseases in the Dog

Sometimes you take the bad with the good. That's especially true with purebred dogs, said Dr. Peter Jezyk, adjunct associate professor of medical genetics at the School. Preserving cherished conformation, behavior and athletic traits in dogs often means selecting inadvertently for genetic abnormalities. Fortunately, significant advancements in the diagnosis and management of canine genetic diseases are well under way, and will enable breeders to identify sound stock. Dr. Jezyk discussed the manifestations, diagnostic methods - including metabolic screening, and therapeutic schemes relevant to several types of heritable disorders in dogs.

Whether genetic defects result from numerical alterations or structural rearrangements in the genome, their clinical effects are usually far-reaching within affected individuals.

"Chromosomal aberrations generally are those types of diseases in which there are widespread anomalies and a number of systems are affected," said Dr. Jezyk.

Congenital hypothyroidism, seen in boxers, Scottish deerhounds and giant schnauzers, manifests itself through abnormal facial and body structure, obesity, coat dullness and mental torpor. "Thyroid hormone has a great affect on brain development," Dr. Jezyk said. "And the dullness that these animals show is, in fact, due to the lack of thyroid hormone being synthesized."

Canine hypothyroidism, which may also occur secondary to such diseases as hyperadrenocorticism, is highly treatable through thyroid replacement therapy. These animals should not be bred.

Many toy breeds, particularly Chihuahuas, have suffered from their own popularity. Hydrocephalus, a condition characterized by enlargement of the cranial caused by abnormal accumulation of cerebrospinal fluid within the cerebral ventricular system, is on the rise in toy breeds. Clinical signs include a large, dome-shaped head, flattened face, open fontanel, laterally-directed eye sockets and hypertelorism (over-reaching) in the front legs.

"My theory," said Dr. Jezyk, "is that this is part and parcel of breeding toy dogs. We've actually changed the structure of their cranial bones."

"If it were not genetic, you would see it with the same frequency throughout all breeds. When you see reports from other places around the world of identical conditions, not only does it reinforce that it is, in fact, a genetic condition, but it also gives you some idea of how widespread it is in the population."

Determining that a disease is genetic is half the battle: mapping its mode of inheritance is the other half. Most genetic diseases are inherited as autosomal recessive traits. Affected individuals of both genders have two defective genes as a result of matings of parents who may or may not phenotypically - or clinically - manifest the disorder.

Genetic defects may also result from anomalies on sex chromosomes.

Dr. Jezyk described a study at Penn which examined familial immune deficiency in basket hounds. Since abnormal pups were males who died by four months of age, the researchers concluded that the disease is X-linked and transmitted through heterozygous (1 normal gene, 1 abnormal gene) mothers.

Short-limbed dwarfism, observed in Samoyeds and Labrador retrievers, presents a more complicated scenario. Afflicted dogs typically have shortened, bowed forelimbs, and retinal folds. In a recent study at the School, a breeding of two affected individuals produced eight offspring - four normal pups and four short-limbed dwarfs, only two of which had retinal folds.

Researchers determined the probable mode of transmission to be autosomal dominance with incomplete penetrance, which would explain why individuals with the defective genes were not all affected to the same degree.

"With some of these diseases, it's not so obvious how they're inherited," said Dr. Jezyk. "Until we get better diagnostic methods, we can only make inferences about their mode of inheritance from pedigree analyses."

Canine genetic research presents a unique challenge because dogs' chromosomes are not very distinct. "They're a lot harder to sort out, and there's still no good consensus as to numbering chromosomes in dogs," he said.

And while unanswered questions still abound many of the polygenic disorders - which result from mutations on more than one gene - molecular testing is rapidly being refined for other genetic conditions.

Diagnostic innovations are also being applied to familial metabolic disorders. Clinical manifestations of inborn errors of metabolism in domestic animals typically include growth retardation, facial dysmorphism, skeletal malformations, organomegaly, ocular lesions and neurologic abnormalities.

Type II tyrosinemia, seen rarely in dogs, is manifested by dermatitis, lacklustre hair coat, ulcerated mouth and pads, and ocular tyrosine crystals. It is caused by a deficiency of tyrosine aminotransferase, the enzyme responsible for breaking down tyrosine in the blood.

"Showing this enzyme deficiency is enough to define it as a genetic disease," said Dr. Jezyk.

He added that access to comprehensive growth records is also key. "Growth information is one of the most important factors in diagnosing genetic diseases."

Methylmalonic aciduria, seen in young giant schnauzers, is characterized by growth retardation and general failure to thrive. To diagnose the disease, urine specimens are tested for the presence of methylmalonic acid, an intermediate in cholesterol breakdown. The mechanism for the blockage in the pathway usually involves some defect in the production, transportation or breakdown of vitamin B12. By administering large doses of parenteral B12, methylmalonic acid production has been shown to decrease.

While clinical identification of a genetic abnormality might help an affected individual, it contributes little toward eradicating the disease in the population.

"One of the important things we're doing is working to eliminate the carriers," Dr. Jezyk said. "But we can't..."
Genetic Diseases

Continued from page 7
always tell if an animal is a carrier with an enzyme assay.

The first molecular genetic screening test for a common inherited disease in companion animals has been developed at the School. This routine test uses a genetic probe to identify mutant alleles and recognizes not only affected dogs, but also carriers of phosphofructokinase (PFK) deficiency. Identified in over 50 English springer spaniels, the disorder is inherited as an autosomal recessive trait. Affected dogs, lacking in this important glycolytic enzyme, produce dark urine subsequent to exercise or other physical stress.

Many heritable metabolic diseases, particularly those involving amino acid deficiencies, are treatable with dietary supplements. It is therefore important to identify them early. With gene therapy on the horizon and new genetic probes in various stages of development, we may soon rely on molecular genetics to diagnose and treat genetic diseases, as well as to screen the breeding population to remove carriers from the gene pool.

With financial support from the American Kennel Club (AKC), the Section of Medical Genetics at the School is completing work on the Canine Genetic Disease Information System, a listing of more than 200 canine genetic diseases, their symptoms and modes of inheritance, test and treatment information, and breed prevalence. The system will be available on computer discs in the near future.

J.C.

Making Sense of the Pet Food Explosion

There's one word that sums up today's dog food arena, and that's variety. With over 15,000 products on the market, the consumer faces quite a dilemma in the supermarket pet food aisle. Dr. Kathryn E. Michel, post-doctoral fellow in nutrition at the School, discussed canine nutritional requirements and made recommendations about reading pet food labels. Dismember fact from fiction in some popular marketing concepts and choosing quality foods that suit each dog's nutritional needs.

The six basic classes of nutrients - carbohydrates, protein, fats, vitamins, minerals and water - must be fed in optimal quantities to prevent problems associated with nutrient deficiencies and toxicities.

"These nutrients have to be available in the right amounts," said Dr. Michel. "There's no single exact quantity of any given nutrient that a dog needs every day; rather, there is a broad range. This range can, however, become narrow in certain circumstances...a dog that is sick, a pregnant bitch or a growing pup." Both the state and federal governments regulate the pet food industry. The Food and Drug Administration controls therapeutic claims of manufacturers, and the states - through guidelines established by the Association of American Feed Control Officials (AAFCO) - oversee product nomenclature, label format, ingredients, guarantees, manufacturing practices and other factors relating to pet food quality.

Nutrition profiles now reflect nutrient availability. "Available" nutrients, differentiated from "fed" nutrients, are those which an animal may readily assimilate; this distinction is important because other food components, like starch, fiber and calcium, may alter the availability of nutrients by interfering with their digestibility and absorbability.

Pet food marketers capitalize on things like flavor varieties, nutrient content and the recent appeal of all-natural products, and the consumer who bases product selection on marketing concepts must be somewhat discriminating, said Dr. Michel.

"You've got to decide if (a marketing claim) is based on a scientific concept or if it's a gimmick to get you to buy the food."

Knowledge of how to read pet food labels can be a valuable tool in choosing products. The principal display panel includes the product identity, which is highly regulated. If a product is designated as "chicken," it must contain at least 70 percent chicken. The presence of a modifier (i.e., "chicken platter") indicates that the product is at least 10 percent chicken. "Chicken flavor" merely means that the chicken taste is evident in the food. Other components of the principal display panel include pictorial representation, net weight and manufacturer's name.

The information panel features the nutrition statement, based on either adherence to AAFCO nutrient profiles or results of feeding trials and a statement of that basis. Also included here are the ingredients, listed in descending order by weight.

The guaranteed analysis includes, by percentage, minimum crude protein and fat, and maximum moisture, ash and crude fiber. To obtain the percent carbohydrates, subtract the listed percentages from 100. Compute the total calories from nutrient classes by multiplying the percent protein and carbohydrates by 3.5 kcs/gram and the percent fat by 8.5 kcs/gram; the sum of the three equals the total calories in 100 grams of the food. To figure out the percent protein on an energy basis, divide the total calories from protein per 100 grams by the total calories per 100 grams. Do the same for fat and carbohydrates.

Dogs' nutritional requirements differ from those of human beings. Ensuring their proper nourishment means not only understanding their individual nutritional needs, but also reading between the lines when evaluating dog foods.

J.C.
Canine Emergencies

Dogs can be victims of their environments and prey to their own curiosity. Fortunately, aggressive emergency therapies exist to manage many of their medical crises. Dr. Kenneth J. Drobatz, assistant professor of emergency medicine and director of VHUP's 24-hour Emergency Service, cited some of the common causes of canine emergencies, their mechanisms, treatments and prognoses.

Dogs brought to the Emergency Service are treated on a triage, or medical priority, basis: those with life-threatening conditions are treated before stable patients. Clinicians immediately treat distress in the four major physiological systems - the respiratory, cardiovascular, renal and central nervous system - which may mean deferring treatment of primary clinical signs.

"A dog could come in with a severed leg barely hanging by its skin. That's probably not its most life-threatening problem," said Dr. Drobatz. "The most life-threatening problem is probably the blood loss that has already occurred. If we can stabilize these patients, we can usually save them.

Mucous membranes are evaluated to assess blood oxygenation, and an intravenous (I.V.) catheter is inserted to allow immediate access to the dog's vascular system, should it become necessary to administer emergency drugs or measure blood levels.

A common canine emergency seen with some frequency in larger breeds is gastric dilation and associated volvulus (gastric/intestinal torsion). These patients usually present with abdominal pain and distension caused by gas accumulation. Other signs include retching, restlessness and rapid respiratory rate. Patients are given I.V. fluids, and then the stomach is decompressed, the volvulus is surgically corrected and any necrotic stomach wall is removed. Dr. Drobatz estimates the success rate for these procedures to be between 80-90 percent.

Not always so curable, but quite common - particularly in urban areas - are traumatic injuries. Gunshot wounds and injuries caused by automobiles are treated quite frequently at VHUP. Bite wounds, also seen often in dogs, may offer a deceptive appearance: cutaneous punctures and lesions can downplay the severity of the muscle maceration and tissue necrosis underneath. These wounds must be drained and cleaned thoroughly to prevent abscess formation.

"Any trauma case, no matter how relatively benign it appears, needs to be treated with respect," said Dr. Drobatz. "We monitor the dog for at least 24 hours, the dynamic period. If something is going to happen, it usually happens during this time."

The Emergency Service frequently treats dogs for problems associated with toxin ingestion. Rodenticides with blood anticoagulants seem to be canine delicacies. Dogs that consume rodenticides - or rat poisons - usually present with acute hemorrhage, which may appear as swelling or bruising. Other clinical signs include anemia, tachycardia (increased heart rate) and respiratory distress.

Some of these patients may require intravenous fluid and blood products as well as thoracocentesis if pleural hemorrhage has occurred. Vitamin K therapy is also used as an antidote for the poison.

Hemolytic anemia manifests itself with similar signs. Dogs afflicted with this severe form of anemia, in which the immune system attacks the red blood cells, may present with increased respiratory rate, bounding pulses, lethargy and icteric (jaundiced) membranes. Hemolytic anemia may occur secondarily to medications, vaccines, red blood cell parasites, tick borne diseases, autoimmune diseases or ingestion toxins containing zinc such as galvanized metal objects, sun block and pennies minted in or after 1983. Therapy includes treatment of the underlying cause if found and drugs to suppress the immune system as well as blood transfusion if necessary.

Aspirin, when given in excess, can cause stomach ulcers in dogs. Clinical signs include tarry stool, vomiting and weakness. Patients may be treated with substances that coat the stomach and decrease acid production, as well as and supplements to replace protein depleted by bleeding, and blood transfusions if the anemia is severe.

There is a constellation of canine injuries and illness as treated on an emergency basis. Some, but not all, can be prevented. The Center of Veterinary Critical Care represents the joint commitment of several fields of expertise at VHUP, such as emergency medicine, intensive care and anesthesiology, to managing these emergencies.

Conference Room named in honor of Dr. Detweiler

The department of animal biology honored Dr. David K. Detweiler, professor emeritus of physiology, by naming the department's conference room on the first floor in the Rosenthal Building the David K. Detweiler Conference Room.

Dr. Joseph Spear, professor of physiology and Dr. David Detweiler with a portrait of Dr. Detweiler that was placed in the David K. Detweiler Conference Room.
Editors: Members of the University and Veterinary School community honored Dr. Edwin J. Andrews, V'67, during a reception and dinner on December 15, for his services as Dean.

A portrait of Dr. Andrews was unveiled, has been placed in the newly established Dean's Gallery in Room B101. Also announced was the establishment of the Edwin J. Andrews Center for Student Life. Following is the citation:

**Edwin J. Andrews Center for Student Life**

On behalf of the faculty and students of the University of Pennsylvania School of Veterinary Medicine, this Center is dedicated in honor of Edwin J. Andrews.

Dr. Andrews earned his V.M.D. in 1967 and his Ph.D. in Pathology in 1971 from the University of Pennsylvania. He returned to his alma mater, serving as Dean from July 1987 to December 1993. One of Dr. Andrews' outstanding contributions was the initiation of programs which improved the quality of student life and relieved burden of debt. The Dean's Scholarship Program provides an annual tuition subsidy to designated students. Due to the persuasiveness of Dr. Andrews, the Agriculture Education Loan Forgiveness Act of Pennsylvania was amended to include veterinary students. The Act reduces the loan indebtedness of Pennsylvania residents practicing agricultural medicine within the Commonwealth.

The Edwin J. Andrews Center for Student Life embodies Dr. Andrews' commitment to provide exceptional support services for students. His influence served as a unifying force among the Offices of Academic Affairs, Admissions, Financial Aid and Student Programs.

Dr. Andrews' legacy touches the lives of students through his concern and care for their well being.

**Dedicated this 15th day of December 1993.**

Earlier in the day, the School's Board of Overseers presented a resolution of appreciation to Dr. Andrews:

**Resolution of Appreciation to Dr. Edwin J. Andrews**

October 13, 1993

Dean Edwin J. Andrews came to the University of Pennsylvania thirty years ago as a student in the School of Veterinary Medicine. He received a V.M.D. in 1967, and Ph.D. in 1971 while working as a research fellow in pathology. Dr. Andrews first served as a lecturer and subsequently as an assistant professor at Hershey Medical Center. He then served as an associate professor and Director of Laboratory Animal Diagnostic Resources at Cornell. Immediately before returning to the University of Pennsylvania as dean in July 1987, Dr. Andrews served as vice president of Johnson and Johnson.

At the time Dr. Andrews became dean, the School's annual operating deficit was close to $2 million. By increasing revenues, decreasing expenditures, and renegotiating existing debt, he skillfully achieved balance within three years. When confronted with an even greater period of financial uncertainty as shifts in the political winds threatened to eliminate the School's appropriation from the Commonwealth of Pennsylvania, Dean Andrews successfully directed the School's efforts in restoring vital funds.

During his tenure as dean, he redefined the admissions office and implemented changes which led to a significant increase in qualified applicants to the School. At the same time, increased emphasis was placed on recruitment and searches for first-rate faculty. During the first five years of Dr. Andrews' tenure, the School's endowment increased 102% percent. Modern new facilities were constructed and countless others renovated on both campuses to further aid the research endeavor which led to significant growth in research productivity. The School's service and clinical components were enhanced. Both hospitals maintained large case loads while improvements in diagnostics and therapeutics were reported annually. The
School's vital role in servicing the Commonwealth's agricultural communities was recognized when the School became a full partner in the Commonwealth Diagnostic Commission.

None of Dean Andrews' accomplishments were more valued than his enthusiastic and aggressive support for the improvement in the quality of student life. During his term of office, financial aid increased dramatically, and the highly successful Dean's Scholars Program was established. At the same time, he worked diligently in an effort to have the Commonwealth Assembly enact legislation to enable relief of a portion of the students' financial burden.

RESOLVED, that the Overseers of the University of Pennsylvania School of Veterinary Medicine, on behalf of themselves, the administration, faculty, staff, students, and alumni express to Dean Edwin J. Andrews, a gracious and unassuming man, their appreciation for his tireless and dedicated service on behalf of the University and the School of Veterinary Medicine and they look forward to Dr. Andrews' continued involvement in the School of Veterinary Medicine.

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Centennial Medal for Dr. Deubler

The School honored Dr. M. Josephine Deubler, V'38, by presenting the Centennial Medal to her during a dinner held prior to the Montgomery County Kennel Club show in October, the all-terrier show chaired by Dr. Deubler. Following is the citation:

M. Josephine Deubler, V.M.D., Ph.D.

Brought into this world surrounded by a love of animals and veterinary medicine, you have created in your 70+ years a legacy of love, admiration, respect and awe. Throughout your childhood years at Indian Rock Farm in Newtown, Pennsylvania, you enjoyed riding to the hounds and the challenge of guiding jumpers to a collection of ribbons and trophies.

Your interest in veterinary medicine emerged from a family where your father, brother, uncle and two cousins all became veterinarians. It is no surprise then that in 1938 a young Josephine Deubler joined that list, and became the first female graduate of the School of Veterinary Medicine at the University of Pennsylvania. Not content with this accolade, however, you then obtained a Masters Degree and a Ph.D., to become the first female veterinarian to achieve such distinction at the University. Secure in your new niche, you then enriched the Pennsylvania Veterinary Medical Association as their first member of your gender.

Joining the faculty at the School of Veterinary Medicine as an Assistant Instructor, your research interests focused on important diseases from periodic ophthalmia in horses, to feline panleukopenia, and bovine keratitis. You served your School for 53 years through 5 of its 10 Deans eventually retiring with emeritus status in 1987.

Your real love in life, however, emerged as a breeder, exhibitor and judge of dogs. You owned, bred and showed Smooth Fox Terriers, Kerry Blues, Irish Terriers, Dachshunds and Dandie Dinmonts. YOUR Dandies took Best of Breed at Westminster in 1956, and then took Best of Show honors at the National Specialty for three consecutive years. Now you hold the distinction of being an internationally renowned AKC judge for all terriers, all hounds, both groups and Best in Show.

A caring and giving person, you have served the dog fancy in enumerable ways, including Chairperson of the Montgomery County Kennel Club Show, and Chairperson of the Bucks County Kennel Club Show for over 25 years. A long time contributor to Popular Dogs, your dedication to the fancy never diminished interest in your profession or your alma mater. Steadfastly serving as a Veterinary School class agent, as secretary and historian of the Veterinary Medical Alumni Society, as secretary-treasurer of the Bucks-Montgomery Veterinary Medical Association, as secretary of the Animal Rescue League in Philadelphia, and as a regular contributing editor to the School's news magazine, the Bellwether, you have also been the spark that ensures the success of the School's annual canine and feline symposia.

Through your personal efforts the School is the beneficiary of major bequests, myriad donations, judging fees, and other multitudinous contributions from individuals, foundations, and dog clubs. Your tireless energy and selfless dedication has been recognized repeatedly. On three occasions the coveted "Fido" has designated you as dogdom's Woman of the Year; The Association of Women Veterinarians has presented their Distinguished Service Award; The Veterinary Medical Alumni Association has bestowed on you its Award of Merit; and The Westminster Kennel Club has honored you as a Terrier Group Judge. In 1987 a scholarship fund at Penn was established in your honor and today there are three fully endowed Dr. M. Josephine Deubler Dean's Scholars.

Yet, as much as you have been lauded, you continue to outshine your trophies and awards. So today, The School of Veterinary Medicine at the University of Pennsylvania is privileged to bestow on Dr. M. Josephine Deubler the highest accolade of her alma mater, its Centennial Medal.

October 7, 1993
Dr. Edwin J. Andrews, V'67, former dean of the School, was honored as the 1993 Distinguished Veterinarian by the Pennsylvania Veterinary Medical Association. He was cited for his "outstanding accomplishments in industrial veterinary medicine over the years: for his outstanding services as Dean of the School of Veterinary Medicine from 1987 through 1993; and for his stellar performance in resolving the funding crisis of 1992-93 for the School when its very existence was threatened."

Dr. Gary A. Lavin, V'62, was installed as the 39th president of the American Association of Equine Practitioners during its Annual Convention in San Antonio, TX. Dr. Lavin had been serving as acting president of the AAEP since February 1993, after the death of then AAEP President Dr. Dan Evans.

Dr. J. Clyde Johnson, V'62, was installed as president-elect of the American Association of Equine Practitioners.

Dr. Anne Sylvestre, lecturer in surgery, and Dr. Paul Orsini, staff veterinarian at VHUP, are now Diplomates of the American College of Veterinary Surgeons. Dr. Perry Habeker, V'81, lecturer in pathology, is now a Diplomate of the American College of Veterinary Medicine.

Dr. Mark Huskins, V'69, professor of pathology, has been appointed acting chair of the section of pathobiology. Dr. Huskins received a University Research Foundation award for a project entitled "Gene Therapy in Mucopolysaccharidosis."

Dr. Samuel Chacko, professor of pathology, received a new four-year NIH grant entitled "Sex Hormones and Development of the Urinary Bladder."

Dr. Renate Reimschuessel, V'81, has been appointed director of the Aquatic Pathobiology Center at the University of Maryland in Baltimore.

Dr. Leslie Dierau, V'74, has been named as coordinator of the Playa Lakes Joint Venture. Dr. Dierau is based at the Southwest Regional Office of the U.S. Fish and Wildlife Service in Albuquerque, NM. She coordinates activities of the Service, five state wildlife agencies, conservation groups and others involved in a partnership to conserve playa lakes on the southern High Plains (eastern New Mexico, the Texas and Oklahoma panhandles, southwest Kansas and southeastern Colorado). Established in 1990, the Playa Lakes Joint Venture is working to protect, enhance and restore playas throughout the region, as part of the North American Waterfowl Management Plan - an international effort to restore declining waterfowl populations by restoring crucial wetland habitats across the continent.

Dr. Peter Dodson, professor of anatomy, has been invited to serve on Sigma Xi's 36th College of National Lecturers for a two year term. The National Lectureship Program offers an opportunity for scholars at the leading edge of science and technology to bring their insights and their excitement to diverse groups.

Dr. Wilbur Amand, V'66, retired vice president for animal health at the Philadelphia Zoo, has been honored with the prestigious Emil P. Dolensek Award. This award is presented annually by the American Association of Zoo Veterinarians to one of its members who has made an exceptional contribution to the conservation, care and understanding of captive and free-ranging wildlife.

Dr. Steven Levy, V'77, was named Practitioner of the Year for the American Animal Hospital Northeast Region for his contributions to veterinary medicine while in private practice.

Dr. Irwin Rothman, V'41, professor of psychiatry at the Philadelphia College of Osteopathic Medicine, recently addressed a national meeting of pain rehabilitation specialists during a national meeting on pain therapies held in Philadelphia.

Dr. H. Wesley Towers, Jr., V'68, received a number of honors in 1993. He was named outstanding alumnus by the University of Delaware. Dr. Towers was presented Delaware's Award for Excellence and Commitment to State Service by Governor Tom Carper. Delaware's Department of Agriculture named Dr. Towers Employee of the Year. Dr. Towers has been employed by the Delaware Department of Agriculture for 25 years and has served as the state veterinarian for 24 years.

Dr. Colin Harvey, professor of surgery and dentistry, was presented the Peter Emily Award of the American Veterinary Dental College at the annual meeting of the organization in October. Dr. Harvey was honored for "outstanding contributions to veterinary dentistry."

Dr. James W. Buchanan, professor of cardiology, presented a paper at the American College of Veterinary Medicine annual meeting in Washington. He presented an invited lecture to the Japanese Small Animal Veterinary Association in Gifu, Japan and lectured to faculty and students at Azabu University, Azabu. Japan in July. Dr. Buchanan presented several topics on clinical cardiology at the World Animal Hospital Association meeting in Osaka, Japan in August. In October Dr. Buchanan presented topics at the 12th Annual Meeting of the European Society of Veterinary Cardiology and at the World Small Animal Veterinary Association International Meeting in Berlin, Germany. Later in the month he presented a topic to faculty and students at the Veterinary School in Bern, Switzerland.

Dr. David Kritchevsky, Wistar Professor of Biochemistry, received a Special Recognition Award from the Council on Arteriosclerosis of the American Heart Association for his contributions to the study of arteriosclerosis. A number of faculty and VHUP
staff members gave lectures at the recent Northeast Region Meeting of AAHA, held in Philadelphia in November. On the roster were Drs. Darryl Biery, Mark Saunders, Charles Pugh and Lynn Walker covering radiology topics; Dr. Peter Felsburg spoke on primary immune deficiency diseases and Dr. John Wolfe lectured on molecular medicine and gene therapy; Dr. James Wilson presented management seminars; and Dr. Daniel Brockman, Marcia Finkelman and Jane Cohen lectured in the technician program.

The General Session of the meeting had a preponderance of Penn speakers: Drs. Daniel Brockman, Mary Beth Callan, Margaret Casal, Cynthia Otto, David Holt, Urs Giger, Katharyn Michel, Lesley King, and Gail Smith. Donna Oakley also gave a presentation.

Milissa Cooper, V'96, has been named a Ballard Student by the Morris Animal Foundation; she helps inform her fellow students here about the work of the foundation.

Dr. Peter Hand, V'61, professor of anatomy, was invited to Taiwan, R.O.C. in March to participate, as a member of the nominating committee, in the ceremony of the First LiFu Academic Award in Chinese Medicine, held in Taipei. The three selected LiFu Award recipients were world leaders in the study of the biochemistry of herbal medicines, neurochemical basis of acupuncture, or in the practice and study of the historical perspectives of Chinese Medicine. Dr. Hand also chaired the LiFu Award scientific session on Acupuncture in Neuroscience and was invited to present a seminar for the Department and Institute of Anatomy at National Yand-Ming Medical College in Taipei.

Dr. Adrian Morrison, professor of anatomy, has been chosen president-elect of the Sleep Research Society of the United States. He will assume the presidency in 1995. In October Dr. Morrison delivered the annual John L. Polcyn Lecture at Franklin and Marshall College; the lecture was endowed for the purpose of presenting a current issue in medicine to the college community. Dr. Morrison spoke on the use of animals in biomedical research.

Dr. Grace Karreman, V'82, is in charge of CASH, the Cooperative Assessment of Salmoid Health, a comparative database management system utilized by the British Columbia Salmon Farmers Association.

Dr. Gary Smith, associate professor of population biology and epidemiology, was awarded a four-year grant by NIH/National Institute of Allergy and Infectious Diseases for the study "Development and Mortality of Ixodes dammini ." Dr. Michael Tomasic, lecturer in anesthesia, and Dr. Susan McDonnell, research assistant professor of reproduction, each had their NIH grants renewed.

Dr. Joseph Dlugach, V'45, received the Jean Giono Award, the top honor in MasterCard's Master Planter Awards Program. Dr. Dlugach competed against nominees from 50 states and the District of Columbia and then against three other semi-finalists. The award was established "to recognize individuals who unselfishly give their time and effort to improve the environment through the planting and nurturing of trees and forests." It is presented annually. Dr. Dlugach is an untiring volunteer to preserve the Wissahickon Valley.

Dr. Corinne Sweeney, associate professor of medicine, has been appointed co-chair of the Department of Clinical Studies, New Bolton Center.

Dr. Peter J. Ihrke, V'72, was honored by the American College of Veterinary Dermatology at the annual meeting and was presented the organization's 1994 Award for Excellence for Outstanding Contributions to Science and Education. Dr. Ihrke is professor of dermatology and chief of the dermatology service at the University of California School of Veterinary Medicine.  

Dr. David Galligan, V'81, is presented the Merck Creativity Award by Dr. Carol K. Robertson of Merck, Animal Division.

Clients Honor Retiring Practitioner

Dr. Edward Mikus, V'60, retired from practice recently and to honor this veterinarian, his clients established the Mikus Prize for the School to award for at least three years to a senior student who "exemplifies those qualities most valued by the veterinary profession. These qualities include proficiency in the practice of veterinary medicine and upholding the principles of veterinary medical ethics." The first recipient was Lance Bassage, V'93.
**AKC Rulings on Show Dogs**

A.K.C.'s Dog Show Rules state that "A dog is considered changed in appearance by artificial means if it has been subjected to any type of procedure that has the effect of obscuring, disguising or eliminating any congenital or hereditary abnormality or any undesirable characteristic or that does anything to improve a dog's natural appearance, temperament, bite or gait."

Owners and veterinarians often must decide if a surgical procedure would disqualify a dog from competition, especially with optional surgery.

A list of procedures undertaken strictly to restore the health of a dog which would not, in themselves, render a dog ineligible to compete has been approved by AKC:

1. The repair of broken legs, even if such procedures involve the insertion of pins, plates or wires.
2. The removal of damaged cartilage.
3. The repair of ligaments that have ruptured or been torn.
4. Caesarian sections.
5. The repair of umbilical hernias.
6. The removal of tumors or cysts.
7. Gastric torsion/bloat surgery.
8. Splenic torsion surgery.
10. Correction of "Cherry Eye" (which involves the gland of the nictitating membrane.)
11. Debarking.
12. The removal of dewclaws if a regular practice in the breed.

The following procedures would be considered changes in appearance by artificial means and make a dog ineligible to compete in shows:

1. The correction of entropion, ectropion, trichiasis, or distichiasis.
2. Trimming, removal or tattooing of the third eyelid (nictitating membrane).
3. The insertion of an eye prosthesis.
4. Correction of harelip, cleft palate, stenotic nares, or an elongated soft palate resection.
5. Any procedure to change ear set or carriage other than that permitted by the breed standard.
6. Restorative dental procedures, the use of bands or braces on teeth, or any alteration of the dental arcade.
7. The removal of excess skin folds or the removal of skin patches to alter markings.
8. Correction of inguinal, scrotal, or perineal hernias.
10. Alteration of the location of the testes or the insertion of an artificial testicle.
11. Altering the set or the carriage of the tail.

Of course, the health and comfort of the dog should be a primary consideration. Inherited problems are a growing menace. Show dogs are considered breeding stock and should not have conditions which may be passed on to their offspring. Concealing defects by surgical intervention can only result in deterioration of a breed. AKC's Limited Registration provides for purebred companion animals.

**Portosystemic Shunts**

A portosystemic shunt is an abnormal vein which allows blood draining from the stomach, small intestine, spleen and pancreas via the portal vein to bypass the liver. When an animal is born with this abnormality, the liver does not receive the portal blood necessary for liver development. Liver functions, including maintaining blood glucose, protein and clotting factor synthesis and ammonia metabolism are affected. Increased blood ammonia levels and other changes associated with poor liver function result in clinical signs which include depression, "star gazing," and sometimes seizures. In addition, affected dogs and cats may show gastrointestinal signs and are often "poor doers." The condition is suspected from the clinical signs and the results of blood tests. The diagnosis can be confirmed by contrast radiography, ultrasound, scintigraphy, or surgical exploration. Surgical ligation of the shunt is best treatment. Current research at the Veterinary Hospital of the University of Pennsylvania is focusing on the causes of the neurological signs and the accuracy of ultrasound in diagnosing shunts. Further information may be obtained from David Holt, BVSc. Dr. Holt is assistant professor of surgery at the School of Veterinary Medicine, University of Pennsylvania.

**A.K.C. Statistics**

The American Kennel Club registered 1,422,559 dogs in 1993. The "Top Ten" were Labrador retrievers (first for third straight year), Rottweilers. German shepherd dogs, cocker spaniels, golden retrievers, poodles, beagles, dachshunds, Dalmatians and Shetland sheepdogs.

There were 1,177 All-Breed Championship Dog Shows in 1993 and 18,989 dogs earned the title "Champion."

Other A.K.C. events include...
Tracking, Hunting and Herding Tests as well as Lure Coursing.

The Pomeranian was the most popular Toy Breed in 1993, ranking 11th. Miniature schnauzers, in 14th place, led the terriers.

The American Kennel Club registers 148 breeds and varieties (130 breeds and 18 varieties). There are seven miscellaneous breeds not yet eligible for championship competition.

**American Eskimo Dog**

The latest breed to be admitted to registration in the American Kennel Club's Stud Book is the American Eskimo dog, nicknamed the Eskie. The breed is shown in the Miscellaneous Class and upon full recognition will be in the Non-Sporting Group with the other Nordic breeds (keeshond, Finnish spitz, chow chow and Shiba Inu).

The spitz breeds are characterized by double coats, erect pointed ears, curled tails and wedge-shaped heads. The AED is always white or white with biscuit cream. There are three distinct sizes (measured by height at withers): toy (9 to 12 inches); miniature (over 12 to 15 inches); and standard (over 15 to 19 inches). Sizes under 9 inches or over 19 inches are disqualifications.

The breed standard describes the AED as a loving companion dog. It is intelligent, alert and friendly, although slightly conservative - never overly shy or aggressive. It is an excellent watchdog, sounding a warning bark to announce the arrival of any stranger. It is protective of its home and family, although it does not threaten to bite or attack people. The AED learns new tasks quickly and is eager to please. For show dogs, no trimming of the coat is allowed other than to tidy the hocks and pasterns.

The American Eskimo dog has been a favorite among circus performers. For many years, the only pedigrees some Eskie owners had were for their dogs' circus lineage, including the tricks they performed.

The Non-Sporting Group is a cross-section of breeds whose one important trait is that they are bred to be members of the family. The AED can be considered an ideal all-around family companion.

**Book Review**

**Responsible Dog Ownership** by Kathy Diamond Davis (Howell Book House - MacMillan Publishing Company, 866 Third Avenue, New York, NY 10022. $20.00).

This book could be on a required reading list for every potential dog owner. Anti-dog sentiment and legislation is increasing. People don't know what owning dogs involves, but get them anyway. Too many dogs end up in animal shelters. Dogs provide many benefits and owners should know the principles of responsible ownership.

The author emphasizes the importance of selecting a dog you can handle. So many cute puppies become homeless adults. Chose the right size for capabilities. The advantage of neutering dogs and bitches is discussed. A chapter emphasizes the importance of confinement. A crate can be used in automobiles or in the home. The amount of grooming required for different breeds, as well as expense, is discussed. All breeds require some regular grooming.

Veterinary care, especially for vaccinations, is covered. Many problems can be avoided by daily pick up and disposal of feces - plastic bags are suggested (use like a glove to pick up, turn inside out and tie the top into a knot).

For accidents in the house, use detergent to clean the area and pour on white vinegar to control the odor. Never use ammonia on dog urine because the scent encourages the dog to use the spot again.

A chapter on "When Is It Time To Give Up?" covers common reasons people get rid of their dogs, including the dangerous dog, moving, personal or family problems and health problems.

Training and the Canine Good Citizen Test are important aids in making life better for your dog, your neighbors and yourself.

The book is an excellent guide to help safeguard the person's right to enjoy dogs in our contemporary culture. It contains basic information and is the kind of book that should be available in public libraries.

**International Meetings in Philadelphia**

Drs. Biery and Harvey are both actively involved in the planning of two international veterinary meetings to be held in Philadelphia in August and September.

From August 1 to 7 the 10th International Veterinary Radiology Association Meeting (IVRA) will be held at the Wyndham Plaza Hotel in Philadelphia. The meeting is co-sponsored by the American College of Veterinary Radiology (ACVR) and the School. Following the IVRA meeting, the American College of Veterinary Radiology will have its annual forum on Sunday, August 7. The event offers three seminars: Small Animal Diagnostic Imaging, Large Animal Diagnostic Imaging, and Technical Aspects of Diagnostic Radiology.

For further information on the IVRA meeting and the ACVR forum please contact Dr. Darryl Biery, Section of Radiology, ViUP, 3900 Delancey Street, Philadelphia, PA 19104.

The Third World Veterinary Dental Congress will be held September 30 to October 1 at the Penn Tower Hotel on campus. The meeting is jointly sponsored by the American Veterinary Dental College, the Academy of Veterinary Dentistry and the American Veterinary Dental Society. It will be headquartered at the hotel and use the facilities of the Dental and Veterinary Schools for hands-on laboratory sessions. There will be three days of lectures, seminars, major wet-lab sessions and mini labs, covering small animal, equine and exotic animal dentistry.

For further information, please contact Dr. Colin Harvey, School of Veterinary Medicine, University of Pennsylvania, 3900 Delancey Street, Philadelphia, PA 19104.
Merck Continues Support for Laboratory Animal Medical Training at The University of Pennsylvania

Merck Research Laboratories has provided a second postdoctoral fellowship grant in Laboratory Animal Medicine at the University of Pennsylvania as a part of a growing relationship in laboratory animal medicine between Merck and the University. Dr. James "Buster" Hawkins, a 1978 veterinary-graduate of Auburn University, has been selected and is now in the first year of the program.

This three year Laboratory Animal Medicine training program has been in existence at the University of Pennsylvania since 1987, and 15 veterinarians have participated during that time. The program is designed to develop competence in biomedical research and laboratory animal medicine and prepares candidates for board certification by the American College of Laboratory Animal Medicine. Individuals enrolled in this program complete a one month rotation in the Department of Laboratory Animal Resources at Merck's West Point, PA facility.

The first Merck supported veterinarian, Dr. Laurence Handt, completed the program in June 1993, and received a Master's degree from the University of Pennsylvania for his work investigating experimental Helicobacter pylori infections in nonhuman primates. He now works as a staff veterinarian with Merck’s Department of Laboratory Animal Resources in West Point, PA.

The joint effort by Merck and the University of Pennsylvania is an example of a growing trend of cooperation between the business and academic sectors to foster advanced training in scientific disciplines.

Scholarships


Camille DeClementi, V’94, and Stephen Euler, V’94, are the recipients of the Richard Durr, Jr. Scholarship.

Michele Hurst, V’94, received the Israel and Anna Live Scholarship.

Reina Fuji, V’96, has been selected the Ethel G. and Alan H. Carruth Dean’s Scholar. Three new Dean’s Scholarships have been established from the estate of Irene Moore Husking, the late sister of Dr. Melville Rawnsley, V’38, a co-founder of these scholarships. The scholarships, named the Samuel T. and Emily Rawnsley Dean’s Scholarships, were awarded to Matthew Rice, V’95, Laurie Sponza, V’96, and Lisa Vander Gaag, V’94.

A scholarship from the Mid-Susquehanna Kennel Club was awarded to Harvey E. Hummel, V’95. Blaine Connor, V’95, received a 1994 Pfizer Veterinary Scholarship Award.

The Pennsylvania Veterinary Foundation made four scholarship awards: Lisa A. Heaney-Van der Gaag, V’94, received the Dr. Samuel F. Scheidt Memorial Scholarship; the Dr. Samuel B. Guss Memorial Scholarship was awarded to Elizabeth J. Wade, V’94; Krista A. Price, V’95, is the recipient of the Dr. Palace H. Seitz Memorial Scholarship and Kathleen M. Hall, V’95, received the Trustee’s Scholarship. Jamie DeGarmo, V’95, received a scholarship from the Amlan Foundation.
New Bolton Center benefit at Saratoga raises $100,100

Representatives of A WEEKEND IN OLD SARATOGA presented a check to the School in the amount of $100,100, the proceeds of the successful benefit for New Bolton Center held in Saratoga in August. Monies will be directed for programmatic endowment of the Connelly Intensive Care Unit/Graham French Neonatal Section and equine research efforts at the University of Pennsylvania School of Veterinary Medicine' rural campus.

A WEEKEND IN OLD SARATOGA is a non-profit organization which sponsors carriages in Saratoga each year. This year the weekend benefited New Bolton Center. Participants were treated to a country carriage drive, a drive to a polo match, and a carriage parade at the Saratoga race course. Activities culminated in “An Evening in Old Saratoga,” a black-tie gala and silent auction held at the Gideon Putnam Hotel in the Saratoga Spa State Park on August 9. More than 260 people attended the beautifully designed event and enjoyed the music by Robert Hardwick Orchestra. Prior to the gala, the champagne reception was held at the Saratoga Springs home of Miss Beverly R. Steinman, Lancaster, PA, for benefactors, coaching fellows and patrons.

Chairperson of the board of A WEEKEND IN OLD SARATOGA was Mrs. Lawrence E. Ensor, Jr., of Philadelphia. Honorary chairpersons of the gala were Mr. and Mrs. William C. Lickle, Montchanin, DE.

The gala was ably chaired by Mrs. John R. Landan, Jr., Chester Springs, PA, and Mrs. Edwin J. Andrews, Mont Clare, PA. The silent auction was headed by Mrs. James A. Orsini, Kennett Square, PA, and Mrs. Wylie F.L. Tuttle, Rock Hall Stud, MD. Members of the Gala Committee included such local residents as Mrs. Richard D. Abbott, Cochrangville, PA, Mrs. Kathleen Crompton, and Mrs. Richard J.G. Jones, both of Unionville, PA, Mr. and Mrs. Michael Rapp, Downingtown, PA, assisted the Gala Committee.

The honorary committee for the New Bolton Center benefit included Mrs. Walter M. Jeffords, Andrews Bridge, PA, Mr. and Mrs. Robert P. Levy, Bryn Mawr, PA, Mrs. Harry W. Lunger, Wilmington, DE, Mrs. J. Maxwell Moran, Paoli, PA, Mr. and Mrs. Vincent B. Murphy, Far Hills, NJ, and Mr. George A. Weymouth, Chadds Ford.

New Bolton Center’s George D. Widener Hospital for Large Animals and the Field Service treat more than 25,000 animals annually. Approximately 1,000 of these patients are cared for in the Connelly Intensive Care Unit/Graham French Neonatal Section, which will benefit from the funds raised for programmatic endowment.

The other endowment supported by the event, equine research, assists such basic research efforts as the study of the mechanisms of the equine airway.

“This outstanding event for New Bolton Center would not have been possible without the dedication and hard work of the volunteers, many of whom are active participants in equine sports,” said Dr. Edwin J. Andrews, former dean of the veterinary school.

DEAR ALUMNI:

It is written that “it is better to give than receive.” We who had the opportunity to attend the University of Pennsylvania School of Veterinary Medicine received one of the finest veterinary educations anywhere on this planet.

A cloudy veil has descended on our alma mater that may threaten its very foundation. The events of the past several years - a difficult national economy, recommendations to curtail or eliminate state funding, and the University’s position to close the School if state funding ended - demoralized students, faculty, and alumni.

My answer to these threats is to give back something to our alma mater. I believe the Lord has blessed us as alumni of this fine school and we should all give. I chose to fund, using appreciated assets, a Dean’s scholarship over a four-year period. Now in my third year of funding the scholarship, I have not had to compromise my lifestyle in any way to make this commitment. On the contrary, my pledge enables me to avoid confiscatory capital gains taxes. I encourage you to join me to create permanent endowment funds, generating income in perpetuity, so the School will never again suffer when economic or political winds shift.

Put funding for the Veterinary School in your short and long term goals so that you will help sustain our noble institution.

Sincerely,
Alonzo Edmiston, Jr. V.M.D.,
Class of 1967
Vets’ Role in Equine Airlift

In October 1993 a massive equine airlift from Frankfurt, Germany to New York took place to bring competitors to Gladstone, N.J. for the 1993 World Pair Driving Championship. New Bolton Center veterinarians played a vital role to ensure that the 120 horses from all over Europe were free of disease and could enter the United States with minimal quarantine.

“All the horses had been pre-tested, prior to assembling at Frankfurt,” explained Dr. Elaine Hummel, associate professor of medicine, and a member of the veterinary team. “But because they came from so many different countries and would be kept in close quarters on the plane, it was imperative to be sure that they were free of disease. Of particular concern was piroplasmosis, a tick-borne protozoan disease that destroys red blood cells. It is very rare in the United States and the European strain is quite virulent, so every effort is made to keep it out.” If just one tick had been found by the veterinarians in New York, the entire plane load of horses would have been sent back to Europe. And that would have been the end of the event which was held on in this continent for the first time ever.

Dr. Hummel was accompanied by Drs. Brad Bentz and Amy Dowd, residents at New Bolton Center, and Dr. Barbara Forney, a Chester County practitioner. “We had to examine 120 horses for signs of disease and for ticks. We did that in Frankfurt and in Darmstadt, were some of the animals were stabled. Then, prior to loading, we again inspected for ticks and sprayed the horses lightly with a tick spray. It was very busy.” Did they find any ticks? Yes, one dead deer tick, not the specie that carries the disease.

The horses travelled in two groups on a specially outfitted Boeing 747. Horses were loaded into padded containers especially designed for equine transport. “It took six hours to load the plane,” Dr. Hummel said. In addition to horses, the plane also carried carriages, equipment, grooms and drivers. In New York, everyone and everything was unloaded. The horses were checked by veterinarians and blood was drawn that was shipped to the laboratory at Ames, IA. Special arrangements had been made and test results were available in 24 hours.

Meanwhile the horses had been transported to Gladstone where a riding barn had been converted into a hemi­terically sealed, climate-controlled quarantine station. “The usual quarantine facilities were insufficient to hold that number of horses, so these special arrangements were made to accommodate the animals,” said Dr. Hummel. “Once the results were back, the horses were moved to regular stables. All passed with flying colors.”

VHUP dedicates Hall of Great Living Legends

In Hollywood, the film industry immortalizes its movie greats on the Hollywood Walk of Fame. At VHUP, the newly created Hall of Great Living Legends honors in a similar way those special pets and show animals who mean so much to us.

The Hall of Great Living Legends is located near the examination rooms on the first floor of VHUP. For a gift of $5,000 per pet, VHUP honors each Great Living Legend with a personalized plaque bearing both a photo and a verbal tribute. A gift of $2,500 lists the name of the pet or show champion on a large tree-sharped plaque bearing the names of other small animals honored at this gift level.

The Hall of Great Living Legends was made possible through a gift from Drs. Hillary and Irena Koprowski. The Koprowskis provided the lead gift in memory of their beloved canine companion. Porthos de Bellemour, and his valiant fight for life. His plaque reads: “He was the most faithful friend and companion his masters could have.” The donors attended a special dedication ceremony at VHUP on March 4th to unveil the plaque.

Gifts from the Hall of Great Living Legends Program support the clinical research of junior faculty members, forming the nucleus for a sizeable endowment fund to provide stable, long-term funding for new clinical innovations and treatments.
Special Gifts

The following made gifts to the Dr. William Boucher Memorial Fund:
Ms. Sylvia R. Beeler
Bernard F. Brennan, V.M.D.
Dr. and Mrs. Ralph Brister
Mr. C. John Breyer
Daniel M. Burnside, V.M.D.
Alfred M. Merritt, D.V.M.
Mr. and Mrs. Thomas DeMott
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William E. Riddle, V.M.D.
Mr. and Mrs. Kent Stabili
William Stockman, V.M.D.

Mr. and Ms. Elaine of Mr. Charles A. T. O'Neill:
The following gifts were made to the Bryn Mawr Kennel Club.
Ms. Marie E. Dillon
Doberman Pinscher Club of America
Doberman Pinscher Club of Northern California, Inc.
Mr. Samuel Evans Ewing, 3rd
Mr. Walter F. Goodmann
Mrs. Theresa Lazzaro Hundt
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Mr. J. Council Parker
Mr. and Mrs. H. Donald Putney
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Mrs. Natalie G. Stebbins
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Ms. Rose Triolo
Ms. Linda Ayers Turner-Knorr
Mr. and Mrs. Russell Weeks
Ms. Susan Weiss
Mr. W. Warren Wilson
Ms. Elaine O. Wilson
Mr. and Mrs. Peter Zarba

The following made donations to the Dr. Albert Wagner Memorial Fund:
Doris Sell Emerson, V.H.D.
Mr. David Hopkins
Ms. Majorie J. Kinsley
Thomas S. Kube, D.V.M.

The following gifts were made to the Tamworth Fund in memory of Mrs. Edith Joan Elser:
Dr. and Mrs. Mark W. Allam
Dr. and Mrs. Ruben T. Ritter, Jr.
Mr. and Mrs. Richard J. Flagg
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Mrs. Ruth von Wiesenhal
Mr. A. A. Zimmerman
Mr. and Mrs. Arthur A. Zimmerman

Following are gifts to The Friends of New Bolton Center in honor or in memory of the person listed:
Gift in honor of Mr. Jack Grabosky
by Betty and Jacques Zimmon
Gift in honor of Dr. Leonard Haus
by Ms. Casey Goldston
Gift in honor of Dr. Eric Tulleners
by Ms. Kara M. Tedeschi
Gift in memory of Mr. and Mrs. Dean Bedford
by Mr. and Mrs. John H. Livingston
Gift in memory of Mrs. Ida Evans
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Gift in memory of Ms. Karen A. Giambi
by Ms. Theresa A. Giambi
Gift in memory of Mr. Ralph Goomrigan
by Ms. Marlene Prosky
Gift in memory of Maryann Kuehn
by Marlene and Jeanne Prosky
Gift in memory of Mr. George T. Loutain, Sr.
by Nicholas G. Loutain, V.M.D.
Gift in memory of Mrs. Elizabeth M. Smith
by Ms. Jean H. Stirling
Gift in memory of Mr. Ferdinand R. White
by Ms. Catherine Larmore

The following are gifts to The Friends of New Bolton Center in memory of special animals:
Gift in memory of "NATASHA" and "DRIFTWOOD"
by Mary M. Ball, V.M.D.
Gift in memory of "JIGS"
by Califon Animal Clinic
Gift in memory of "PONCHO" and "WHIRL WIND DECISION"
by John S. Kenney, D.V.M.
Gift in memory of "TIGER"
by Dr. James S. Kuo
Gift in memory of "SPRITIE"
by Ms. Joan Welt


**Philly PAWS**

The PAWS in Philly PAWS stands for Pets Are Wonderful Support. PhillyPAWS was founded to help people with HIV/AIDS in daily and special care of their pets and is modelled after similar organizations in New York and San Francisco. "Pets are very important in the lives of people with HIV/AIDS," explained Dr. Robert Moffatt, V'87, one of the founders of PhillyPAWS. "Without PhillyPAWS many of such people may have to give up their beloved animal companions. We help those we serve to keep their pets with them for as long as possible, at the same time encouraging their pets' good health and comfort. Cats, dogs, birds, fish and rabbits are the animal companions most commonly served."

The group's trained volunteers assist owners in such routine chores as feeding and grooming the pets, walking them, and taking the animals to the veterinarian if needed. They may also provide short-term foster care for animal companions, during periods of hospitalization of their owners.

"The most requested services are monthly food delivery and veterinary care," said Dr. Moffatt. "Right now we have ten area veterinarians and VHUP's Emergency Service participating in the program. Some of the pets are elderly and it is of great importance to their owners to keep them healthy." The veterinarians offer reduced fees for routine and emergency services and some make house calls. "We try to ensure that people with HIV/AIDS can maintain a quality of life, reducing emotional stress and easing the financial burden that often result after a seropositive diagnosis."

Dr. Moffatt, together with Dr. Susan Westmoreland, V'91, at the invitation of SCAVMA, came to VHUP to explain the program and to recruit student volunteers to help. The interest was great and more than 40 students signed up for volunteer positions. But, as the number of animal companions registered with PhillyPAWS increases, more volunteers are needed. Those interested can contact the organization at 1234 Locust Street, Philadelphia, PA 19107.

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**Dr. William Boucher**

Dr. William B. Boucher, V'40, emeritus professor of medicine, died in January, 1994. After graduation Dr. Boucher joined the faculty as assistant instructor in veterinary medicine. He remained on the faculty continuously until his retirement in 1981.

Dr. Boucher's work was devoted almost entirely to teaching medicine and to clinical service in the large animal hospital and field service. He served as chief of medical service. New Bolton Center, from 1967 until 1979. Above else, Dr. Boucher was an outstanding teacher who earned great respect and love from his students.

Beginning in 1940 and continuing until 1968, he was in charge of field services and provided many memorable moments for students on clinical calls to farms. He was especially astute in physical examination and diagnostic procedures.

Dr. Boucher's teaching abilities were recognized in 1968 when he received the Norden Teaching Award and in 1981 when he was the recipient of the prestigious Christian and Mary Lindback Award for Distinguished Teaching. In 1979 The Pennsylvania Veterinary Medical Association selected him as Distinguished Veterinarian. In 1985 the School honored him by renaming the field service the William B. Boucher Field Service.

Over and above his contributions as a teacher/clinician, Dr. Boucher, his wife Doris, and their children are best remembered by hundreds of students for their hospitality. The Boucher home was always open to students, interns, and residents, and especially on holidays provided a "home away from home."

*John E. Martin, V'42*

Contributions in memory of Dr. Boucher can be made to the Doris and William Boucher Scholarship Fund at the School.
Penn Annual Conference

Despite snow, sleet, ice and freezing temperatures, the 1994 Penn Annual Conference was a success. Over 600 veterinarians defied terrible weather and stalled traffic to attend the 94th Conference. A very special thank you goes out to all our loyal alumni, friends and exhibitors who attended.

Copies of the 1994 Penn Annual Conference Proceedings are for sale at $15.00 each. If you wish to purchase a copy, please send your $15.00 check, payable to The Penn Conference to:
Office of Continuing Education, School of Veterinary Medicine, 3800 Spruce Street, Philadelphia, PA 19104.

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Horse and Pony Show at Devon to benefit Vet School

This three-day, Class A horse event on June 27-29th will include a range of activities to entertain and educate the public, including English, Western, Arabian and 4-H equine competition classes; canine events, such as a dog beauty contest and an agility demonstration; jousting knights; and an evening jazz concert. Village Shoppes displaying such unique items as hand-made designer clothing for dogs will add to the occasion. Proceeds from the event will be donated to the School of Veterinary Medicine.

Volunteers are needed to assist with planning the event and also to work during the show. In addition, private sponsors to underwrite events, purchase box seats, and rent booths are welcomed.

For further information or to volunteer, contact Ms. Dolores Swann at (215) 296-8668 or (215) 525-1730.

Support for Veterinary Research

The School of Veterinary Medicine has received funding from the Bernice Barbour Foundation of Hackensack, NJ for two research projects - $25,000 for the study of hyperkalemic periodic paralysis in horses and $19,000 to initiate a severity of disease index scoring system for canine intensive care patients. The Foundation has been a generous supporter of the Vet School, with previous gifts to purchase the Small Animal Hospital bloodmobile and to renovate the Hospital’s in-house blood bank.

Bellwether 36

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We’d like to hear your praise, criticisms or comments. Please address your correspondence to:
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