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A Message from the Dean

In articles and letters discussing those components of our public health system deployed to contain the now all too real threat of bioterrorism, veterinary medicine is rarely mentioned. Yet veterinarians are positioned to contribute to the health and safety of human, as well as animal populations, in uniquely significant ways. Many of the pathogenic agents believed to be candidates for use by terrorists cause disease in animals and/or are carried by animals.



Veterinary epidemiologists study patterns of

disease in animal populations to identify and monitor diseases potentially dangerous to man. In the case of West Nile virus infection, the discovery of dead birds first alerted authorities to the possibility of ensuing human infections and to the need for stringent mosquito control measures.

When, in 1993, the Japanese Aum Shinrikyo cult released anthrax spores in a Tokyo building, there were no human deaths, but several pets succumbed to systemic anthrax, probably from licking their fur or other objects. In contrast to cattle, sheep, horses, and pigs, dogs and cats are not highly susceptible to anthrax. Nevertheless, these examples illustrate how affected animals, if diagnosed early, can serve as sentinels of disease, alerting physicians to the possibility of human infection.

In addition to those viral and bacterial agents of direct public health concern, veterinarians protect our health and welfare by

surveillance, prevention, and control measures aimed at highly contagious diseases that threaten the nation's livestock and poultry industries. The agents of foot and mouth disease, avian influenza, and swine fever, to name a few, if introduced into the United States, would severely damage America's agricultural economy and consumer access to affordable supplies of milk, meat, eggs, and poultry. Large animal veterinary practitioners can thwart acts of agro-terrorism by rapidly communicating suspicious infectious disease patterns to appropriate state and federal diagnostic laboratories and agencies, and by imposing appropriate animal handling and quarantine measures.

We must ensure that the same lines of communication are readily accessible to veterinarians in companion animal practice.

Alan M. Kelly

The Gilbert S. Kahn Dean of Veterinary Medicine

Herb and Ellen Moelis Honored

A gala reception honoring **Herb and Ellen Moelis** was held in a flower-filled marquee adjacent to the Allam House at New Bolton Center on October 25th. The reception was rescheduled from the American Gold Cup in September, when it was cancelled due to the terrorist attacks on the World Trade Center and the Pentagon.

In spite of gusty winds and the threat of falling temperatures, more than 100 people came to celebrate the Moelises, and their many charitable endeavors. In a well-illustrated tribute, Dr. Kelly highlighted Herb and Ellen's efforts on behalf of the School of Veterinary Medicine, Penn's Library, Thoroughbred Charities of America, Freedom Hills Therapeutic Riding program and, more recently, the New York Heroes Fund. Herb, a 1953 Wharton School graduate and a member of the Veterinary School's Board of Overseers, gave a spirited response; but Ellen touched everyone when she recounted how their grandchildren, who the Moelises have been tutoring in the gentle art of philanthropy, spontaneously and unanimously agreed that their own little foundation should support the disaster relief fund in New York following the events of



Betty Moran and Leonard King.



Betty Moran, Herb and Ellen Moelis.



Betty Moran, Allaire duPont, Herb and Ellen Moelis.



Dean Kelly presents Herb with "Ben on the Bench."

September 11th.

Dr. Kelly presented Ellen with a lovely bouquet of flowers, and then recognized the tireless efforts of **Betty Moran** and the **American Gold Cup** for their continued

generous support of New Bolton Center and the School of Veterinary Medicine. Everyone voted the occasion a wonderful evening of fine food, drink and fellowship.

Teaching and Research Building News

Funds for the new **Teaching and Research Building** are growing. Since August, an additional \$2.5 million has been raised for the building. The total funds raised stand at \$32.5 million, representing two-thirds of the estimated building cost of \$48 million.

Several new significant gifts for the new building include:

Mrs. Ethel Carruth, a 1943 graduate of Penn's School of Education, of Houston, Texas made a gift of \$1 million for a laboratory to support the work of the Center for Infectious Diseases and Food Safety Research. Mrs. Carruth and her late husband, Buddy, a 1942 graduate of the Wharton School, have supported the Veterinary School and the University for many years. They established an endowed scholarship, the Ethel G. and Allen H. Carruth Dean's Scholarship, in 1992. Mr. and Mrs. Carruth bred and raised Santa Gertrudis cattle on their ranch in Texas. Mr. Carruth served for many years as president and chairman of the Houston Livestock Show and Rodeo and both were very active with the Houston SPCA.

The late **Mary M. Opsuth** of Trenton, N.J., through her estate, provided at least \$500,000 for a laboratory for medicine clinicians in the new building. This laboratory will enhance the interaction between clinical faculty and researchers in the basic sciences. Mrs. Opsuth was a long-time client at VHUP. She brought her poodles in many times to be seen by Meryl Littman, V'75, associate professor of medicine. Mrs. Opsuth so appreciated the care her pets received by Dr. Littman and the VHUP staff that she made the provision in her will, "Because of and as an expression of my sincere appreciation for the exceptional caring talent of Dr. Meryl Littman in the practice of small animal medicine, and in my memory, I give, devise and bequeath... the remainder and residue of my estate to the School of Veterinary Medicine." Mrs. Opsuth died in 1999 at the age of 89. The laboratory will be named in her memory.

Board of Overseers member, **Patricia Billhardt**, completed her pledge of \$250,000 for a classroom within the new building. Mrs. Billhardt, a prominent boxer breeder and exhibitor, and her husband, Jack, are long-time supporters of the School and have established four endowed scholarship that

bear her name. Billhardt has served on the Board of Overseers since 1996.

Mrs. Emilie deHellebranth, through her estate, contributed \$100,000 for the new Teaching and Research Building. Mrs. DeHellebranth, for many years, enthusiastically supported the work of Dr. Peter Dodson, professor of anatomy. She provided funding for his dinosaur excavation expeditions to Montana and helped underwrite the dig in Egypt that yielded the humerus of *Parallatitan stromeri*, a giant sauropod.

Planning is proceeding for the new Teaching and Research Building as faculty are refining their needs for the much-anticipated teaching and research spaces.

\$48 million goal

\$32.5 million raised



The Teaching and Research Building site is bounded by 38th Street, Woodland Avenue, and Baltimore Avenue.

Veterinary School Buildings in Philadelphia



Quadrangle Building
1907



Gladys Hall Rosenthal Building
1963



Veterinary Hospital of the University of Pennsylvania
1981



Site of Teaching & Research Building Planned Groundbreaking
2003

Keeping Pennsylvania's Food Products Safe

"One in five samples of supermarket ground meat and poultry bought for study was contaminated with Salmonella, and most of the strains were resistant to antibiotics."

(A report on a scientific paper in the *New England Journal of Medicine*, in *The Philadelphia Inquirer*, 10/18/01)

Food safety is very much on everyone's mind. Stories about unsafe foods, food poisonings, and rising antibiotic resistance of organisms, have alarmed the general public. Food is no longer locally produced — the marketplace is stocked with fruits and vegetables from far-away states and countries. Cheeses come from across the continent and Europe. Meat products and fish originate in Europe. Fish and particularly seafood is farm-raised in South America and Asia. The raising, selling and distributing of food is global and this makes it easier for harmful or resistant bacteria to travel from one country to another.

In response to the recent hoarding of antibiotics by the public, there have been many stories about the ability of Salmonella and other organisms to develop into more and more drug resistant varieties. There is an ongoing discussion about drug use in the food animal industry worldwide and about allowing new, powerful antibiotics to be used in the raising of food animals.

Each year, millions of Americans suffer from food borne illnesses. Most cause mild discomfort, but they can be dangerous for immunosuppressed individuals and the elderly. The culprits often are bacteria; *Campylobacter* causes the highest incidence of illness, followed by Salmonella, *Shigella*, and *Escheria coli* H0157. Most *Campylobacter* infections are associated with poultry, large numbers of which carry the microbe. Fortunately this microbe rarely causes outbreaks with sporadic or familial cases accounting for the greatest number of infections.

Is there reason to be worried? "Yes," says **Dr. Charles Benson**, professor of microbiology at the School. "These organisms are all around us. Even if you are a vegetarian, you can get infected by Salmonella as the bacteria can be on the skin of fruit or vegetables grown in a field fertilized with manure compost. Bacteria and other harmful organisms have been in the environment for millions of years and they have survived because they can adapt to changed circumstances rather rapidly."

There are more than 30 antibiotics approved for use in food animals, some of these drugs are also approved for use in humans. Bacteria are exposed to these drugs and develop resistance to them. This resistance may be transferred in bits of DNA from one bacterium to another and between different species of bacteria. Such resistance is then passed on to the next generation and becomes established in the bacteria population.

Salmonella is the focus of the Salmonella Reference Center (SRC) which was established five years ago at New Bolton Center under the direction of Dr. Benson. Actually, the work on Salmonella at the School began many years earlier when it was realized that table eggs could act as a vehicle for the transmission of *Salmonella enteritidis*. **Dr. Robert Eckroade**, associate professor of avian medicine and

background and training in reference and international disease surveillance. **Dr. Donald S. Munro** retired from the Scottish Salmonella Reference Laboratory (SSRL) in Glasgow and joined Dr. Benson's group at New Bolton. He is an authority on the epidemiology of Salmonellae. Dr. Shelley Rankin, also from the SSRL, is experienced in molecular epidemiology.

The Center provides diagnostic and reference service to the PADLS laboratories and serves the needs of individual practitioners within Pennsylvania. The Salmonella isolates samples are typed through a wide variety of techniques, including serotyping, phage typing, and antimicrobial resistance monitoring. In addition, molecular techniques such as plasmid profiling, restriction enzyme analysis of the bacterial genome and other tests are used to understand the dynamics of salmonellae trans-



pathology, and Dr. Benson, conducted many studies to determine how the bacteria could enter the egg prior to being produced by the chicken. They also developed a series of preventive measures that farmers employ to reduce the incidence of Salmonella infection in chicken houses. These measures have greatly reduced the number of infected eggs.

The Salmonella monitoring program that was developed and put in place at New Bolton Center led to the establishment of the SRC which has become a valuable resource, not only for Pennsylvania farmers, but for other agricultural laboratories in the nation. The Center is part of the Pennsylvania Animal Diagnostic Laboratory System (PADLS); funding is received from the Pennsylvania Department of Agriculture, along with grants from USDA, the American Egg Board, and with revenue generated through client services.

The Center is staffed by specialists with

mission. SRC is one of only three laboratories in the United States which has the capability and expertise to provide such a detailed analysis of the samples. "Using this approach, we have been able to achieve a degree of discrimination which has been previously impossible to achieve," says Dr. Benson. "We can not only relate a strain to a given farm, but in some cases we can even identify which barn." The Center also performs services for clients out of state. This yields an enormous amount of research material and generates a healthy income.

Each sample, once it has been completely typed, is deposited in the reference laboratory culture collection together with a complete record of the test data and available descriptive epidemiology. The collection is available to permit retrospective studies to be undertaken at such times as new serotypes appear in Pennsylvania. It represents a unique resource to the

state. "The services provided by the SRC provide an added dimension to the diagnosis and management control of animal associated human infectious disease and economically important animal diseases within the Commonwealth," says Dr. Benson.

One of the important tasks of the SRC is the monitoring of development of antimicrobial drug resistance which poses a major threat to human and animal health. Generally it is perceived that such resistance developed because of the addition of antibiotics to animal feeds, often at low levels, to enhance health and growth of food animals. "Not all antibiotic resistance develops in animals," says Dr. Benson. "This has been clearly established as a result of the work carried out at the SRC. Every isolate submitted to us is tested for resistance to a range of 13 antibiotics of human and veterinary importance. This monitoring allows us to track the development and spread of antibiotic resistance throughout the state." A key conclusion from this surveillance activity is that resistance is not predicated on a simple cause and effect basis. These developments are multifaceted in nature involving a range of complex interacting factors which include indigenous flora/dose/time/feed and the innate ability of the pathogen to change. The effects of these factors only begin to become obvious when large numbers of bacteria are monitored over time. This work has attracted considerable interest, not only within the veterinary microbiology community, but also within human medicine and the pharmaceutical industry because of the implications raised.

The SRC laboratory has a quick turnaround time for samples submitted. Serotype and phage type resistance profile can be provided in 24 hours, core molecular data are available in an additional 24 hours. This becomes important if an outbreak occurs — measures then can be taken quickly to contain it and to begin preventive steps to protect the other animals on the farm.

The SRC researchers also have the skill to take techniques developed for one genus and

adapt them to other genera. This is quite important because there are many organisms that threaten the health of food animals and humans such as *Listeria* and *Leptospira*.

The SRC works closely with the School's Center for Animal Health and Productivity (CAHP) and its field investigators to monitor infectious diseases on farms in the region.

The Commonwealth has in excess of 600,000 dairy cattle and this is one of the state's main, if not the largest, agricultural industries. In a collaborative study of the incidence of Salmonella infection on Pennsylvania dairy farms

the SRC surveyed 100 randomly chosen farms and found that 14% were positive. Mortality in cattle covered by this survey ranged from 1-5%. This indicates that losses due to Salmonella in the Pennsylvania dairy industry could exceed \$6,000,000.

Pennsylvania is unique in that it supports a large number of dual enterprise farms. The SRC recently completed a study to determine the prevalence of *Salmonella typhimurium* DT 104, a particular drug resistant strain, in the environment of a naturally infected dual enterprise farm. The real-time study allowed for quick development of recommendations to reduce the incidence and eventually eliminate the organism from the farm.

In most cases, further outbreaks of Salmonella or other bacterial infections can be prevented by changes in husbandry on the farm. Clinicians from the CAHP make recommendations about disinfection of areas where the animals are housed, about feed handling and rodent control, to help the farmer overcome the problem. Often it takes just a few changes in practices to eliminate the problem.

The SRC collaborates with researchers at other universities and laboratories, the Centers for Disease Control, the National Veterinary Services Laboratory, the National Antimicrobial Monitoring Service and the FDA as well as institutions abroad. The latter is particularly relevant because of the global nature of food production. SRC is working to become a part of the international surveillance network in the



Dr. Charles Benson

field of human enteric diseases. Its collection of more than 17,000 strains of Salmonella from across the United States is a unique asset and enables the laboratory to conduct retrospective studies and monitor the development of resistance to an enormous range of antimicrobial agents.

SRC will be one of the founding members of Vet-Net, a veterinary monitoring service funded by the European Economic Commission, to be established within two years. Dr. Benson and his group are a vital part of PADLS and they are doing their part of keeping the Commonwealth's food supplies safe. One piece of advice from Dr. Benson: "Wash the fruits and vegetables before eating them. Cook meat and eggs thoroughly. Always wash utensils and cutting boards between usage for raw and cooked ingredients. And enjoy your meal!"

Scholarships

The Dr. Ginnie Leiblein Memorial Scholarship and the Westminster Kennel Foundation Scholarship were awarded to **Patty Lathan, V'02**. **Amy Balcerzak, V'05** received a scholarship from the NCAA. **Darah Resh, V'03** received a scholarship from The Lalitta Nash McKaig Foundation. The Barnstable County Agricultural Society, Inc. and The Coondog Scholarship Fund awarded scholarships to **Kate Johnson, V'03**. **Emily Kuprion, V'03** received a scholarship from the Rotary District 7450 Gundaker Foundation. The Armour/Lewis Family Foundation provided scholarships to **Micah Brodsky, V'02**, **Annette LePere, V'02**, **Colleen Kane, V'02**, **Karena Joung, V'03** and **Kimberly Johnston, V'03**. The William Goldman Foundation has provided scholarships to **Gina Cairone, V'03**, **Edward Cooper, V'02**, **Melissa Geedey, V'02**, **Erin Mairs, V'03** and **Karen Oberthaler, V'02**. **Christine Bohn, V'02** is the recipient of the Clifford R. Wright, Jr. Scholarship. **Marcilyn Duman, V'02** was awarded the Iris M. McGee Scholarship. **Danielle Springer, V'03** and **Kathy Heim, V'04** have been awarded Anne Linn White Dean's Scholarships. **Frieda Rest, V'02** is the recipient of the Richard A. Dorr, Jr. Memorial Scholarship.

2001 Rush Shippen Huidekoper Society Dinner

The 2001 **Rush Shippen Huidekoper Society Dinner**, which recognized the University of Pennsylvania School of Veterinary Medicine's most generous donors and friends during the 2000-01 fiscal year, was held on Saturday, November 10, at The Academy of Natural Sciences in Center City Philadelphia. Almost 150 guests enjoyed dining in the shadow of dinosaurs in Dinosaur Hall, and attending a presentation by **Dr. Peter Dodson**, professor of anatomy in the School of Veterinary Medicine and professor of geology in the School of Arts and Sciences.

Dr. Dodson enthralled everyone by discussing the recent dinosaur discoveries by him and his fellow Penn colleagues, including the discovery in 2000 of *Paralititan stromeri*, the second-biggest dinosaur known to have ever lived. This remarkable discovery in Egypt will be featured in a documentary, *The Lost Dinosaurs of Egypt*, which will air on the A&E Network in the fall of 2002.

Named after the first dean of the School of Veterinary Medicine, the Rush Shippen Huidekoper Society recognizes those donors who contribute \$1,000 or above to the School in the fiscal year. The generosity of the School's alumni and friends advances the School's mission to better the health and welfare of animals and humans. The continued support of the School's donors is an important vote of confidence in the School as it continues to build upon its more than 100 years of preeminence in veterinary teaching, research, and service.

For information on becoming a member of the Rush Shippen Huidekoper Society, visit the School's **Alumni & Friends web site** at <<http://alumni.vet.upenn.edu>> or contact Joshua E. Liss at (215) 898-1481 or via e-mail at <lissj@vet.upenn.edu>.



Kenneth L. Bollens, Jr., V'72, and his wife, Lucille.



Dinosaur Hall



Dr. Peter Dodson, who spoke about recent dinosaur discoveries.



From left to right, James Nutt, V'04, James Jasan, Susan Ackermann, and Monica Hawkins. Mr. Nutt is the first recipient of The Jay Jasan Endowed Scholarship Fund, generously supported by James Jasan, and other donors, in memory of his son, Jay, V'93.



From left to right, David K. Detweiler, C'41 V'42 G'49, and his wife, Birthe, and Calvin Moon, V'52, and his wife, June.



Stuart A. Fox, C'50 V'53, and his wife, Claire, CW'46 GR'66.



St. George Hunt, V'86, and his wife, Susan.



Andrew H. Elser, V'87, (left) and several Opportunity Scholarship recipients.

Photography by Jon Adams/hfphotos

First Transgenic Animal Developed via Retroviral DNA Insertion into Male Germ-Line Stem Cells

By Stephen Bradt

Scientists at the School have successfully used a retrovirus to modify genes in spermatogonial stem cells in a mouse — the first instance, in any species, of a transgenic animal created by inserting a gene into male germ-line stem cells.

The inserted gene subsequently appeared in approximately 4.5 percent of offspring of mice transplanted with the altered stem cells, and was transmitted to at least three succeeding generations.

The work was the cover story in the Nov. 6 issue of the Proceedings of the National Academy of Sciences. The findings should enable the creation of transgenic individuals in a wide range of species, permitting scientists to develop research models for study of numerous human diseases.

Led by **Ralph L. Brinster**, Richard King Mellon Professor of Reproductive Physiology at the School, the scientists succeeded in inserting a foreign gene — in this case the common reporter gene lacZ, whose product is the enzyme fl-galactosidase — into 2 to 20 percent of mouse spermatogonial stem cells in laboratory experiments, a tenfold improvement over previous attempts.

“These results indicate that there is no intrinsic barrier to the genetic engineering of spermatogonial stem cells using retroviruses, and that once inserted, the foreign genes will continue to be transmitted and expressed from one generation to the next,” said Dr. Brinster. All male mammals harbor many spermatogonial stem cells, key repositories of genetic material whose daughter cells give rise after puberty to sperm. In the human male, approximately 1,000 sperm cells, each carrying a different combination of genetic material, are generated in this manner with each heartbeat. Whereas the female germ cell, the egg, stops dividing before birth, male germ-line stem cells continue to divide throughout life.

Of the various types of stem cells, only two — spermatogonial and hematopoietic stem cells — can be positively identified using functional assays. This makes them valuable models for other types of stem cells, such as those that

give rise to skin, the lining of the intestines, brain, muscle and liver.

Spermatogonial stem cells are of additional interest for transgenics applications because they are the only cells, including all other stem cells, that undergo self-renewal throughout an animal's lifetime and contribute genes to subsequent generations. Previous attempts to genetically alter this unique type of stem cell, either through retroviruses or other methods, have met with little success.

Brinster's work is unusual in that his transgenic mice were created using cells from male animals. Transgenic animals are generally produced by inserting foreign DNA into cells derived from females, such as oocytes, eggs and blastocysts. Brinster's group has demonstrated that the efficiency of generating transgenic mice through spermatogonial stem cells is roughly equivalent to that of female-derived cells.

“Questions had been raised regarding whether male germ-line stem cells could be transduced with a retroviral vector and whether any gene introduced would be silenced,” Brinster said. “Our work clearly demonstrates that the stem cell can be transduced at relatively high efficiency and expression is not silenced. About 10 percent of stem cells carry active genes that are transmitted for at least three generations.”

Retroviruses are the most common vehicles for introducing genes in human somatic cell gene therapy, and some scientists had expressed concern that this approach might result in genetic alterations to germ-line cells. Brinster's paper indicates that the germ cells are indeed susceptible to insertion of foreign genes via retroviruses, although the somatic cells that surround stem cells in the body most likely provide a protective shield.

Brinster was joined in the work by Makoto Nagano, now at McGill University, and Clayton J. Brinster, Kyle E. Orwig, Buom-Yong Ryu and Mary R. Avarbock, all of the Department of Animal Biology at the School. Their work was supported by the National Institutes of Health, the Commonwealth and General Assembly of Pennsylvania and the Robert J. Kleberg Jr. and Helen C. Kleberg Foundation.

The Veterinary Hospital
of the University of
Pennsylvania School of
Veterinary Medicine

*Presents Symposia for
Owners and Breeders
of Companion Animals*

**Canine
Symposium**
Saturday, January 26, 2002

**Feline
Symposium**
Saturday, March 23, 2002

at the

**Veterinary Hospital of the
University of Pennsylvania**
3850 Spruce Street
Philadelphia

Registration for each symposium is
\$60 per person.

Advance reservations are required.
Seating is limited. For further
information please contact:

Josephine Deubler, V.M.D., Ph.D.
Veterinary Hospital of the
University of Pennsylvania
3850 Spruce Street
Philadelphia, PA 19104

Tel.: (215) 898-8862

For a detailed program, go to
<[www.vet.upenn.edu/comm/news/
2002symposium.html](http://www.vet.upenn.edu/comm/news/2002symposium.html)>

Reservations can be made electronically
by going to the secure website
<[www.vet.upenn.edu/Administration/
businessandfinance/payment/](http://www.vet.upenn.edu/Administration/businessandfinance/payment/)>

Equine Pregnancy Losses in Pennsylvania

The three-year research investigation entitled *Project M.A.R.E.*, funded by the Pennsylvania Department of Agriculture, was completed in June 2001. **Drs. Perry Habecker, Fabio Del Piero, Tanya Lemire** of the Department of Pathobiology at New Bolton Center and Dr. Helen M. Acland of the Bureau of Animal Health and Diagnostic Services, Pennsylvania Veterinary Laboratory in Harrisburg, Pa. were the pathologists representing the Pennsylvania Animal Diagnostic Laboratory System (PADLS) and performing the diagnostic test on specimens. **Dr. Patricia L. Sertich** of the Department of Clinical Studies-New Bolton Center coordinated the project and was assisted by the project research technician **Mr. Steve Kirschner**. **Dr. Raymond C. Boston** performed the data analysis for the project.

At the onset, the study was assigned a name for presentation to the public in order to establish study awareness and memorable project recall. *Project M.A.R.E.*: **M**onitoring **A**bstortions & **R**eproductive **E**fficiency in Pennsylvania would summarize certain aspects of breeding management and determine the causes of late pregnancy loss in mares in Pennsylvania. Horse breeders and equine practitioners in Pennsylvania were solicited for participation in *Project M.A.R.E.* Registration in the study simply required a breeder to complete a survey that inquired about the management of their broodmares. Participation in *Project M.A.R.E.* entitled the breeder to have a diagnostic evaluation and free necropsy of the conceptus of any aborting mare. Participating veterinarians received information regarding the proper submission of samples from any mare that might experience spontaneous abortion. Veterinarians located in remote areas received fetal necropsy kits complete with a directional video, sample vials, and overnight postage. Over 350 breeders and 135 practitioners registered for the project and submitted diagnostic materials from nearly 150 aborting mares. There was a great variation in the number of mares each farm managed (1 to 500 mares) but most breeders had less than 7 pregnant mares. Most (63%) of the farms did not have access to a stallion on their home farm. Greater than 23 breeds were represented in the study with the Thoroughbred (32%), Standardbred (13%) and Quarter Horse (11%) being the most frequent breeds represented in Pennsylvania.

A summary of the many aspects of breeding farm management was made during *Project M.A.R.E.* Breeders seem to be quite successful in getting their mares settled as past pregnancy rates were just over 75%. Although approximately 70% of the farms breed mares by natural cover, around one third of the farms use artificial insemination with fresh semen and slightly more than a third use artificial insemination with transported cooled semen. Only 5% of the farms use frozen semen to breed mares. Over 80% of the mares are examined for pregnancy ultrasonographically and at least 75% of the farms specifically have their mares examined for the presence of twins. If twins are detected an attempt is made to manually reduce them on over 80% of the farms. Some farms allow twins to attempt to regress naturally but as many as 40% of the farms will terminate twin pregnancies with prostaglandin. In the four years preceding *Project M.A.R.E.* the farms participating in the study reported an total average of 29 mares aborting twins each of those four years.

Although two thirds of the farms surveyed breed mares on their home farm, a little over a third of the farms send mares out of Pennsylvania for breeding. For mares being bred off their home farm, both those being bred in Pennsylvania and out of state, only about one third return to their home farm in less than a week after breeding.

Although only about 6% of the farms never vaccinate their broodmares against infectious diseases, most breeders do not provide their broodmares the best opportunity to produce high quality colostrum. Mares are able to produce higher quality colostrum if they are administered their annual vaccinations at approximately one month before their due date. More than half of the mares are administered vaccinations against rhinopneumonitis repeatedly during pregnancy. Current recom-

mendations are to administer rhinopneumonitis vaccine at 3, 5, 7 and 9 months of gestation because the immune protection achieved from vaccination is short lived and needs to be repeated if mares are to be protected against rhinopneumonitis abortion. Three quarters of the farms use a killed virus vaccine against the herpes virus that causes rhinopneumonitis. Unfortunately some mares do not appear to



have adequate immunity as their serum titers were found to be low when routine titers were evaluated during a pregnancy loss diagnostic work-up. Close to a third of the breeders do not utilize any veterinary service in maintaining a vaccination program and instead purchase their vaccines from a mail order service and have a layperson administer the vaccines. Although most breeders regularly deworm their mares during gestation, few took advantage of the effective safe opportunity to deworm just before breeding when there is no risk to the fetus and in the first few days after parturition. There is evidence that “foal heat diarrhea” can be prevented if mares are administered anthelmintics soon after foaling. This will decrease the parasite contamination a newborn foal is exposed to as they are investigating their early surroundings. Two thirds of the broodmares are administered ivermectin and half of all mares may receive pyrantel pamoate during pregnancy. Almost all breeders were careful not to administer vaccinations or anthelmintics during the first month of gesta-

tion when the early embryo is undergoing important organ development. Slightly less than two thirds of all broodmares have an annual Coggin's test performed. Water is supplied to the broodmares on most breeding farms as groundwater from wells or springs. Only 7% use municipal water exclusively for their broodmares.

Fortunately more than 75% of the breeders were able to submit the entire conceptus from mares experiencing a late pregnancy loss. A diagnosis of the cause of pregnancy loss was made two thirds of the time if the entire conceptus was submitted. Unfortunately, if only a necropsy kit was submitted, only half of the time was an etiology determined. Because of this finding, breeders should be encouraged to take the time and make the effort to send the whole fetus and the placenta to the laboratory. When this is not possible though, a necropsy kit submission is still of value. Most mares had no history of problems during their pregnancy and only a quarter of them appeared ill at the time of their pregnancy loss. The presence of premature lactation or early mammary gland development is thought to be an indication of some problem during pregnancy. A third of the mares were noted to have mammary development before spontaneous abortion. Only 11% of the mares had a history of previous pregnancy loss. Just over 10% of the losses were associated with dystocia.

Problems that were associated with the late pregnancy loss are listed in follow table:

Placentitis	17%
Other placental abnormalities . .	18%
Bacteria Infection	12%
Rhinopneumonitis (herpes) . . .	11%
Developmental abnormality . . .	11%
Dystocia	10%
Umbilical cord Abnormalities . .	9%
Twins	2.5%
Fescue	0%
Nocardia Placentitis	0%
Leptospirosis	0%
Equine Viral Arteritis (EVA) . . .	0%
Equine infectious anemia (EIA)	0%

Although vaccination is recommended to help protect mares against abortion due to rhinopneumonitis, the vaccines are not 100% effective. In spite of breeding farms carefully following the veterinary recommendations for frequency of vaccination, vaccine handling and administration some mares still experienced

rhinopneumonitis abortion. It is interesting to note that inadequate plasma titers against rhinopneumonitis were found in some of the vaccinated mares that lost their pregnancy due to some other cause. This information reflects the need to investigate the vaccination protocols that are being used. Prevention of rhinopneumonitis depends not only on vaccination but proper management of the broodmares. Pregnant mares should be isolated from transient horses on the farms and kept in small closed groups. Mares foaling for the first time should be kept separate from pluriparous mares.

Efforts should be made to prevent bacterial infections in mares. Although a diffuse type of placentitis can occur in mares that develop septicemia, the more common type of placentitis



is called ascending placentitis and develops from a local infection of the genital tract. Mares that have poor perineal conformation or lose significant body condition during pregnancy may be prone to developing an infection in the genital tract that slowly moves into the uterus and infects the placenta and may subsequently causes abortion. Changes that occur with placentitis can be detected and monitored by ultrasonographic examination. Keeping the mares in good body condition by providing good quality feedstuffs and moderate exercise can prevent this. An episiotomy or Caslick's Operation can augment the function of the caudal genital tract to prevent contamination and chronic infection of the genital tract. Mares showing signs of placental infection may

be administered antibiotics and agents to help support the pregnancy. These mares need to be carefully monitored at the time of parturition as the inflamed placenta may fail to rupture spontaneously resulting in delayed delivery of the fetus and hypoxia.

Pregnant mares should be examined by palpation and ultrasonography per rectum at least two times before 30 days of gestation to improve the opportunity to detect the presence of twins. Mares found to have twins are best managed by manual reduction of the twins to a singleton prior to 30 days of gestation.

Providing close observation prior to and during delivery can reduce pregnancy losses associated with parturition. Good, frequent communications with the farm's veterinarian will help assure that obstetrical assistance will

be available should a dystocia occur.

Fortunately broodmares in Pennsylvania do not appear to be experiencing significant pregnancy loss due to fescue toxicosis, Nocardia placentitis, Leptospirosis or the Mare Reproductive Loss Syndrome that has been reported in Kentucky this 2001 foaling season. *Project M.A.R.E.* has identified problems associated with pregnancy loss in mares in Pennsylvania. Knowl-

edge of this information can help in the organization of producer educational programs, encourage the use of veterinary services to prevent and treat pregnancy problems, and direct future research projects investigating pregnancy loss. *Project M.A.R.E.* has identified what aspects of broodmare management are being optimally implemented and what areas need to be improved. Veterinarians in Pennsylvania are prepared to provide adequate information and samples to enhance the Pennsylvania Animal Diagnostic Laboratory System's ability to reach a diagnosis. This laboratory and Dr. Sertich encourage continued collaboration with veterinarians and horse breeders in Pennsylvania to **M**onitor **A**bortions & **R**eproductive **E**fficiency in Pennsylvania.

Dr. Adrian Morrison, professor of behavioral neuroscience, was elected President of the World Federation of Sleep Research Societies at its October congress in Punte del Este, Uruguay. Dr. Morrison has been invited to present The Walter C. Randall Lecture on Biomedical Ethics in April 2002 during the American Physiological Society (APS) Experimental Biology meeting in New Orleans, La. Recipients of these Distinguished Lectureships are chosen by the 12 APS Disciplinary Sections as outstanding contributors and representatives of the best research within their field. The Randall Lectureship, sponsored by the APS and Taylor University, promotes integrity in sciences, especially to students in training, and otherwise fosters the highest ethical standards in biomedical research, publication, teaching and interaction with the public sector. Dr. Morrison's lecture is entitled "Developing an Ethical Position on the Use of Animals for Biomedical Research."

Dr. Mark Saunders, V'81, associate professor of radiology, was elected as president-elect of the American College of Veterinary Radiology at the 2001 ACVR Annual Scientific Meeting in Honolulu. He will serve as president-elect for 2001-02 and then move to president for 2002-2003.

Dr. E. Neil Moore, professor of physiology, was elected a Fellow of the American Heart Association and an inaugural fellow of the Council on Basic Cardiovascular Sciences of the American Heart Association.

Dr. Ilana Reisner, assistant professor of behavioral medicine, was an invited speaker at the "Canine Aggression: A Three Day Symposium" in November at the University of Guelph, Ontario. Her talk was entitled "The role of neurobiology and impulsivity in canine aggression. In July, Dr. Reisner was an invited speaker at the AVMA meeting in Boston, and presented a talk entitled, "Anxiety and its role in old dog behavior problems: A no-brainer?"

Barry Stupine, vice dean of the School, has been named Chair of the Human Resources Committee and a member of the Executive Committee of the American Red Cross, Penn/Jersey Region.

Dr. Bernd Driessen, assistant professor of anesthesia, is a diplomate American College of

Veterinary Anesthesiologists (ACVA). He and three colleagues from the University of California presented three abstracts at the Annual Meeting of the American Society of Anesthesiologists in New Orleans in October. Dr. Driessen and his co-investigators Drs. Cheung, Jahr and Gunther at the University of California received a two-year NIH-BRG grant to develop new bioengineering methods for the in-vivo study of blood substitutes. Dr. Driessen, **Lawrence Nann**, anesthesia technician supervisor, New Bolton Center, and **Robin Benton**, anesthesia technician, received a grant from Abbott Pharmaceuticals to conduct a clinical study comparing two inhalant anesthetics in horses.

Larry Nann spoke at the Academy of Veterinary Technician Anesthetists/ACVA Meeting in New Orleans, La., in October. His talk, presented to certified veterinary technicians who perform anesthesia on a regular basis, was titled "Zen and Understanding Your Anesthesia Machine." He also organized and taught a wet

Leslie King, Sarin Sorenmo, and Robert Washabau, V'82 attended the meeting and presented papers.

Dr. Sue McDonnell, adjunct associate professor of reproductive behavior, gave a series of seminars at the AAEP Encore in Philadelphia in July; at the Texas Breeder's Forum, Aubrey, Texas, in August; at New Bolton Center in September; at the Iowa State Veterinary Association in September; at the AAEP San Diego, Ca., and at the Western Equine Reproduction Symposium in Solvang, Ca. in November. **Dr. Katherine A. Houpt, V'63**, of Cornell University and **Dr. Nancy Diehl, V'91**, of Penn State University, co-taught the two day course at New Bolton Center in September.

The **Oncology Service at VHP** was well represented at the 21st annual Veterinary Cancer Society meeting in Baton Rouge, La. **Drs. Jennifer Baez, V'92, Janet Burke, V'98, Craig Clifford, Beth Overley, and Ms. Roxanne Bachman** all presented abstracts at the meeting.

Dr. Billy Smith, assistant professor in clinical studies, presented three lectures at the annual conference of the New York State Veterinary Society in November.

Dr. Jean-Pierre Saint-Jeannet, assistant professor of developmental biology, received a three-year grant from the

March of Dimes Birth Defects Foundation for a project entitled: "Sox9 activity during neural crest development"

Drs. Meryl Littman, V'75, Urs Giger and Paula Henthorn received funding from AKC-Canine Health Foundation for a project entitled: "Longitudinal field studies of soft-coated wheaten terriers affected with protein-losing enteropathy and/or protein-losing nephropathy," and for the foundation of a DNA bank.

The new date for the European Society of Veterinary Neurology meeting in Philadelphia is September 26 to 29, 2002. **Dr. Sheldon Steinberg, V'59**, professor of neurology, is the organizer. The meeting, originally planned for

Rosettes & Ribbons

some recent accomplishments of note at the School

lab on "Veterinary Anesthesia Machines and Scavenging Systems." The meeting was held in conjunction with and with support from the ACVA. Mr. Nann is a member of the Organizing Committee of the AVTA. This organization will hold its first certifying exams for Veterinary Technician Specialist in Anesthesia and Academy membership in October 2002.

Dr. Alexander M. Reiter, lecturer in veterinary dentistry, made six presentations at the 15th Annual Veterinary Dental Forum in San Antonio, Texas in October. **Dr. Colin Harvey**, professor of surgery and dentistry, also gave talks at the meeting. He was appointed secretary of the American Veterinary Dental College.

Dr. Ronald Harty, assistant professor of microbiology, received a five-year grant from NIH/NIAID entitled "Budding of Negative-Sense RNA Viruses."

The School was well represented at the 7th annual FECAVA/FK DVG European Congress in Berlin, Germany in October. **Drs. Urs Giger,**

Dr. Brinster honored



The University of Texas M.D. Anderson Cancer Center presented the 2001 Ernst W. Bertner Memorial Award to **Dr. Ralph L. Brinster, V'60**, Richard King Mellon Professor of Reproductive Physiology. Dr. Brinster was honored for distinguished contributions to cancer research.

The Ernst W. Bertner Award is conferred annually on a physician or scientist who has made distinguished contributions to cancer research. Established in 1950, it is the oldest award conferred by the M.D. Anderson Cancer Center. It is presented at the annual Symposium on Fundamental Cancer Research.

Histologic Classification of Epithelial and Melanocytic Neoplasms of the Skin of Domestic Animals. **Dr. Tom Van Winkle, V'75**, professor of pathology, and Dr. Yvonne Schulman, AFIP, presented three hours on Histologic Classification of Tumors of the Nervous System of Domestic Animals

Dr. Robert Eckroade, associate professor of poultry pathology, traveled to Mongolia for four weeks in April for ACDI/VOCA as a Veterinary Curriculum Development Volunteer to review the curriculum and to aid in designing curriculum and suggesting changes and areas of development. Dr. Eckroade also worked with government level officials and representatives of veterinary associations and veterinary educators to draft the continuing education requirement of a veterinary practice act. Dr. Eckroade traveled to Denver, Colorado in June for a NASDA meeting to evaluate the USDA-APHIS response to foreign disease outbreaks.

Dr. Virginia Reef, professor of medicine, spoke at the World Equine Veterinary Association meeting in Sorrento, Italy in October, the AVEF meeting in Paris in November and presented her fifth ultrasound laboratory at the AAEP meeting in San Diego, Ca. in November

Chung Lee, V'04, has been designated the Morris Animal Foundation's Ballard Student representative. As a Foundation ambassador, a Ballard Student works to educate the student body and the faculty at the veterinary schools about the Foundation's vital role in advancing veterinary medicine

Dr. Reid Groman, lecturer in critical care

medicine, presented eight hours of continuing education seminars at the South American Society for Small Animal Specialists meeting in Montevideo, Uruguay in November.

Dr. Alicia McKnight, resident in radiology, presented a talk entitled "The Feasibility of Standing Equine MRI-Work in Progress" at the Annual Conference of the American College of Veterinary Radiology in Honolulu in August.

Dr. Mark Rondeau, resident in medicine, won first place in the 2001 Eukanuba Veterinary Diets Case Report Competition. Second prize was won by **Dr. David Puerto**, lecturer in surgery.

Dr. Heather DeHeer, staff clinical pathologist, is a diplomate of the American College of Veterinary Pathologists. **Dr. Jennifer Bouma, V'97**, lecturer in radiology, is a diplomate of the American College of Veterinary Radiologists. **Dr. Mark Krecic**, lecturer in medicine, is a diplomate of the American College of Veterinary Internal Medicine.

Drs. Colleen Brady, Deborah Silverstein and Rebecca Syring, all lecturers in emergency and critical care medicine, passed their boards and are now diplomates of the American College of Emergency Critical Care.

Dr. Margaret Sleeper, V'93, has accepted the position of assistant professor of cardiology.

Dr. R. Avery Bennett joined the faculty at VHUP in December as associate professor of surgery.

Dr. Jennifer I. Baez, V'92, lecturer in oncology, is a diplomate of the American College of Veterinary Oncology.

September 2001, had to be postponed.

Dr. Shelly Rankin, assistant professor of microbiology, received a two-year grant from the Commonwealth of Pennsylvania Department of Agriculture to study "Genotypic Characterization of Antibiotic Resistant Salmonella."

Dr. Phillip Scott, professor of microbiology and immunology, received the Bailey K. Ashford Award by the American Society of Tropical Medicine and Hygiene. The award, which recognizes distinguished work in the tropical medicine field, was presented at the annual meeting of the American Society of Tropical Medicine and Hygiene in Atlanta, Ga. in November.

At the First Annual C.L. Davis/AAVLD Diagnostic Pathology Symposium in November **Dr. Michael Goldschmidt**, professor of pathology, presented three hours on

Penn Approved as ECVDI Residency Training Center

The European College of Veterinary Diagnostic Imaging (ECVDI) has recently approved the University of Pennsylvania School of Veterinary Medicine as an official residency training center in diagnostic imaging. The ECVDI is the analogous European organization to the American College of Veterinary Radiology (ACVR).

The University of Pennsylvania is the first ECVDI training center in America. **Dr. Tobias Schwarz**, who is a diplomate of the ECVDI, and **Dr. Jeff Wortman**, who is a diplomate of the ACVR, co-direct the ECVDI residency program.

It is now possible for the School's radiology residents to simultaneously fulfill the requirements to sit for both the ACVR and the ECVDI certifying examinations in the third year of the residency. This ECVDI residency program is another example of the strong European bonds with the University of Pennsylvania School of Veterinary Medicine.

Two first year radiology residents, **Dr. Yael Mosenco** and **Dr. Allison Zwingerberger**, have already enrolled in the ECVDI residency program.

More information about ECVDI can be found under: <http://www.vet.gla.ac.uk/EVDI/ecvdi.htm>

First Molecular Pathway Known to Regulate Rest and Wakefulness

By Stephen Bradt

Working with sleep-deprived fruit flies, scientists at the University of Pennsylvania have uncovered the first molecular pathway, in any species, implicated in the shift between rest and wakefulness.

The findings, from a team led by **Joan C. Hendricks** of Penn's Center for Sleep and Respiratory Neurobiology were reported in the November issue of the journal *Nature Neuroscience*. The work indicates that a *Drosophila melanogaster* gene known as CREB — evolutionarily conserved in species from flies to humans — plays a role in rest's rejuvenating effects, apparently permitting sustained wakefulness.

Anyone who's ever pulled an all-nighter knows by the next morning that sleep is essential, and sleep's status as a behavior found in organisms ranging from fruit flies to frogs to humans underscores its importance as a biological process. But 50 years after the discovery of REM sleep, scientists still know little, on a molecular level, about why sleep is needed and the exact benefits conferred by a daily period of rest.

The Penn researchers say that in addition to offering answers to such fundamental questions, the new work could help improve the efficacy and safety of the ways people alter their sleep patterns.

"If we can get at basic mechanisms of how sleep is normally controlled, and what it does

for us, we can start to think of how to control, manage and improve sleep," said Hendricks, the Corinne R. and Henry Bower Professor of Medicine at the School. "This would be helpful for people subjected to changes in sleep schedules and for people with sleep disorders."

Hendricks' group first described *Drosophila* sleep in a paper published last year in the journal *Neuron*. Rest in flies shares numerous similarities with human sleep, including prolonged immobility, decreased sensory responsiveness and a need to compensate after sleep deprivation. Fruit flies spend about six to 10 hours a day resting, mostly at night.

"The sleeping flies lie prone in a quiet corner, unresponsive to stimuli, for bouts averaging about 45 minutes but sometimes lasting up to two-and-a-half hours," Hendricks said. "These sessions are interspersed with very brief, one- to two-minute interruptions, during which they eat and groom and then settle back down."

The Penn researchers' new findings indicate that the activity of CREB, short for cyclic AMP response element binding protein, is inversely related to the physiological urge for rest. The need for sleep after a phase of deprivation — attained through the mechanical agitation of fly habitats roughly every 15 seconds for as long as six hours — surged in flies whose CREB activity was blocked. In normal flies, CREB activity remains elevated for some 72 hours after such a prolonged period of wakefulness; CREB mutants slumber even longer than normal flies in the aftermath of deprivation.

CREB, which is evolutionarily conserved in species from slugs to mice to humans and

already known to function in cyclic AMP signaling, is also known to play an important role in learning in fruit flies. Hendricks' work could strengthen the link that many researchers believe exists between rest and the consolidation of memory.

The Penn group is continuing its studies of how CREB is turned on, as well as the target genes affected by its activity. They suspect that CREB activation during rest may somehow optimize the function of the central nervous system during waking hours.

Hendricks' co-authors on the *Nature Neuroscience* paper are **Julie A. Williams**, **Karen Panckeri**, **David Kirk** and **Amita Sehgal**, all of Penn, and Marcela Tello and Jerry C.-P. Yin of the Cold Spring Harbor Laboratory in New York. Their work is funded by the National Institute of Heart, Lung and Blood and the Howard Hughes Medical Institute.

Director of Development for VHUP Appointed

Donna M. Carlson has been appointed director of development for VHUP.

Ms. Carlson served as director of development for Eagleville Hospital for three years. Previously she was in several positions over a six-year period at Holy Family

College. She received her undergraduate degree in economics from Holy Family College. Donna owns a great Pyrenees and has been a VHUP client.



Cystinuria Study in the Maned Wolf

Dr. Paula Henthorn, associate professor of medical genetics, received a three-year grant from the Morris Animal Foundation to continue studies of cystinuria in the maned wolf. The maned wolf, a threatened South American canid species, has a high incidence of this hereditary disease that results in cystine stone formation. The study is an extension of the ongoing studies of cystinuria in dogs. The preliminary studies were carried out by **James Kehler, V'02**, a student in the School's V.M.D./Ph.D. program. It is worth noting that **Dr. Kenneth Bovee** studied cystinuria in the maned wolf back in the 1970's and 1980's, and that the Metabolic Screening Laboratory in the Section of Medical Genetics has been providing urine screening for the past 20 years as a service for North American zoos and wildlife sanctuaries that maintain maned wolves. The current studies are an extension these previous studies, and we can now use molecular genetics approaches to understanding the disease.



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Opportunity Scholarship Program Impacts Students *and* Donors

by Joan Capuzzi Giresi, C'86 V'98

For **Diana Chang, V'05**, receiving an Opportunity Scholarship to the University of Pennsylvania School of Veterinary Medicine has been much more than a badly-needed source of financial aid. It has been a sense of gratification.

"It's a great honor because it's like someone reaching out their hand to you to help you along. It's an amazing feeling," says Ms. Chang.

The **Opportunity Scholarship Program** pairs each donor, who commits to giving \$2,500 per year for four years—a total of \$10,000—to a single student, who is selected based on strong academic qualifications and financial need. Since the program's inception in 1998, 40 Opportunity Scholarships have been awarded.

Dr. Charles W. Raker, C'41 V'42, chairman of the Opportunity Scholarship Program Committee, adds that the beneficiaries are "students



The Henry and Mary Nebzydoski Opportunity Scholarship
From left to right, Andrew P. Nebzydoski, V'84, Diana Chang, V'05, and Patricia A. Morgan, V'85.

who we feel would be a credit to the profession and to the alumni of the University of Pennsylvania."

For Ms. Chang, a Taiwanese immigrant who is funding her veterinary education entirely on student loans and scholarships, the award has meant not having to work part-time while in school. Opportunity Scholarship funds have also spared **Mary Ellen Hennessey, V'05**, from having to juggle school and a job. "I need all the time I have to study," she says, "and I know I couldn't do it with a job."

Recipient **Brooke Moore, V'05**, who is also borrowing the entire tuition amount, less scholarships, notes that the financial benefit of her Opportunity Scholarship is far greater than the face value of the funds. "With interest, that

\$10,000 is at least \$15,000 on payback," she says.

Opportunity Scholarships also benefit the School, explains Dr. Raker, by luring competitive students who might otherwise not consider Penn due to its high tuition in comparison to the public veterinary schools. "By offering some scholarship aid, we can maybe turn the tide and have them come to Penn and not go to some other veterinary school."

Scholarship donors may submit preferences for their recipient students, which aids in enhancing the mentoring relationship. For example, Ms. Chang's sponsors, spouses **Drs. Andrew P. Nebzydoski, V'84**, and **Patricia A. Morgan, V'85**, asked that their student recipient be from Northeastern Pennsylvania and be interested in large-animal work.

Each student in the program is also paired with a mentor who is either his or her donor(s) or a faculty member. Dr. Raker, for example, has offered advice on summer jobs in the veterinary field to the student whom he sponsors and mentors. In his mentorship of a second student—whose sponsor is not a veterinarian—Dr. Raker hopes to help the third-year student in his pursuit of an equine residency.

Dr. Suzanne J. Smith, V'82—who, with her husband **Dr. Peter H. Craig, V'55 G'85**, sponsors and mentors Ms. Moore—hopes the student spends some time at Dr. Smith's mixed-animal practice in Milford, N.J. "I hope this is a place she can run to when she needs to get reanchored to where her future is going to lead her in practice," she says.

Drs. Smith and Craig met Ms. Moore at the 2001 Rush Shippen Huidekoper Society dinner, held in recognition of those donors who contribute \$1,000 or more to the School in the fiscal year. The event, held November 10 at the

Academy of Natural Sciences in Philadelphia, also featured a presentation by **Dr. Peter Dodson** on recent dinosaur discoveries.

Dr. David P. Martin, V'66, who met his and his wife's student recipient, Ms. Hennessey, at the dinner, says the scholarship program provides an added benefit to

donors: "It caught my imagination as something that was really neat to see in a single person rather than to just give money that goes into this big nebulous pot."

Craig, who recalls that the tuition cost was just \$165 a semester when he went to veterinary school, is pleased with the opportunity to provide essential tuition assistance to Ms. Moore. "The help she'll get from this will not only benefit her now," he says. "It's really going to launch her future."

As for the future of the Opportunity Scholarship Program, the original 13 scholarship recipients will graduate this year. Dr. Raker and his fellow committee members are already contacting the donors of those scholarships to renew their support, and they hope to add on ten new scholarships this year.

Joan Capuzzi Giresi is a writer and a veterinarian in the Philadelphia area.

For more information or to receive a brochure on the Opportunity Scholarship Program, please contact Joshua E. Liss, Director of Alumni Relations and Annual Giving, at (215) 898-1481 or via e-mail at <lissj@vet.upenn.edu>.



The Martin Family Opportunity Scholarship
From left to right, David P. Martin, V'66, Mary Ellen Hennessey, V'05, and Ulrike Martin.



The Spring Mills Veterinary Hospital Opportunity Scholarship
From left to right, Suzanne J. Smith, V'82, Peter H. Craig, V'55 G'58, Michael Craig, and Brooke Moore, V'05.

Photography by Jon Adams/hispix

VHUP Clinician Serves at Ground Zero

At 1:00 PM on September 11, **Dr. Cynthia Otto**, associate professor of emergency and critical care medicine at VHUP, stopped her hospital routine and became a government employee for nine days. Dr. Otto, a member of the Pennsylvania Task Force 1, one of 28 Urban Search and Rescue Teams in the nation, was “activated” to be deployed to the destroyed World Trade Center complex in New York.

The team of 62 people is trained to deploy in six hours, self sustain for 72 hours, and operate 24 hours a day. The team and the dogs are specifically trained for search and rescue after a building collapse. Teams were established by the Federal Emergency Management Agency to be deployed after natural disasters such as hurricanes and earthquakes. The Pennsylvania Task Force has been in existence for eight years and was first deployed during Hurricane Floyd. A team is made up of search and rescue, medical, technical and logistics personnel. There is no official team position for a veterinarian, but the experience in New York shows how necessary a veterinarian is at a disaster site. The team includes four highly trained search dogs and their handlers, firefighters specially trained for rescue, paramedics and physicians.

“After a delay at the Lincoln Tunnel for a bomb scare, the team arrived at the base of operations, the Javits Center, about midnight,” said Dr. Otto. “We unloaded our two semi-trailers of gear and equipment and set up an impromptu home. By 3 AM we were ready to

go to work.”

Teams at disaster sites are put under the command of the local authorities. Here it was the New York Fire Department. The team was divided into two work groups, the day shift and the night shift. Dr. Otto became part of the night shift because it was decided that local veterinary care would be harder to obtain during the night. Two dogs, Logan, a German shepherd, and Bear, a Labrador retriever, were on the shift. The team had a forward base of operations in the Merrill Lynch Fitness Center at Ground Zero. The space had been damaged, but it was functional. The base was in close proximity to that of the New Jersey team, so Dr. Otto kept an eye on their dogs and other dogs that were in need of care.

“What was a typical night at Ground Zero?” said Dr. Otto. “The night shift would load up on buses or military vehicles for the trip to Ground Zero. The streets were lined with New Yorkers cheering on the workers. It was a powerful way to start a shift. The busiest component of the team was the search component, the dogs and also technical search (using specialized search cameras and listening devices). The dogs would be sent out to the “pile” with the handler. They would search areas of rubble looking for live victims. Although they are trained for “live find,” it soon became evident that the dogs were also able to identify remains of victims.”



A quick nap



Dr. Otto examining a dog in distress

The conditions under which dogs and people worked were dangerous. They had to maneuver on a huge pile of building debris, where gigantic steel beams rested precariously, one on top of the other. They had to watch their footing and be prepared for sudden holes. There was smoke, noise of huge cranes and hauling equipment, dust, and a great variety of odors. Everything was bathed in incredibly bright light from the many high-powered lights on the site. The humans wore masks and protective shoes and clothing. The dogs could not have masks nor could they work in booties — thousands of which had been donated by a well-meaning public — because they needed to feel the terrain with their feet to avoid accidents.

The dogs were constantly called to search and this contributed to dehydration and exhaustion. “I gave a lot of fluids, subcutaneous and IV,” said Dr. Otto. “We tried to rest the



Taking a break with one of the dogs

dogs as much as possible and get them to drink water. These are very intense dogs, they are driven and will work until they drop. So dehydration was a big danger. The other dangers were the dust and the noxious fumes. I rinsed their eyes every 30-45 minutes. Their feet too were washed at that time to flush away the fine dust. I bandaged wounds and treated minor cuts on site. More serious problems were treated by the Suffolk County, N.Y., SPCA van that was used by the Veterinary Medical Assistance Team (VMAT), located about five blocks from Ground Zero.”

The VMAT team is one of four that exist in the nation, these teams are based in Massachusetts, Maryland, North Carolina and California. They are made up of 15 to 20 veterinary personnel. The team also provided a decontamination facility where the dogs were bathed at the end of each shift to remove the dust and debris from their coats.

Dr. Otto said that the rare critical animal was evacuated to the Animal Medical Center, New York City. She said that “Despite all of the risks, the dogs had minimal problems. The biggest problem seen was dehydration, probably a result of overwork. Cut pads were remarkably infrequent despite the sharp debris. The dogs were tired and because they were not finding live victims, they did not have opportunity to play, their normal reward for a find.”

To keep the dogs’ spirits up, the team organized searches in a near-by park. A person would hide and the dog would find it. Then it was playtime. “Many people volunteered to hide,” said Dr. Otto. “It gave them a release and it helped the dogs. The

dogs also became therapists to the many people who worked at Ground Zero. They were petted and talked to, they momentarily distracted people from the horrendous scene. The need for this interaction led to therapy dogs being brought to Ground Zero to interact with the rescue personnel.”

The night shift ended around 8:30 AM when the team was transported back to Javits Center for rest. The dogs went to sleep pretty easily, but the humans did not. They were camped out on the floor, in sleeping bags — it was light, noisy and busy. “We got about three to four hours of sleep each day before we started our shift again,” said Dr. Otto.

The tour of duty ended on September 19th when the Pennsylvania team was relieved by a team from Texas. “It was a hard time, but a powerful time,” said Dr. Otto. “The swell of support from the citizens of New York and the entire

country was incredible. Daily we would receive emails of support, letters from children and encouragement from strangers. The Spirit of America has risen and will not be beaten down.”

There were approximately 350 dogs in Manhattan working at Ground Zero. They made around 900 visits to the mobile VMAT clinic. Some of these dogs belonged to the 21 Urban Search and Rescue Teams deployed there. Five such teams were deployed to the Pentagon site. Dr. Otto observed the conditions at the site first hand and worked in the dust, smoke, and air full of noxious odors coming from a myriad of burning chemicals and substances. The long term effect of such exposure remains to be seen. Dr. Otto has designed a three-year study to follow the dogs who worked at Ground Zero to determine whether the exposure at the site will affect the dogs’ health in the long term. The study will be funded by the American Kennel Club, the AKC Canine Health Foundation, Ralston Purina, and Veterinary Pet Insurance.

These dogs, in addition to their work right after the disaster, may contribute in the future in their role as sentinels for health problems that may be encountered later by the firemen, policemen, the rescue personnel, and the construction workers who worked at the site from the beginning. One can only hope that the effects will be minor and not long term. The study may provide answers in three to four years.



Decontamination

“Renaissance” Vet Offers Perspective on Diverse Career

by Patrick A. Mahaney, V'99

Dr. Sally Walshaw's interest in all animal species has provided her a life of diverse experiences in veterinary medicine. She is currently the acting director of University Laboratory Animal Resources at Michigan State University. Dr. Walshaw grew up in Nebraska, moved to New York as a high school senior, and received her B.A. in biology from Manhattanville College in Purchase, N.Y., in 1966. Dr. Walshaw worked as a lab assistant in biochemistry for the Sloan-Kettering Cancer Institute in New York City, where an advisor suggested she further her education through a master's degree.

In 1968, she received a M.A. in biology from Hunter College in New York City. Dr. Walshaw's graduate work developed her interests in comparative biology, such as species characteristics, physiology, and ecology. Her interest in becoming a veterinarian stemmed from her perception that “veterinary medicine offered a scholarly opportunity and a practical approach to problems in various animal species and ecosystems.”

Dr. Walshaw then pursued a veterinary education as an in-state applicant to Cornell University. According to Dr. Walshaw, a professor on Cornell's admissions committee told her, “you have an excellent academic record, it's too bad that you are a woman.” Although her first choice school rejected her at a time when women were not admitted in large numbers to veterinary school, Dr. Walshaw was Penn's gain in 1971.

As a student, Dr. Walshaw felt that Penn's veterinary program was designed to “give her the best education possible,” and she enjoyed positive experiences through the School's faculty-student mentoring program. She viewed her elective classes and rotations as opportunities to optimize her limited experiences with large animal species. Dr. Walshaw received her V.M.D. in 1975, and completed a small animal internship at Penn in 1976.

Dr. Walshaw explored clinical work at a private practice in Michigan, and then began her long-standing association with Michigan State University (MSU), teaching in the veterinary technology program from 1978 to 1987. In 1987, Dr. Walshaw accepted the position of

training coordinator for the laboratory animal unit at MSU. She views “teaching as a joy and privilege.” Currently, she is an associate professor of small animal clinical sciences, teaching undergraduate, graduate, post-doctoral, and veterinary students to refine their laboratory

Life Sciences, providing services to the undergraduate, medical, veterinary, and nursing colleges. In 2000, she became the acting director of University Laboratory Animal Resources at MSU, involving the management of laboratory animal care. She oversees an outreach program



Photo courtesy of Greg DeRulter, Lansing State Journal

promoting public understanding about laboratory animal medicine through tours of the facilities. As a writer, Dr. Walshaw has co-authored *Manual of Clinical Procedures of the Dog, Cat, and Rabbit*, contributed chapters on Rabbit Behavior and Rabbit Euthanasia in

the *Manual of Rabbit Medicine and Surgery*, and published articles in scientific journals.

Dr. Walshaw lives with her husband, Richard, whom she met during his residency in small animal surgery at Penn. Richard is the section chief of Small Animal Surgery and a professor in the Department of Small Animal Clinical Sciences at MSU. They have a daughter, Patty, who graduated in 2001 from Penn and who is now studying at Temple University to be a psychologist, and a son, Dan, who is in high school. Dr. Walshaw looks forward to retirement, as she hopes to study Spanish and an Asian language. Additionally, she intends on further exploring her interest in all species through hiking and aquatics expeditions.

Dr. Walshaw realized the importance of the human-animal bond among those who enter the field of veterinary medicine. She finds “many aspects of the bond fascinating,” considering that the bond is not exclusive to any particular species. Involved with human-animal bond activities since 1981, Dr. Walshaw has been the secretary for the American Association of Human-Animal Bond Veterinarians since 1997. She also provides presentations on animal death and human emotion for pet owners, veterinarians and veterinary technicians, laboratory animal workers, and animal shelter workers. In addition, she has a strong interest in the humane treatment of laboratory animals.

Dr. Walshaw also is an adjunct professor in the MSU Center of Ethics and Humanities in

the *Manual of Rabbit Medicine and Surgery*, and published articles in scientific journals.

Dr. Walshaw lives with her husband, Richard, whom she met during his residency in small animal surgery at Penn. Richard is the section chief of Small Animal Surgery and a professor in the Department of Small Animal Clinical Sciences at MSU. They have a daughter, Patty, who graduated in 2001 from Penn and who is now studying at Temple University to be a psychologist, and a son, Dan, who is in high school. Dr. Walshaw looks forward to retirement, as she hopes to study Spanish and an Asian language. Additionally, she intends on further exploring her interest in all species through hiking and aquatics expeditions.

Patrick Mahaney is a veterinarian practicing emergency medicine and surgery in Rockville, Md. Patrick lives in Washington, D.C., and enjoys the city's many cultural offerings and yoga studios.

President's Message

I am privileged to have the honor to work on behalf of the School of Veterinary Medicine's alumni as the 2001-03 president of the Veterinary Medical Alumni Society (VMAS). I am a small animal practitioner in the New York City area, and the son of Jack Bregman, V'66.



Eric M. Bregman, V'95,
President, Veterinary
Medical Alumni Society

We have a wonderful group of alumni who serve on the VMAS Executive Board, including several new members who are recent graduates from the 1990s. This year's new members are **Kimberly Dawn Ashford, V'97**; **Stephen P. Butler, V'84**; **St. George Hunt, V'86**, who serves as the alumni representative on the School's Admissions Committee; **Anita Impellizeri, V'97**; **Lori Spencer Mann, V'95**, who serves as the alumni representative on the School's Long Range Planning Committee; **Shannon D. Shank, V'99**; and **James V. Stewart, V'68**, who is president-elect of the VMAS and is the chairperson of the Alumni Liaison Committee.

A new development for the upcoming year is a change in location for Alumni Weekend. The Executive Board is excited to announce that **Alumni Weekend 2002** will be held in Philadelphia exclusively for the first

time in more than six years. A fun-filled day is planned that will include a continuing education course, VMAS Annual Meeting, Alumni Day Picnic, participating in the Parade of Classes, tours of VHUP, and an all-alumni dinner honoring the 2002 reunion classes (years ending in "2" or "7") at the University of Pennsylvania Museum of Archaeology and Anthropology. We hope that all of you will appreciate this change of scenery, and will make plans to join us on Friday, May 10-Saturday, May 11. For more information, see page 21.

The School is experiencing a wonderful period of growth. There are several projects underway, including the renovation of the VHUP wards and the construction of the new **Scott Equine Sports Medicine Building** at New Bolton Center. All of this work, along with the planned new **Teaching and Research Building**, will greatly benefit the education of today's students.

In conclusion, I would like to say that I am very pleased and proud to be working on your behalf for the next two years. We appreciate any input that you may have. Please feel free to contact me via e-mail at <ebvmd@aol.com> with your comments and suggestions. For more information on the VMAS, please visit the School's Alumni & Friends web site at <<http://alumni.vet.upenn.edu>>.

I hope to see many of you at the Penn Annual Conference in January. Have a wonderful holiday season and a happy new year.

Class Notes

1939

Martin H. Ravitch and his wife, Reba, were recently profiled in a San Antonio Community Hospital publication as contributors to the hospital in Upland, Calif., where they have lived since 1976. According to the article, the Ravitches traveled on more than 100 cruises during the 1980s.

1945

Jack K. Robbins, his wife, and their four sons, who are all active in the horse racing industry, received the Commissioner's Cup from the National Thoroughbred Racing Association (NTRA) in November 2001. The Commissioner's Cup is presented annually to honor an individual or group for extraordinary contributions to the NTRA and the Thoroughbred industry. According to NTRA Commissioner Tim Smith, "Jack Robbins has been a key supporter during the NTRA's creation and development, and his family's contributions—whether on the racetrack, in executive offices or in the legal realm—offer further evidence of why this extraordinary family was chosen for this award." Dr. Robbins is a longtime equine practitioner at California racetracks. He is a member of the The Jockey Club and a director of the Grayson-Jockey Club Research Foundation. Dr. Robbins is a past president and a Distinguished Life Member of the American Association of Equine Practitioners.

1956

Elizabeth Atwood Lawrence made a

continued on page 18

Class of 1981 20th Year Reunion

On September 29, 2001, members of the Class of 1981 celebrated their 20th year reunion at the home of **Michael J. Herman, V'81**, and his wife, Janice, in Worcester, Pa. Those in attendance included, from left to right, **Paul V. Marino, V'81**, and his wife, Anna-Ghilaine Schless; **David K. Lukof, V'81**; **Dolores M. Holle, V'81**, **Pamela J. McKelvie-Smith, CW'75, V'81**; **Richard M. Levine, V'81**, **Michael J. Herman, V'81**, **Mark D. Newkirk, V'81**; and **Judith A. Durkee, V'81**.



Class Notes

presentation, "The History of Livestock Projects in Developing Countries," during the annual meeting of the American Veterinary Medical History Society at the American Veterinary Medical Association (AVMA) Annual Convention in July 2001.

1957

M. Phyllis Lose, who has practiced equine medicine for the last 45-years in Bensalem, Pa., and who has authored several equine books, is the owner of Oscar, a small white mixed terrier, who will be starring in a new motion picture, "Crimebusters," to be filmed at Universal Studios in Orlando, Fla.

1958

The Florida Veterinary Medical Association (FVMA) honored **Russell J. Snyder** with a Lifetime Achievement Award at its annual convention in September 2001. The award is given to senior members who have made outstanding contributions to the FVMA and veterinary medicine. Dr. Snyder has been an active member of the FVMA since he joined in 1960, and

has served as president of the Jacksonville Veterinary Medical Society twice.

1960

Walter M. Woolf was also recognized by the FVMA with a Lifetime Achievement Award at its annual convention in September 2001. Dr. Woolf has served as president of the Hillsborough County Veterinary Medical Society and the Pinellas County Veterinary Medical Society. He and his wife, Millie, also own Air Animal, Inc., an animal transportation company. Dr. Woolf has been active in this industry, serving as president of the Independent Pet and Animal Transportation Association, and currently as president of the Animal Transportation Association.

1966

Suzanne Ruch Jenkins received the 2001 Helwig-Jennings Award from the American College of Veterinary Preventive Medicine during its annual meeting at the AVMA Annual Convention in July 2001. The award is given in

recognition of outstanding and prolonged service to the College.

1970

During the Pennsylvania Veterinary Medical Association's (PVMA) Annual Meeting in August 2001, **John I. Enck, Jr.**, was elected President-Elect. He is the Director, Bureau of Animal Health and Diagnostic Services, and Executive Director, Animal Health and Diagnostic Commission, Pennsylvania Department of Agriculture. He also serves as the State Veterinarian.

1974

During the PVMA's Annual Meeting in August 2001, **Theodore B. Robinson** was honored with the 2001 Veterinarian of the Year Award. He was recognized for his dedication and service to the veterinary profession through his work with the Bucks-Montgomery Veterinary Medical Association, PVMA Winter Seminar, and the Crown Point Navajo Indian Reservation in New Mexico.

1977

Sydney Evans was appointed an associate professor of radiation oncology by the University of Pennsylvania School of Medicine in December 1999. She was selected to serve on Penn's Faculty Senate Executive Committee and Medical School Executive Committee in 2001.

1978

Richard S. Freedman is one of 14 new veterinarians to be inducted into Morris Animal Foundation's Veterinary Honor Roll. Honorees are nominated by donors who contribute \$500 or more to the Foundation on behalf of the veterinarian. "These veterinarians were recognized by their clients for providing service over and above what they would typically expect in veterinary care," said Dr. Robert Hilsenroth, executive director of Morris Animal Foundation. Dr. Freedman practices in Charlottesville, Va.

1980

Carol Zoltowski has been recently appointed Vice President, Regulatory Affairs at VIVUS, Inc., a pharmaceutical company engaged in the development of innovative therapies for the

AAEP Annual Convention Alumni Reception

More than 60 School of Veterinary Medicine alumni and their guests attended an alumni reception during the American Association of Equine Practitioners' 47th Annual Convention in San Diego on November 25, 2001. Penn alumni enjoyed the opportunity to renew old friendships and make new ones at the largest equine veterinary meeting in the world. Dean Alan M. Kelly gave alumni an update on recent activities at their alma mater.



From left to right, Dr. Virginia Reef, professor of medicine and chief, Section of Sports Medicine and Imaging, at New Bolton Center, J. Clyde Johnson, V'62, and his wife, Ruth.



From left to right, Dr. Alexandra Konegger; Jack M. Leonard, V'79; and Dr. John Lee, Jr.



From left to right, Dean Kelly, Florence Brennan, and Bernard F. Brennan, V'46.

Class Notes

treatment of quality-of-life disorders in men and women, with a focus on sexual dysfunction. In addition, she continues relief work as a clinical veterinarian in San Francisco.

1985

James A. Thomson, a University of Wisconsin-Madison developmental biologist, was presented with the Wilson S. Stone Memorial Award in October 2001 at the 54th Annual Symposium on Fundamental Cancer Research sponsored by The University of Texas M. D. Anderson Cancer Center in Houston. The award recognizes young researchers who have made outstanding contributions to biomedical sciences in the United States. Dr. Thomson was honored for his pioneering work in the isolation and culture of nonhuman primate and human embryonic stem cells—undifferentiated cells that have the ability to become any of the cells that make up the tissues of the body.

1990

During the PVMA's Annual Meeting in August 2001, **Michael R. Moyer** was elected Vice-President. He owns Bridgewater Veterinary Hospital, a companion animal practice, in Cornwells Heights, Pa.

Share news with your classmates

about a new position or accomplishment, wedding or birth announcement, by sending your class note today! We accept pictures, too, featuring alumni gatherings, whether it's from a wedding or mini-reunion. Be sure to identify everyone in the picture. Pictures will be returned only upon request. Send all your submissions to:

Joshua E. Liss
 Director of Alumni Relations
 and Annual Giving
 University of Pennsylvania
 School of Veterinary Medicine
 3800 Spruce Street
 Philadelphia, PA 19104-6047
 Fax (215) 573-3544
 E-mail <lissj@vet.upenn.edu>

1993

Alexandra L. Chisolm-Chait has become board-certified in Internal Medicine-Small Animal by the American College of Veterinary Internal Medicine. Dr. Chisolm-Chait practices at the Pet Emergency & Specialty Center in La Mesa, Calif.

1995

Mary A. Bryant was elected to a three-year term to the American Veterinary Medical Foundation (AVMF) Board of Directors at the AVMA Annual Convention in July 2001. To advance the care and value of animals in society, the AVMF distributes nearly \$1 million annually in support of student financial aid, scholarships, disaster relief, animal studies and other initiatives. Dr. Bryant is an associate veterinarian at the Wilmington Animal Hospital in Wilmington, Del. She also serves as staff veterinarian and veterinary advisor to Eden Alternative, a program that incorporates pets, children, and plants into nursing home facilities.

1997

Jennifer Chaitman has become board-certified in Internal Medicine-Small Animal by the American College of Veterinary Internal Medicine. Dr. Chaitman practices at Veterinary Internal Medicine and Allergy Specialists in New York City.

1998

Heather Peikes has become board-certified by the American College of Veterinary Dermatology. Dr. Peikes practices at Veterinary Internal Medicine and Allergy Specialists in New York City.

Births

1994

Elizabeth Boucher Miquel, a daughter, Lucienne, on July 26, 2001.

1999

Jennifer A. Morris, a son, Charles John, on July 19, 2001.

Deaths

1935

Elwood G. Forder on April 14, 1999.
Arnold M. Snyder on September 19, 2001.

1937

James G. Eagelman on August 12, 2001.

1940

Roy S. Harry on October 30, 2001.

1941

Bertrand B. Dionne on October 11, 2001.

1946

Marvin Alexander on July 24, 2001.

1950

Edward D. Bubser on June 16, 2001.

1951

William V. Gallery on October 8, 2001.

1952

Edward P. Newman in October 2000.

2002 Penn Annual Conference

The 102nd annual continuing education conference for veterinarians and veterinary technicians will be held on January 30 and 31 in Philadelphia.

Visit the web site and print the conference brochure:
 <<http://alumni.vet.upenn.edu/pennannualconference.htm>>

2001 Alumni Award of Merit Nominations Sought

Nominations are being sought for three recipients of the 2002 Alumni Award of Merit, which will be presented at the Veterinary Medical Alumni Society (VMAS) Annual Meeting during Alumni Weekend 2002 on May 11. The VMAS honors alumni who have made outstanding contributions to their profession and the School with the Alumni Award of Merit. The award is given annually to recognize distinguished graduates for their contributions that advance knowledge in biomedicine, promote the welfare of animals through public education of animal owners, and benefit society through civic activities

which foster the advancement of the profession and the School's good name.

Eligible 2002 recipients are members of the classes that end in "2" or "7," and who will be celebrating a five year reunion during Alumni Weekend 2002. Members of the VMAS Executive Board will select the recipients from the pool of nominees. Nominations are due **no later than January 25, 2002**.

For more information or if you have any questions, please contact Joshua E. Liss, Director of Alumni Relations and Annual Giving, at (215) 898-1481 or via e-mail at <lissj@vet.upenn.edu>. For a list of previous

Alumni Award of Merit recipients, please visit <<http://alumni.vet.upenn.edu/alumniawardofmerit.htm>>.

To make a nomination, please send a letter explaining your reasons to:

Joshua E. Liss
 Director of Alumni Relations and
 Annual Giving
 University of Pennsylvania
 School of Veterinary Medicine
 3800 Spruce Street
 Philadelphia, PA 19104-6047

Alumni Connections

To find a former classmate and to sign-up for a permanent e-mail forwarding service:

Join the University of Pennsylvania Alumni On-Line Community for free at <www.alumniconnections.com/olc/pub/UPN>. After you register, you can search the On-Line Directory, which is a great resource for personal and professional networking and an easy way to keep up-to-date on fellow alumni. You can also sign-up for a permanent e-mail forwarding service, which will forward messages received at your permanent Penn address to the e-mail address of your choice.

To update your alumni record:

You can update your record via the University of Pennsylvania Alumni On-Line Community On-Line Directory. You may also contact Elizabeth McNamara at (215) 898-1481 or via e-mail at <emcnamar@vet.upenn.edu>.

To make a gift or for information on supporting the School of Veterinary Medicine:

Make a gift with your credit card through a secure online transaction at <www.upenn.edu/gifts>. For information on supporting the School, visit the Alumni & Friends web site at <<http://alumni.vet.upenn.edu>> or contact Joshua E. Liss at (215) 898-1481 or via e-mail at <lissj@vet.upenn.edu>.

To request a transcript and/or proof of graduation:

For information on requesting a transcript, visit the Office of the University Registrar's web site at <www.upenn.edu/registrar/trans.html> or call (215) 898-7511. For information on requesting a certification of graduation, which does not require a transcript, contact the School's Office of Student & Curricular Affairs at (215) 898-3525 or via e-mail at <student-affairs@vet.upenn.edu>.

To obtain a Penn Alumni Card:

The Penn Alumni Card offers a myriad of benefits, including access to the Penn Libraries. The charge for the card, which is valid for 10 years, is only \$20. Alumni Cards are issued at the PennCard Center, which is located in the Franklin Building at 3451 Walnut Street. In order to receive the card, alumni are asked to show a form of photo identification (a valid driver's license, passport, etc.) and complete an Alumni Card Request Form. It then takes only a few minutes to take a photo of the alumnus/alumna and for them to receive their Alumni Card. As an added convenience, alumni can also obtain an Alumni Card by mail. For more information or to download a request form, visit the "Obtaining a PennCard" web page at <www.upenn.edu/penncard/obtaining.html>.

Alumni Relations and Annual Giving Staff:

Joshua E. Liss
 Director of Alumni Relations and Annual Giving
 (215) 898-1481
 Fax (215) 573-3544
 E-mail <lissj@vet.upenn.edu>

Elizabeth McNamara
 Annual Giving Coordinator
 (215) 898-1480
 Fax (215) 573-3544
 E-mail <emcnamar@vet.upenn.edu>

Please address any correspondence to:
 Office of Development and Alumni Relations
 University of Pennsylvania
 School of Veterinary Medicine
 3800 Spruce Street
 Philadelphia, PA 19104-6047

Alumni Weekend 2002

Tentative Schedule of Events
Friday, May 10—Saturday, May 11
Philadelphia



Photography by Jon Adams/rhphotos

Friday, May 10—Begin Alumni Weekend 2002 by going back into the classroom!

2:00-3:00 p.m. **Alumni Weekend 2002 Classes Without Quizzes Presentation**
“My Pet Has Changed: Understanding Aging-Related Behavior Changes in Dogs and Cats”
 by Dr. Ilana R. Reisner, Assistant Professor of Behavioral Medicine and Director of the Behavior Clinic at the Veterinary Hospital of the University of Pennsylvania
 Houston Hall, Golkin Room, 3417 Spruce Street
Learn how to deal with your aging pet from Dr. Ilana R. Reisner, a board-certified veterinary behaviorist. With improved nutrition and medical care, the life expectancy of our pets has been rising. Hear about the current understanding of dementia in dogs and cats, and updates on the research and management of this common problem. Time will be reserved for questions and answers.

Saturday, May 11—Make it a day on the School's Philadelphia campus!

8:30-10:00 a.m. **Continuing Education Course (E.R. Marookian, V.M.D., Auditorium, VHUP)**
Topic to be announced

10:30 a.m.-12:00 p.m. **Veterinary Medical Alumni Society Annual Meeting (Marookian Auditorium)**
See your Alumni Society at work, and watch the presentation of the 2002 Alumni Award of Merit to three graduates celebrating a class reunion in 2002

12:00-2:30 p.m. **Alumni Day Picnic (Hamilton Village, across Spruce Street from the School)**
Enjoy a buffet-style luncheon with alumni, special activities will be available for children at Kid's Corner

2:30-3:30 p.m. **Parade of Classes (Locust Walk)**
Show your school spirit by participating in one of Penn's favorite traditions

3:00-4:30 p.m. **Tours of VHUP, Philadelphia Research Facilities**

5:00-6:30 p.m. **Deans Alumni Reception (University of Pennsylvania Museum of Archaeology and Anthropology, 33rd & Spruce Streets)**

6:30 p.m. **Alumni Dinner Honoring the 2002 Reunion Classes (years ending in “2” or “7,” University Museum)**

Make your hotel and travel plans early!
 For your convenience, rooms have been reserved throughout Philadelphia for alumni attending Alumni Weekend 2002. To make your reservations, contact Fran A. Engelbach, CW'62, at Monarch Travel Services, Inc., at (215) 557-7177 or toll-free at (800) 458-7177.

A brochure with registration information will be sent early in 2002. For more information on Alumni Weekend 2002, please contact Joshua E. Liss, Director of Alumni Relations and Annual Giving, at (215) 898-1481 or via e-mail at <lissj@vet.upenn.edu>.

A call for NBC memories

New Bolton Center celebrates its 50th birthday in 2002.

We are collecting stories and reminiscences about New Bolton Center.

Share your New Bolton Center memories with us. We would like to hear from those of you who were at New Bolton in the last five decades.

Please send your "memories" to Jane Simone via email

<jsimone@vet.upenn.edu> or via mail to her at New Bolton Center, 382 West Street Road, Kennett Square, PA 19342-1692

Expanded Services in Medical Genetics

Dr. John Melniczek, V'92, post-doctoral fellow in medical genetics, re-joined the clinical staff of the Section of Medical Genetics and has been assisting Drs. Urs Giger, Margret Casal and Hamutal Mazrier in expanding the clinical and laboratory services offered to VHUP clinicians and referring veterinarians.

Along with a strong clinical and research background in the field of medical genetics, he brings with him a great interest in identifying and correcting, where possible, canine and feline reproductive problems, and in assisting owners in pediatric care and genetic counseling. Artificial insemination will now be available in canine infertility cases that the primary clinician believes could benefit from such a procedure.

Dr. Melniczek will also be available to answer questions regarding the Section's four laboratories: the metabolic screening laboratory

which seeks to identify patients that might have inherited metabolic disorders; the hematology laboratory that provides assistance in identifying blood compatibility products for patients through the blood bank, and in the identification of canine and feline blood disorders; the cytogenetics laboratory that identifies patients who have disorders of sexual development; and the newest laboratory, the Josephine Deubler Genetic Disease Testing Laboratory, which has been identifying carriers and affected animals for a variety of breed-specific genetic diseases in cats and dogs.

To inquire about referrals for patients with reproductive, pediatric, or genetic problems, or to ask questions about the services provided by the laboratories, Dr. Melniczek and the rest of the Section of Medical Genetics' staff can be reached at 215-898-4680 or at <http://www.vet.upenn.edu/pengen>.

Join the Pet Memorial Program

Established in 1982, the **Pet Memorial Program** has grown from a handful of veterinarians to a large group of practitioners across the country who make gifts in memory of clients' pets. The funds raised enhance teaching and service, which in turn helps the Veterinary Hospital of the University of Pennsylvania (VHUP) provide the best veterinary care for its companion animal patients.

Those veterinarians who participate in the Program agree that it is an excellent client relations tool, and they have received wonderful


responses from their clients upon being informed that a gift to VHUP has been made in memory of their pet. If you do not already participate, you are encouraged to do so.

The Program has been recently reviewed to make it more efficient for both the School and the participating veterinarians. Beginning on January 1, 2002, notification cards will be sent by veterinarians instead of the School. This decision was made in consultation with several of the participating veterinarians, and will

streamline the administration of the Program.

For each tax-deductible contribution of \$100 to the School, participating veterinarians will receive 10 note cards to send to their clients. Not only will this support enhance their client relations' efforts, it will help to maintain VHUP's standard of excellence.

For more information or for card order forms, please contact Elizabeth McNamara, Annual Giving Coordinator, at (215) 898-1480 or via e-mail at emcnamar@vet.upenn.edu.

	A contribution to the University of Pennsylvania School of Veterinary Medicine has been made by

	in memory of

<small>One of the largest and most advanced companion animal teaching hospitals in the world, the Veterinary Hospital of the University of Pennsylvania (VHUP) sees more than 26,000 patient visits a year, including more than 9,000 through the Emergency Service. As part of the University of Pennsylvania School of Veterinary Medicine, VHUP is at the forefront of training students and veterinarians in the diagnosis and treatment of animal diseases. For more information on VHUP, visit the School of Veterinary Medicine's web site at <www.vet.upenn.edu>.</small>	<small>This donation supports the Veterinary Hospital of the University of Pennsylvania, a leader in the development of new treatments and technologies to improve the health and care of companion animals.</small>

Blood Bank Helps Bleeding Puppy

Binni, a 10-month-old Chihuahua, was referred for treatment to the pediatric and genetic service at VHUP by Trooper Veterinary Hospital in Norristown, Pa. The dog had developed a large, painful hematoma over his back caused by hemophilia, a common, severe, hereditary bleeding disorder that affects males. Transfusion of clotting factors can stop the bleeding and be life-saving.

The **Penn Animal Blood Bank (PABB)** collects and prepares thousands of units of blood products each year for VHUP's patients. The blood and blood products are typed and carefully screened for known and emerging infectious diseases to prevent transmission of such diseases to patients.

Blood consists of two portions: a liquid portion, called plasma, and a cellular portion, consisting of red blood cells, white blood cells

and platelets. Each cellular component has its own function within the body: red blood cells are responsible for carrying oxygen from the lungs to all vital tissues and organs, white blood cells help the body fight infection, and platelets are a necessary part of the body's clotting mechanism. Plasma acts as a carri-



Binni with a huge hematoma.

Giving and Receiving

Would you consider a charitable gift of \$10,000 or more if you could retain an income interest in assets that you give away?

We are pleased to offer several philanthropic plans that let you do just that.

Charitable remainder trusts offer outstanding planning flexibility, with **rates starting at 5%**.

Charitable gift annuities offer guaranteed fixed income for life at **rates of 6% to 9.5%** (may be higher if you defer income).

All of Penn's **Life Income Gift Plans** offer you:

- Current income tax deduction
- Significant capital gains tax savings
- Guaranteed income for life or a term of years
- Option to defer income for higher income and deduction
- No management fees for gift annuities, low fees for trusts
- Enduring support for the School of Veterinary Medicine, VHUP, or New Bolton Center

For more information or a personalized illustration with no obligation, call Penn's Office of Gift Planning at **800-223-8236** or email <planned_giving@ben.dev.upenn.edu>. Be sure to mention the *Bellwether*.

Life income gifts may be funded with cash, marketable securities, or other assets in some cases. Income may be current or deferred. Rates and deductions vary with age and number of income beneficiaries and the timing of the gift. Penn gift annuities are not available in all states. Minimum gift amount is \$10,000 for charitable gift annuities and \$100,000 for charitable remainder trusts. Thank you.

er system for these cells, as well as many important proteins, vitamins and nutrients.

When a unit of blood is collected from a donor, all of these components are represented, and the blood is referred to as whole blood. In most cases, a seriously ill animal does not need whole blood but just one or two components. Therefore, the PABB nursing staff, after returning from volunteer canine blood drives in the Delaware Valley, separates the blood into its components with the help of technologically advanced equipment. "One unit of collected blood benefits more than one patient," says Donna Oakley, director of PABB and VHUP nursing. "A patient can be treated specifically with only the component needed. This reduces the risk of adverse reactions." Some of the blood components can be stored for a month and others for one year and are immediately available in an emergency. Because of the large size difference between dog breeds, blood units of different sizes are needed. "Although we are applying blood banking standards from human medicine, we had to develop comparable methods for our small patients, such as toy breeds and cats," says Wendy Hatchett, another PABB nurse.

Binni needed to be transfused with a small unit of plasma twice daily for a couple of days to achieve resolution of the hematoma and further healing. Because hemophilia is a hereditary disorder, it is likely that Binni will have recurrences. Specific small units have been prepared and are readily available for his treatment in the future.

Animal Crackers



BOOK REVIEW

PET CARE IN THE NEW CENTURY: Cutting Edge Medicine for Dogs and Cats by Amy Shojai. New American Library (Penguin Putnam Inc., 375 Hudson St., New York, NY 10014).

Paperback, \$14.00.

Here is an up-to-date reference book covering modern veterinary care. More than a hundred veterinarians, among them quite a few from Penn. (listed in an appendix) explain many health and behavior conditions, arranged alphabetically. There are notes on contact lenses as a diagnostic aid as well as protective glasses. Tests for hearing loss are discussed and hearing aids that are available. Pacemakers are used for some heart problems in dogs. Kidney transplants are used for cats. The topics include aggression, cancer, cognitive disorders, obesity, pain, parasites and vaccinations. "Modern Miracles" describe results of innovative treatments.

The appendix lists veterinary colleges in the United States and their websites. A specialist has completed additional training and is a "Diplomate" of a veterinary specialty college. The appendix gives contact information. Among the specialties are internal medicine, dermatology, ophthalmology, surgery, radiology, nutrition and behavior. Most have websites listing members.

The human-animal bond brings up ethical questions, which are thoughtfully covered. New procedures may receive much publicity, but their effectiveness has not been proven. Pet insurance now is available to help cover the cost. It may cover experimental treatments, but not pre-existing or inherited conditions. Some owners never question the cost of saving a pet's life while others consider spending a "fortune" a poor ethical choice. Is there an answer?

The difficult subject of genetics is briefly covered. Molecular medicine looks for causes of disease in the genes. Research has identified the genes involved in many canine and feline diseases and tests can be used to identify suspected carriers.

This book covers many advances in veterinary medicine and shows you how to take advantage of them. It's a worthwhile addition to the library of dog and cat owners.

NOTES ON HORSES

Paint and Quarter Horses lead in registrations, followed by Thoroughbreds, Tennessee

Walking Horses, Standardbreds, Appaloosas, Arabians, Morgan Horses and Saddlebreds.

The average price of Thoroughbred yearlings sold at auction in 2000 was \$54,506.

Kentucky is the foundation of the Thoroughbred breeding industry with 416 stallions and 20,616 mares bred in 2000.

The average horse eats 11,000 pounds of hay, grass and grain each year. On average, a horse consumes two to three ounces of salt daily. During moderate work, it can lose 1.75 to 2.2 ounces of salt in his sweat and 1.25 ounces in urine. A horse will consume as much sodium as it needs when offered salt free choice.

ANTHRAX

Anthrax is a disease which occurs in almost all warm-blooded animals and humans. The disease is also called Charbon, Milzbrand and Splenic Fever. The human form is known as woolsorters's disease. It occurs worldwide. In the United States there are recognized areas of infection but it has not been seen in Pennsylvania for decades.

The cause is *Bacillus anthracis*, a spore-forming bacterium. The spores may remain viable for decades. Infection of herbivores occurs when they graze in areas where spores in the soil are activated by change in conditions such as flood or drought, especially if the temperature is over 60 degrees. Other species are infected when they eat meat of animals dead of anthrax, get contamination of skin cuts or inhale large numbers of spores. The generalized form is characterized by rapid onset and may be rapidly fatal. Localized infections usually respond to treatment. Intestinal anthrax is acquired by eating raw or undercooked infected meat.

The first vaccine for anthrax was made by Pasteur in 1879 and annual vaccination of grazing animals can control the disease in endemic areas. Ciprofloxacin is the antibiotic of choice for treatment, although the organism is sensitive to a large number of antimicrobials. It is important that regulatory officials be notified if the disease occurs or is suspected so appropriate control measures can be taken.

Anthrax spores manufactured for criminal purposes can have the appearance of a white powder. If there are suspicious circumstances, local law enforcement authorities should be notified.

Factual information concerning various forms of biological and chemical agents and the mail may be found at:

Center for Disease Control —
<http://www.cdc.gov>

United States Postal Service —
<http://www.usps.gov>

Pennsylvania Department of Health —
<http://www.health.state.pa.us>

Bellwether

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American Gold Cup 2001

The American Gold Cup was held September 13 to 16 at the Devon Show Grounds. Events of September 11 cast a big shadow. Everyone wore red-white-and-blue ribbons and collections were taken for victims and survivors. Friday afternoon and evening activities were cancelled in deference to the national day of mourning.

Saturday featured added classes in the Dixon Oval. The day was packed with activities. The celebrity dog show drew a large entry and a large crowd. Judges **Barry Stupine**

and **Christine Connelly** enjoyed their assignment and awarded numerous prizes. Many children came with drawings and paintings and participated in the art show. Sunday featured the grand finale, the competition for the American Gold Cup. It was won by Kimberley Frey on Berberac.

The School's booth was easily identifiable by the lifesize wooden Harnessmaker's horse that the New Bolton Center crew had suspended from a tree.



Special Gifts to the School

The following gifts were made to Friends of New Bolton Center in memory of a special animal:

The Davis/Hirsch Family in memory of "CAESAR"
 Dr. Carol Anne Dolinskas in memory of "RULY"
 Ms. Elizabeth W. Glascock in memory of "LANCELOT"
 Hilltop Farm and Mrs. Jane MacElree in memory of "ROYAL RENDITION"
 Mr. and Mrs. John P. McFadden, Jr. in memory of "MOSELLE"
 Ms. Allison Schomber in memory of "VEOLETTE"

The following gifts were made to Friends of New Bolton Center in honor of those listed:

Ms. Beverly Barnes in honor of Sheba and Ally Barnes
 Mr. and Mrs. John S. Craig in honor of Dr. Dan Morris
 Kenneth K. Sadanaga, V.M.D. in honor of Dr. Jill Beech's appointment as the Georgia E. and Philip B. Hofmann Professor in Equine Medicine & Reproduction
 Ms. Barbara Silverstein in honor of Mr. Tom Taylor

The following gifts were made to Friends of New Bolton Center in memory of Mr. James Armstrong:

Mr. and Mrs. Vladimir Borodavchuk
 Ms. Edna S. Moore
 Ms. Helen K. Pople
 Mr. and Mrs. Pete Tester

The following gifts were made to Friends of New Bolton Center in memory of Ms. Diana Muss:

Mr. and Mrs. Lewis I. Gantman
 Mr. Louis I. Gantman
 Mr. Art Powell
 Mr. Harold Schaeffer
 Mr. Wayne Snyder
 The employees of the Kravco Company

The following have made gifts to the Veterinary Hospital of the University of Pennsylvania in memory of a special pet:

John H. Abrams & Judith S. Everitt in memory of "HENRY"
 Ziva Simon Alon in memory of "ELZA"
 Amy L. Anderson in memory of "RICO"
 Ms. Robin Bausback in memory of "MOLSON GOLDEN"
 Mr. Stephen F. Bezuk in memory of "MISTY" and "MISTER BAD"
 Mrs. Jacqueline Bofinger in memory of "CASEY"
 Mr. and Mrs. John Capuzzi in memory of "MOLLY"
 Mr. and Mrs. Chadwick in memory of "RASCAL"
 Mr. and Mrs. Eugenio Chingino in memory of "BRANDY" & "BIANCA"
 Mr. Oliver B. Cospelich in memory of "PHAROAH" & "BART"
 Ms. Nancy Dagle in memory of "SEDEGWICK"
 Ms. Teresa A. Demusis in memory of "RASCAL"
 Ms. Judith DeStefano in memory of "CLEOPATRA"
 Ms. Sally Evans in memory of "INKY"
 Mr. and Mrs. Chris Fahey in memory of "PEPPER" and "CINNAMON"
 Ms. Marjorie Fein-Deutsch in memory of "JESSICA"
 Ms. Yvonne Ehrhart in memory of "DIXIE"
 Mr. and Mrs. Mulford E. Emmel in memory of "ABERCROMBIE"
 Mr. Richard Feldman in memory of "NIGEL"
 Ms. V. Susan Fisher in memory of "SOPHIE"
 Mr. and Mrs. Jeffrey Gelfand in memory of "KOTI"
 Ms. Susan Gibson in memory of "MAGGIE"
 Mr. and Mrs. Scott Green in memory of "COCO"
 Ms. Eileen Haley in memory of "SENNA"
 Ms. Meredith Heckler in memory of "MOLLY"
 Ms. Carolyn Heiser-Wood in memory of "MAXWELL OLIVER"
 Mr. William Hoffman in memory of "CHACO"
 Ms. Lily Hoge in memory of "PETIE" and "EMMA"
 Ms. Joan Kaufman in memory of "PRINCE"
 Mr. and Mrs. Stephen Kazakoff in memory of "NUGGET"
 Ms. Joan Kistler in memory of "MAXINE"
 Ms. Joan Kistler in memory of "PRINCE" & "SPARKY"
 Mr. John Kurten in memory of "LUCKY"
 Ms. Elizabeth Langan in memory of "CEILI"
 Ms. Bernadine A. Lennon in memory of "SHADOW"
 Ms. Wendy Mace in memory of "SPARKY"
 Ms. Wendy Margolis in memory of "SOPHIE"
 Tomi J. McCann, M.D. in memory of "BUDDY" and "PEDO"
 Ms. Betty Louise McCurdy in memory of "HERKIMER"
 Nancy A. McDermott in memory of "MUFFY"
 Mr. and Mrs. James A. McMillan in memory of "ROCKY"
 Mr. David J. Mealmaker in memory of "NUNZIO"
 Mr. Jerry Michaels in memory of "GOLDY"
 Mrs. Judith Morlacci in memory of "NIKKI"
 Ms. Sonya Peterson in memory of "PJ"
 Ms. Marie Pinizzotto in memory of "CHRISSEY"
 Mr. and Mrs. James Olive in memory of "PEBBLES", "REINA" & "BONNIE"
 Ms. Mary Rice in memory of "SUGAR PIE"
 Mr. and Mrs. Carl Rulis in memory of "BRANDY"
 Mr. and Mrs. Gregg Runyen in memory of "MEGGIE"
 Ms. Susan A. Schmidt in memory of "FRITO BANDITO"
 Mr. and Mrs. Paul J. Schoff in memory of "PIPER"
 Ronni and Lester Schwartz in memory of "TANYA"
 Ms. Randi S. Semanoff in memory of "CHLOE"
 Mr. and Mrs. Paul Seymour in memory of "COCO"
 Mr. Joseph Sgro in memory of "MOLLY"
 Mr. Gene W. Sharpless in memory of "SANDY"
 Mr. and Mrs. Rocco Siravo in memory of "NOEL"
 Ms. Diane Sjolander in memory of "MOLLY" and "SAGE"
 Mr. and Mrs. Charles W. Smith in memory of "SAMANTHA"
 Kathryn Staci in memory of "BANDIT"

Kathryn Staci in memory of "SONIA"
 Ms. Lisa Stanwyck in memory of "TAD"
 Mr. Michael Telenda in memory of "YUKON"
 Mrs. Helma N. Weeks in memory of "ROMEO"
 Mr. and Mrs. Richard Walters in memory of "JESSIE"
 Ms. Mary Kay Washo in memory of "BRIGETTE RED"
 Ms. Kathleen Wert in memory of "FRITZ", "NIKKI" and "LUCKY"
 Ms. Linda Weyler in memory of "BLACKIE"
 Ms. Stephanie Yarbough in memory of "SASHA" and "DIRTY FACE"

The following have made gifts to the Veterinary Hospital of the University of Pennsylvania in memory of Terry Woods:

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 Lori Solomon
 State Farm Mutual Automobile Insurance Company
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 Tanya Lee Tumas
 Robert Woods
 Carolyn Zimmerman

The following have made gifts to the Veterinary Hospital of the University of Pennsylvania in memory of Jack Glover:

Mr. and Mrs. Robert P. Corlies
 Clifford P. Crowers
 Mr. and Mrs. Richard Lippin
 Doris Marie Londer
 Mrs. Zoreslava L. Mysko
 Helen Mae Mullen
 Mr. and Mrs. Owen Regan
 Mr. and Mrs. Harry B. Reiff

The following have made gifts to the Veterinary Hospital at the University of Pennsylvania in memory of those listed:

Linda Bergh in memory of E. Joanne Bristol
 Mr. and Mrs. Bernard Brewstein in memory of Sara Jane Dickstein
 Frances M. Iadevaio in memory of Joseph P. Sanfilippo
 Mr. and Mrs. Arthur Kast, Jr. in memory of Susie Kast
 Ms. Diane Mengel in memory of Dr. Robert B. Weber
 Mr. and Mrs. David A. Miller in memory of John Johnson
 Ms. Maryjeannette J. Monihan in memory of Dr. W.M. Gallery

Trivial Pursuit

If you play Trivial Pursuit Genus 5 you may draw a card that asks "What major Eastern city was the first to boast a blood-mobile for dogs, in 1991?"

The answer is: Philadelphia (at VHUP, of course!)



The following have made gifts to the Veterinary Hospital of the University of Pennsylvania in honor of a special pet:

Ms. Tammy James in honor of "RIDLEY"
Ms. Sheree Mazzella in honor of "MAXWELL"
Mr. and Mrs. Don O'Connor in honor of "MISSY" and "RUSTY"
Mr. and Mrs. Rocco Siravo in memory of "NOEL"

The following have made gifts to the Veterinary Hospital of the University of Pennsylvania in honor of those listed:

Mr. and Mrs. Nicholas Christopher in honor of Drs. Ann Wayne Lucas and Diane DeLorenzo's work at Washington Square Animal Hospital
Ms. Helen Davenport in honor of Dr. Christopher Donner
Mr. and Mrs. C.D. Deringer in honor of the 30th Anniversary of Barbara and Larry Magic
Ms. Tammy James in honor of Dr. Chick Weisse
Mr. and Mrs. Arthur Kast, Jr. in honor of Dr. Prudence Neath
Mr. James Koch and Ms. Karen Bossert in honor of Dr. Chick Weisse and Dr. Tona Melgarejo
Ms. Margie Levi in honor of Nathan's birth
Robin M. Mazin, V.M.D. in honor of Dr. Cynthia Otto's contribution to the WTC search and rescue mission
Ms. Carolyn B. Pope in honor of Dr. Christiansen for his work with Julio Pope
Mrs. Letitia O. Principato in honor of Raymond A. Harding
Mr. and Mrs. Robert Rapiejko in honor of Dr. Tracy Springer
Ms. Linda Weyler in honor of Dr. Lilian Duda and Dr. Amy Kapatkin

The following have made gifts supporting Epilepsy Research in memory of a special pet:

Mr. and Mrs. Barry Miller in memory of "FLUFFY"

The following have made gifts to the Clinical Studies Research Development Fund in memory of Juno:

Ms. Patricia diPietrae
Mrs. Patricia Hall
Mrs. Jennifer Liss
Mr. Joshua Liss
Ms. Marie McEntee
Ms. Catherine McNamara
Ms. Susan Mullins
Ms. Jeanie Robinson-Pownall
Mr. Timothy Rupe
Mrs. Jane Simone
Mr. Mark Stuart
Ms. Ellen Tarasca
Ms. Helma Weeks
Ms. Andrea Withers

The following have made gifts to the Clinical Studies Research Development Fund in memory of Katie:

Mrs. Patricia Hall
Dr. David Holt
Mrs. Jennifer Liss
Mr. Joshua Liss
Ms. Marie McEntee
Ms. Elizabeth McNamara
Mrs. Amy-Lynn Parkman
Ms. Jeanie Robinson-Pownall
Mr. Timothy Rupe
Mrs. Phyllis Sewall
Mrs. Jane Simone
Mr. Mark Stuart
Ms. Ellen Tarasca
Ms. Andrea Withers

The following have made gifts to the Special Species Medicine Clinic in honor of a special pet:

Mrs. Dana Goodyear in honor of "FOUR STEP ROSE"

Mr. and Mrs. Andrew R. Budman in honor of "COOKIE"

The following have made gifts to the Special Species Medicine Clinic in honor of those listed:

Mr. and Mrs. Andrew R. Budman in honor of Dr. Karen Rosenthal

The following have made gifts to the Josephine Deubler Student Scholarship in honor of those listed:

Mr. Dale C. Deubler in honor of M. Josephine Deubler, V.M.D.

The following have made gifts to the Josephine Deubler Genetic Disease Testing Laboratory in memory of a special pet:

Ms. Phyllis N. Sewall in memory of "LACEY"

The following have made gifts supporting Soft Coated Wheaten Terrier Research in memory of a special pet:

Mr. Richard Tomlinson in memory of "GINGER"

The following have made gifts supporting Diabetes Research in memory of a special pet:

Ms. Christine Lally in memory of "LADY"

The following have made gifts supporting Oncology Research in memory of a special pet:

Ms. Catherine Ciric in memory of "BU"
Mr. and Mrs. Steven Conant in memory of "HANNAH"
Mr. and Mrs. Raymond J. Higgins in memory of "STEPHANIE"
Ms. Carolyn B. Pope in memory of "ROMEO"

The following have made gifts supporting Oncology Research in honor of those listed:

Ms. Carolyn B. Pope in honor of Dr. Lisa Barber

The following have contributed gifts to the Dean's Fund in honor of those listed:

Mrs. Carolyn R. Cotter in honor of Dr. Lesley King
Mrs. James S. Vandermade in honor of Dr. David Detweiler

The following have contributed gifts to the Dean's Fund in memory of those listed:

Stephen R. Levan, V.M.D. in memory of Russell S. Detwiler, V.M.D.
Ms. Kathleen McSherry in memory of Mary and Joseph McSherry
Karen Seamans in memory of Mr. Earl Holton

The following have contributed gifts to the Dean's Fund in memory of a special pet:

Betsy Dayrell-Hart, V.M.D. in memory of "TOSCA"
Mr. and Mrs. Paul Seserko in memory of "HOLMHAVEN JASON OF SEALOCH"
Ms. Margaret Yeaw in memory of "BIG KITTY"

The following have contributed gifts to the Clinical Studies Critical Care Fund in honor of those listed:

Mrs. Roberta M. Webb in honor of Dr. Bisque Jackson

The following have contributed gifts to the Chinchilla Research Fund in memory of those listed:

Estate of Helen S. White in memory of Helen White

The following have contributed gifts to Veterinary Student Scholarship in memory of those listed:

Richard G. Ainley, V.M.D. in memory of Robert Ainley Vanderhoof, V.M.D.
Cathy A. Ball, V.M.D. in memory of Sister Catherine Henrietta
William Deeds Donovan, V.M.D. in memory of Dr. Sam Scheidy
Barbara L. Henderson, V.M.D. in memory of Thomas A. Henderson
Dr. Christopher Morris in memory of Dr. Robert B. Weber
Lawrence W. Samples, V.M.D. in memory of Dr. Robert B. Weber

Mr. and Mrs. Charles Thompson in memory of Irvin Hymerling

The following have contributed gifts to Veterinary Student Scholarship in honor of those listed:

Joseph F. DiMauro, V.M.D. in honor of Loren Evans, D.V.M.
Horsham Veterinary Hospital, P.C. in honor of Loren Evans, D.V.M.
Michael S. Miller, V.M.D. in honor of Dr. David K. Detweiler

Dr. Barbara Ruch in honor of Dr. Suzanne R. Jenkins

The following have contributed gifts to Veterinary Student Scholarship in memory of a special pet:

Mr. and Mrs. Nicholas J. Masciulli in memory of "SPOTS"
Ms. Marilyn S. Wiesen in memory of "POKEY"

The following have contributed gifts to the E.R. Marookian Research Scholarship Fund in honor of Dr. Edgar R. Marookian:

Mr. and Mrs. Edward Elmasian
Mr. and Mrs. Paul Jaffarian

Recent Gifts of Note

The School received \$60,000 from the estate of **Jean Shepherd** to establish a scholarship for women in the name of Leigh Brown Shepherd. Jean Shepherd died in October 1999 at the age of 78, he was a resident of Sanibel Island, FL.

Mary R. Romig-DeYoung through her estate, provided \$250,000 for an endowment fund to support animal care and treatment at VHUP. Mrs. Romig-DeYoung, who died in October 2000, was a long-time supporter of the University.

Thoroughbred Charities of America contributed \$50,000 to New Bolton Center for equipment for the Scott Equine Sports Medicine Building. This organization is a charity created by Herb and Ellen Moelis, long-time supporters of the School. Herb is a member of the School's Board of Overseers.

General Econopak, specialists in surgical apparel and products, made a donation of \$30,000 to the School. General Econopak has had a long-standing relationship with the School and its hospitals. Half of the funds will be used at New Bolton for the purchase of equipment. The remainder will be used at VHUP for installation of external nitrogen lines to power special equipment in the surgery suites. A bequest of \$10,000 from the estate of **Lynne Wickenden** will also be applied to this VHUP project.

Upcoming Events

January 2002

5-10

Pennsylvania Farm Show 2002

Farm Show Complex
Harrisburg, PA

Visit the School of Veterinary Medicine's booth at the largest indoor agricultural event in America. For information, visit <http://sites.state.pa.us/PA_Exec/Agriculture/bureaus/farm_show/2002/welcome/welcome.htm>.

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8:00-10:00 p.m.

Alumni Reception

The North American Veterinary Conference
Grand Caribbean Ballroom II
Caribe Royale
Orlando, FL

26

Annual Canine Symposium for Owners and Breeders

E.R. Marookian, V.M.D. Auditorium
Veterinary Hospital of the University of Pennsylvania
For information, call Dr. Josephine Deubler at (215) 898-8862 or visit <www.vet.upenn.edu/comm/news/2002symposium.html>.

30-31

2002 Penn Annual Conference

Adam's Mark Hotel
Philadelphia, PA

For information, visit <<http://alumni.vet.upenn.edu/pennannualconference.htm>>.

30

2:00-4:00 p.m.

Veterinary Medical Alumni Society Executive Board Meeting

at 2002 Penn Annual Conference

March 2002

13

2:00-4:00 p.m.

Veterinary Medical Alumni Society Executive Board Meeting

Alumni Hall
New Bolton Center
Kennett Square, PA

23

Annual Feline Symposium for Owners and Breeders

E.R. Marookian, V.M.D. Auditorium
Veterinary Hospital of the University of Pennsylvania
For information, call Dr. Josephine Deubler at (215) 898-8862 or visit <www.vet.upenn.edu/comm/news/2002symposium.html>.

May 2002

8

2:00-4:00 p.m.

Veterinary Medical Alumni Society Executive Board Meeting

Veterinary Hospital of the University of Pennsylvania

10-11

Alumni Weekend 2002/Reunions for Classes ending in "2" or "7"

For information, visit <<http://alumni.vet.upenn.edu/alumniweekend2002.htm>>.

10

2:00-3:00 p.m.

Alumni Weekend 2002 Classes Without Quizzes Presentation "My Pet Has Changed: Understanding Aging-Related Behavior Changes in Dogs and Cats"

by Dr. Ilana R. Reisner, Assistant Professor of Behavioral Medicine and Director of the Behavior Clinic at the Veterinary Hospital of the University of Pennsylvania
Houston Hall, Golkin Room
3417 Spruce Street

Learn how to deal with your aging pet from Dr. Ilana R. Reisner, a board-certified veterinary behaviorist. With improved nutrition and medical care, the life expectancy of our pets has been rising. Hear about the current understanding of dementia in dogs and cats, and updates on the research and management of this common problem. Time will be reserved for questions and answers.

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School of Veterinary Medicine Class of 2002 Commencement

For updated
event listings,
please visit the

**Alumni & Friends
web site**

at

<http://alumni.vet.upenn.edu>

Visit the School's web site at www.vet.upenn.edu

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