

bellwether

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THE NEWSMAGAZINE OF THE UNIVERSITY OF PENNSYLVANIA SCHOOL OF VETERINARY MEDICINE

**RALPH L. BRINSTER,
VMD, PHD EARNES
PRESTIGIOUS
NATIONAL MEDAL
OF SCIENCE**

ALSO IN THIS ISSUE...

Ryan Hospital Unveils
Buerger Family Minimally
Invasive Surgery Suite

Reproduction Services
at New Bolton Center

Service Spotlights on
Dentistry and Oral
Surgery and Equi-Assist



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ABOUT THE COVER:

Ralph L. Brinster, VMD, PhD is the first veterinarian to be honored with the National Medal of Science.
Photo credit: Scott H. Spitzer.



PHOTO BY USA GODFREY

Since our earliest days, Penn Vet has been uniquely engaged with advancing our profession through our connection with fundamental biomedical science. I am proud to highlight in this *Bellwether* considerable evidence that we continue this tradition.

Our amazing community — faculty, students and staff — make history and change the face of veterinary medicine — and often the face of human medicine — with breakthroughs, new treatments and advanced therapies discovered through their unwavering curiosity and desire to learn. This curiosity paired with impeccable patient care in the clinics make Penn Vet an especially inspiring place.

Recently, one professor, in particular, has illustrated all that is possible at Penn Vet. Ralph L. Brinster, VMD, PhD has rightly earned his spot on the cover of this issue of *Bellwether*.

I am incredibly proud to call Dr. Brinster a colleague and supremely happy for his latest — and arguably most prestigious — award to date. Dr. Brinster was one of seven scientists selected to receive the 2010 National Medal of Science, for which he was honored at a gala event at the White House in October 2011. What makes this distinction so impressive is not just the fact that it is the highest honor any scientist can earn in the US, but that Dr. Brinster is the very first recipient who is a veterinarian. Indeed — a very happy occasion for the profession and for Penn Vet, in particular. His work over the past five decades on furthering the understanding of the mammalian germ line has laid the foundation for biologists since the 1960s and will no doubt leave a lasting legacy on the field for decades to come. You can read more about his exceptional career on page 4.

Penn Vet is also a leader in pioneering veterinary specialties. We led the charge in the creation of several of those specialties recognized by the American Veterinary Medical Association (AVMA), including dentistry and oral surgery. On page 22, you'll read about our Dentistry and Oral Surgery Service at Ryan Hospital and, in honor of National Pet Dental Health Month, about the importance of oral care for pets. Our very own Colin Harvey, BVSc, has worked his entire career to advance the field of oral surgery and dentistry in our animal companions, which

has influenced the care available in the Ryan Hospital service, headed now by Alexander Reiter, Dipl. Tzt. Today, our faculty clinicians are the go-to experts in complicated oral surgeries and work to take their research to the clinics with much success.

Similarly, we are the first School to offer a unique equine home-care nursing program, Equi-Assist. Launched last year, the Equi-Assist program allows equine patients to receive follow up and continued care in their home barn or lay-up facility, which provides peace of mind for owners and a less stressful recovery for these sensitive animals. On page 20, read about the success the program has had in its first year, as well as about its plans for the future.

Penn Vet's comprehensive start-to-finish equine reproduction program, part of the recently renamed Section of Reproduction and Behavior based at New Bolton Center, offers clients expertise from stallion handling through fertility issues to intensive care for the at-risk neonate. On page 11, read about the many roles our collective expertise can play in bringing about the birth of a healthy foal.

Finally, I am thrilled to share that the Buerger Family Minimally Invasive Surgery Suite is open for business as of October. This impressive suite — the first of its kind in any vet school — allows clients to choose less invasive surgical procedures for their pet, which allows a quicker recovery and less pain. On page 8 you can read about one of our first patients, Basil, an adorable German shepherd puppy, who required a complex surgery to correct a genetic defect in his heart. As always, a team of Ryan Hospital clinicians, anesthesiologists, certified veterinary technicians and staff worked with an all-hands-on-deck approach to ensure Basil's surgery was a total success.

This issue of *Bellwether* is full of examples of Penn Vet's revolutionary thought-leadership in the field of veterinary medicine. We are committed to our mission of leading the field and training its leaders. I am happy to be able to share these successes, advances and compelling stories so that you can also share the pride. Please join me as part of our pioneering future by attending one — or more! — of our upcoming events listed on the back cover. Whether you're a client looking for the most up-to-date treatment options for your pet, an alum hoping to earn continuing education credits, or a supporter of Penn Vet's broader mission of improving public health and safety, there is something for you to learn and celebrate as part of the Penn Vet family.

—JOAN C. HENDRICKS, V'79, GR'80
THE GILBERT S. KAHN DEAN
OF VETERINARY MEDICINE

beyondluck

Penn Vet's Ralph L. Brinster, VMD, PhD earns National Medal of Science for a lifetime of breakthroughs

BY KELLY STRATTON

If you ask Ralph L. Brinster, VMD, PhD the secret to his success, he will say it is luck. But if you ask anyone else — including colleagues with whom he has worked for more than five decades — they will tell you it is much more than that — it is brilliance and unyielding curiosity.

Dr. Brinster, the Richard King Mellon Professor of Reproductive Physiology at Penn Vet, was one of seven scientists to be honored by President Barack Obama in October 2011 with a 2010 National Medal of Science, the highest accolade bestowed by the United States government on scientists and engineers. Since the award

was first established 50 years ago, Dr. Brinster is the first veterinarian and the eighth scientist from Penn to win the National Medal of Science.



President Barack Obama congratulates Dr. Brinster on his National Medal of Science honors in October 2011.

The reason for this highest of honors? Dr. Brinster is often regarded as the father of transgenesis, and it was his research on the manipulation of the mammalian germ line, the cells that give rise to sperm and eggs, for which he was honored. By inserting new genes into the germ line of a developing organism — the process known as transgenesis — researchers can produce animals with selected traits that are indispensable models in understanding life processes and disease.

Penn President Amy Gutmann said, “Ralph Brinster is a trailblazer in the field of reproductive biology and genetics whose work has had inestimable influence in science and medicine. His early findings helped usher in the era of transgenic research and represent foundational aspects of techniques used in genetic engineering, in vitro fertilization and cloning. We are extraordinarily proud that he has received the National Medal of Science in recognition of more than five decades of scientific achievement.”

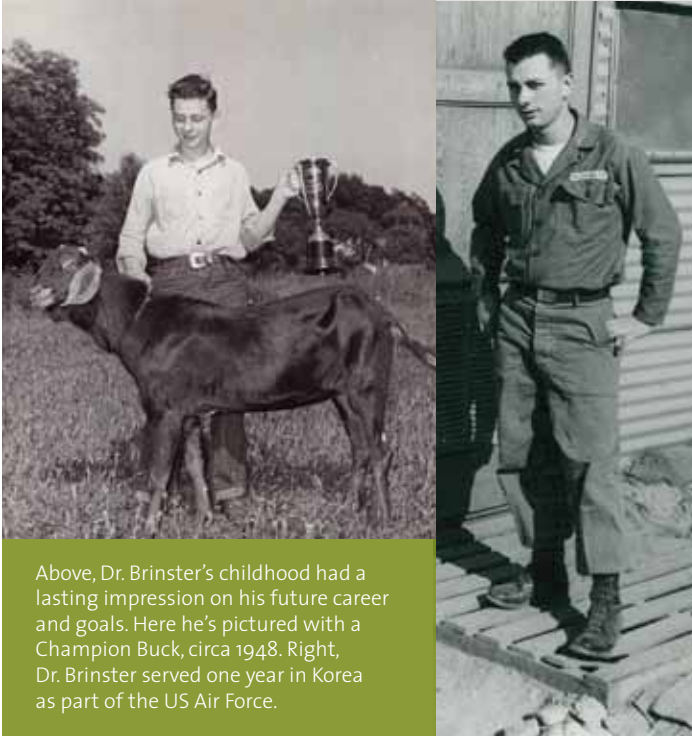
Clearly, it took something more than simple luck.

The Path to Discovery

“I grew up on a small farm in northern New Jersey, and from my experiences there, I became interested in animal development and breeding, including fertility and transmission of genetic characteristics to progeny,” said Dr. Brinster. “Growing up on a farm was a good environment. You work hard and there are no vacations.”

That environment and value system paved the way for Dr. Brinster’s long academic career and continued quest for understanding animal development.

After earning a bachelor’s degree in animal science from Rutgers University in 1953, Dr. Brinster planned to continue his education, but the Korean War was underway.



Above, Dr. Brinster's childhood had a lasting impression on his future career and goals. Here he's pictured with a Champion Buck, circa 1948. Right, Dr. Brinster served one year in Korea as part of the US Air Force.

Dr. Brinster became a second lieutenant in the United States Air Force and served a year in Korea, after which he finished his military commitment in Texas. Still, he did not lose sight of his intention to attend veterinary school. He started Penn Vet in 1956, putting the GI Bill benefits to good use financing his education.

“I was not a great student as an undergraduate; therefore, I was fortunate to be accepted at Penn Vet,” recalled Dr. Brinster. “My intent was to work with large animals, but I became more interested in fertility of animals and germ cell biology; thus, following graduation I began PhD training in physiology at Penn Medicine.”

Dr. Brinster earned his PhD in 1964, and made near-immediate and long-lasting impacts in science.

Scientific Breakthroughs and Advances

Dr. Brinster's first major breakthrough came from research leading to his PhD. It was this research in the early 1960s that led to the development of an effective and reliable system in which to observe and experiment on eggs and embryos outside of the body. By using a culture method that consisted of placing mouse embryos in culture medium under an oil layer, Dr. Brinster created a system that would be adopted by the scientific community almost immediately. The system is still used today – virtually unchanged – as the go-to technique for experiments

involving mammalian eggs and embryos, including all transgenic work, embryonic stem cell research, in vitro fertilization in humans, cloning and knockout technology.

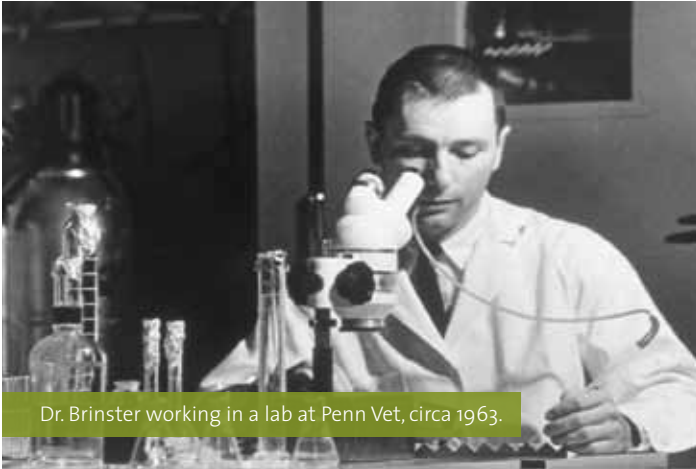
But creating this system was just a first step for Dr. Brinster. Next he planned to manipulate the germ line and germ cells to further understand their development and regulation.

Thinking back to his childhood on the farm and appreciating the need for producing quality livestock, Dr. Brinster said, “I never lost interest in animal breeding and eventually became more and more interested in fertility, specifically the germ line. I wanted to modify the germ line and germ cells to understand how they function.”

Using a mouse model, a standard species in the field of genetics because of their short reproductive time of three weeks and their well-defined genetic background, Dr. Brinster in the early 1970s began his work towards transgenesis. By taking stem cells from mouse teratocarcinomas and injecting them into mouse blastocysts, Dr. Brinster was able to demonstrate, through a series of experiments, that the non-embryo injected cells amazingly became part of the developing mouse tissues and were present in the adult.



Dr. Brinster began his studies at Penn Vet in 1956.

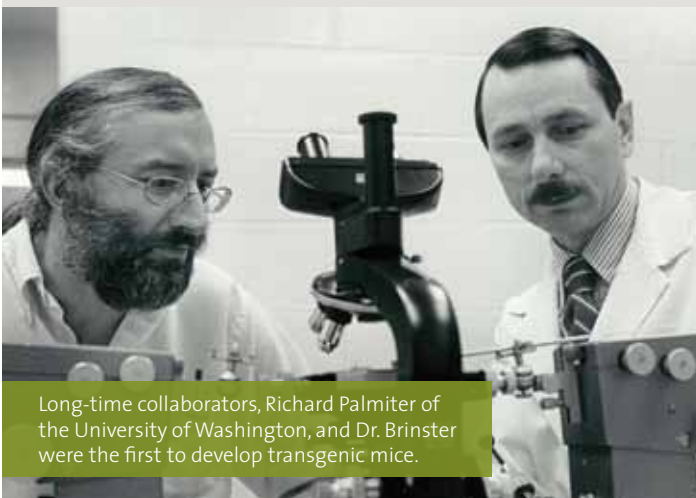


Dr. Brinster working in a lab at Penn Vet, circa 1963.

This series of experiments illustrated that donor cells, which could be cultured *in vitro* and modified genetically, would become part of the adult mouse. Therefore, such cells could carry genetic change into the mouse and into its germ cells, thus permanently altering the germ line of the animal.

“The germ cells are critical cells,” said Dr. Brinster. “They are the only cells in the body that will pass DNA to the next generation.”

While he and other scientists continued to develop and perfect this approach with stem cells to alter the germ cells and germ line, Dr. Brinster began to explore and perfect another approach to germ line modification. He initiated these experiments by demonstrating in 1980 that fertilized one-cell mouse eggs could be injected with nucleic acids and survive. He and others then used this approach to introduce new genes into the adult mouse by injecting them into the fertilized egg. He and Richard Palmiter of the University of Washington published a foundation paper in 1981 demonstrating the integration and expression of a transgene in mice. The following year, they published the famous giant mouse experiment, which appeared as the cover story in the journal *Nature* in 1982 and was reported on the front page of newspapers throughout the world. In



Long-time collaborators, Richard Palmiter of the University of Washington, and Dr. Brinster were the first to develop transgenic mice.

this transformational experiment, they demonstrated that the growth hormone transgene produced rapid growth and large size in the mouse, and the results catalyzed interest in transgenesis. A picture of the mice appears in most textbooks as representing the beginning of the transgenic revolution.

“When we saw the giant mouse,” said Dr. Brinster, “we were surprised and delighted. The giant mouse experiment was a fantastic experiment. That is the experiment that made everybody, including us, stop and say, ‘This is incredibly powerful.’ That you could enter the germ line and make a change like that. It’s the first time man was able to experimentally modify the genetic code that will make the next individual.”

The implications of this success are far-reaching and include the possibility of understanding the origin of animal and human diseases, as well as studying the mechanisms by which a single cell, the fertilized egg, develops into a complex animal.

Today in the Brinster Lab

Dr. Brinster has recently turned his attention to spermatogonial stem cells (SSCs), the foundation stem cells of the male germ line and spermatogenesis. SSCs self-renew and generate daughter cells to differentiate into spermatozoa throughout the entire lifespan of the male.

“I started thinking about the male germ line, and I reasoned that if you took cells from a fertile testis and injected them into the seminiferous tubules of an infertile testis, they should be able to restore fertility to the animal,” said Dr. Brinster. Of all the testis cells transplanted, only the spermatogonial stem cells would colonize the testis and be able to regenerate complete spermatogenesis. “It was a simple concept; I am surprised no one did it before.”

This transplantation system is now used worldwide to study and experiment on male germ line stem cells and spermatogenesis in all species.

Dr. Brinster has used the transplantation system to develop cryopreservation and culture methods for spermatogonial stem cells of rodents and higher species, including primates. These techniques make individual male germ lines and their genetic content biologically immortal for all mammalian species. Clearly, the approaches Dr. Brinster has developed in the male mirror those that he introduced for the female back in the 1960s. They will be useful to preserve and genetically modify the germ lines of farm animals to increase productivity and health. Moreover, the techniques will be valuable in human medicine, particularly for prepubertal boys undergoing treatment for



Where Ralph Brinster may have gotten lucky is in his family life. He and his wife Elaine Brinster, RN (of whom he says, “She is much smarter than me”) have raised four children — two daughters and two sons — all of whom have no doubt been influenced by their father’s hard work. All four children earned bachelor’s degrees from Penn and all four have achieved higher degrees.

Son Clayton J. Brinster also earned an MD from the Perelman School of Medicine at Penn and has just earned a vascular fellowship at Massachusetts General Hospital.

Kristen A. Brinster Waddington went on to earn her juris doctorate from the University of Baltimore School of Law and is now a partner at Sutherland & Brinster, PA.

Lauren R. Brinster followed in her father’s footsteps and earned a VMD from Penn Vet in 1990. Today, she is a pathologist at the National Institutes of Health.

Son Derek R. Brinster went on to earn his MD from the Perelman School of Medicine at the University of Pennsylvania followed by a general surgery residency at Penn Medicine. Today, he is an Associate Professor of Surgery at Virginia Commonwealth University, Medical College of Virginia.

Above, the Brinsters from left to right: Clayton, Kristen, Dr. Brinster, Mrs. Brinster, Lauren, Derek at the National Medal of Science Gala at the White House in October 2011.

cancer. Approximately 80 percent of these boys recover from the cancer, but one-third are infertile as a result of treatment. Preservation of a testicular tissue biopsy before treatment can preserve the stem cells, and the methods Dr. Brinster has developed can be used to increase the number of SSCs and remove any contaminating cancer cells before reintroduction into the patient to restore fertility.

“There is still much to be learned about male germ cells,” said Dr. Brinster. “We and others are particularly interested in the biology of the stem cells as well as the differentiating germ cells. Extremely important are the regulatory mechanisms involved in the self-renewal of the stem cell and the differentiation of the daughter cells as they progress toward spermatozoa. Clearly, the genetic content of the stem cell and germ cell is important, but it is now established that the surrounding cells, the niche cells, play a critical role, perhaps the most critical role, in determining the fate of the stem cell and its differentiating daughter cells.”

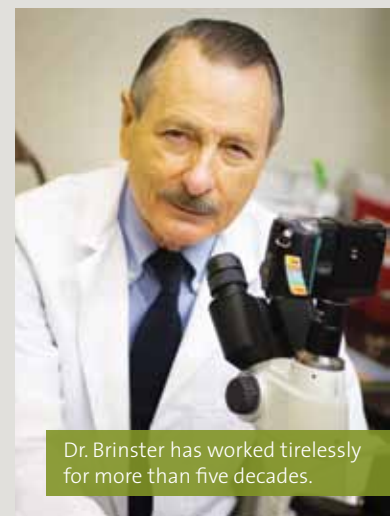
The importance of the surrounding niche cells of the SSC and germ cells was dramatically demonstrated in a recent experiment in Dr. Brinster’s laboratory. When male mice were housed with a female or without a female, it was found that the males residing with females had a reproductive lifespan 20 percent longer than those housed alone. The stimuli clearly came from outside the body through the surrounding somatic niche cells to influence the germ line of the male and its reproductive health and longevity.

The effect of surrounding somatic cells on the function of stem cells has been shown in other systems as well. For example, “In humans, exercise produces more new brain cells. External stimuli dramatically influence the niche cell, which in turn influences the stem cell,” said Dr. Brinster. “How can we make these niche cells healthier? An obvious approach is that beneficial external stimuli could be used to increase the function of niche cells to support their associated stem cells.”

The Legacy

Among his scientific peers, the work of Dr. Brinster has been influential and has opened exciting new areas of investigation. And many are proud of his achievements.

“Ralph’s contributions to the field of reproductive biology, transgenesis and stem cell biology are monumental,” said Narayan Avadhani, PhD, chair, Department of Animal Biology, Penn Vet. “Over the past 50 years, he has consistently led the field making many pivotal contributions. In my scientific career I have rarely seen a scientist who is so focused,



Dr. Brinster has worked tirelessly for more than five decades.

Continued on page 36

German Shepherd Puppy Undergoes Heart Surgery in New Surgery Suite

Basil is one of first patients through Buerger Family Minimally Invasive Surgery Suite

BY KELLY STRATTON



Basil at five months old, about 2-1/2 months after his surgery.

“He was an August baby,” said Brent Grove of Basil, a six-month-old German shepherd puppy. “He’s about 44 pounds now so he’s doing well.”

But he hadn’t always been doing well. Born a normal, healthy pup weighing in at 1 lb., 5 oz., Basil and his only littermate, Gidget, both took to suckling without a hitch. It was only when Brent began weaning the pair that he noticed a difference.

“Basil, after he would eat, he would get this distressed look on his face,” said Brent who has raised German shepherds for more than 10 years. “And then he would regurgitate.”

The Diagnosis

Brent sought out his primary care veterinarian at Airpark Animal Hospital in Westminster, MD. There, Nicholas Herrick, DVM and John Kable, DVM took chest X-rays and conducted a barium swallow. Their findings? Basil’s esophagus was being constricted and anything thicker than water was getting held up at the level of the heart and not passing easily to the stomach.

The condition suspected was a persistent right aortic arch (PRAA), a congenital vascular abnormality of the heart, which shows clinical signs of regurgitation in young dogs. This malformation causes a large dilatation to develop in the esophagus where food and liquids can be trapped and has been reported in German shepherd dogs more frequently than in other breeds.

Brent went home and began researching the condition and how to correct it, which brought him to Penn Vet.

“I wanted to do whatever I could do for Basil,” said Brent. “I searched on the computer for surgeries and that’s how I found Dr. Runge. I emailed him right away and told him I wanted to save this puppy.”

The following week, Brent and Basil met with Jeffrey Runge, DVM, DACVS, lecturer at Penn Vet. During the consultation, they discussed the treatment options available for correcting Basil’s PRAA and determined that a minimally invasive thoracoscopic procedure was a possibility – even though Basil was still a puppy and small.

Historically, an open surgical procedure would be required to correct this kind of condition, but with advances in minimally invasive surgical techniques, Dr. Runge felt Basil was a good candidate for a less-invasive thoracoscopic procedure.

“With the help of our cardiology department we confirmed that Basil had a persistent right aortic arch,” said Dr. Runge. “In a normal dog’s development, the aortic arch should be present on the left side. With the vascular ring anomaly, PRAA, the aorta unfortunately develops on the right side and the esophagus is then encircled by the ligamentum arteriosum. This arrangement will cause a stricture [narrowing].”

Basil’s symptoms matched up perfectly to what an owner would see in a dog with this condition – once a puppy is weaned and starts eating more solid foods, regurgitation can occur and possibly lead to aspiration pneumonia.

State-of-the-Art Surgery

Basil would be one of the first patients to undergo surgery in Ryan Hospital’s new state-of-the-art Buerger Family Minimally Invasive Surgery Suite. The Buerger Family Suite is the first of its kind in any veterinary teaching hospital and is one of the only operating rooms in veterinary medicine that offers a comprehensive array of minimally invasive surgical procedures for companion animals.

Minimally invasive surgical procedures allow for quicker recovery times, shorter hospital stays and quicker return to function. Types of procedures available in the Ryan Hospital suite include:

- Arthroscopy
- Laparoscopy
- Thoracoscopy
- Interventional radiology
- Minimally invasive fracture repair

The Buerger Family Minimally Invasive Surgery Suite opened its doors on Monday, October 3, 2011.

The \$750,000 suite, the first of its kind in any veterinary school, includes the KARL STORZ OR1® Integration System; the Berchtold lighting and boom system; and Covidien Electrosurgical Force Triad Unit. The integration equipment transmits information from various video and data sources and routes it to multiple locations both inside and outside the operating room. Images from the surgical cameras, C-Arm fluoroscope, and picture archiving and communication system (PACS), as well as Internet images and network data can be routed to any of the six displays within the suite, and to a display in an observation area outside the suite.

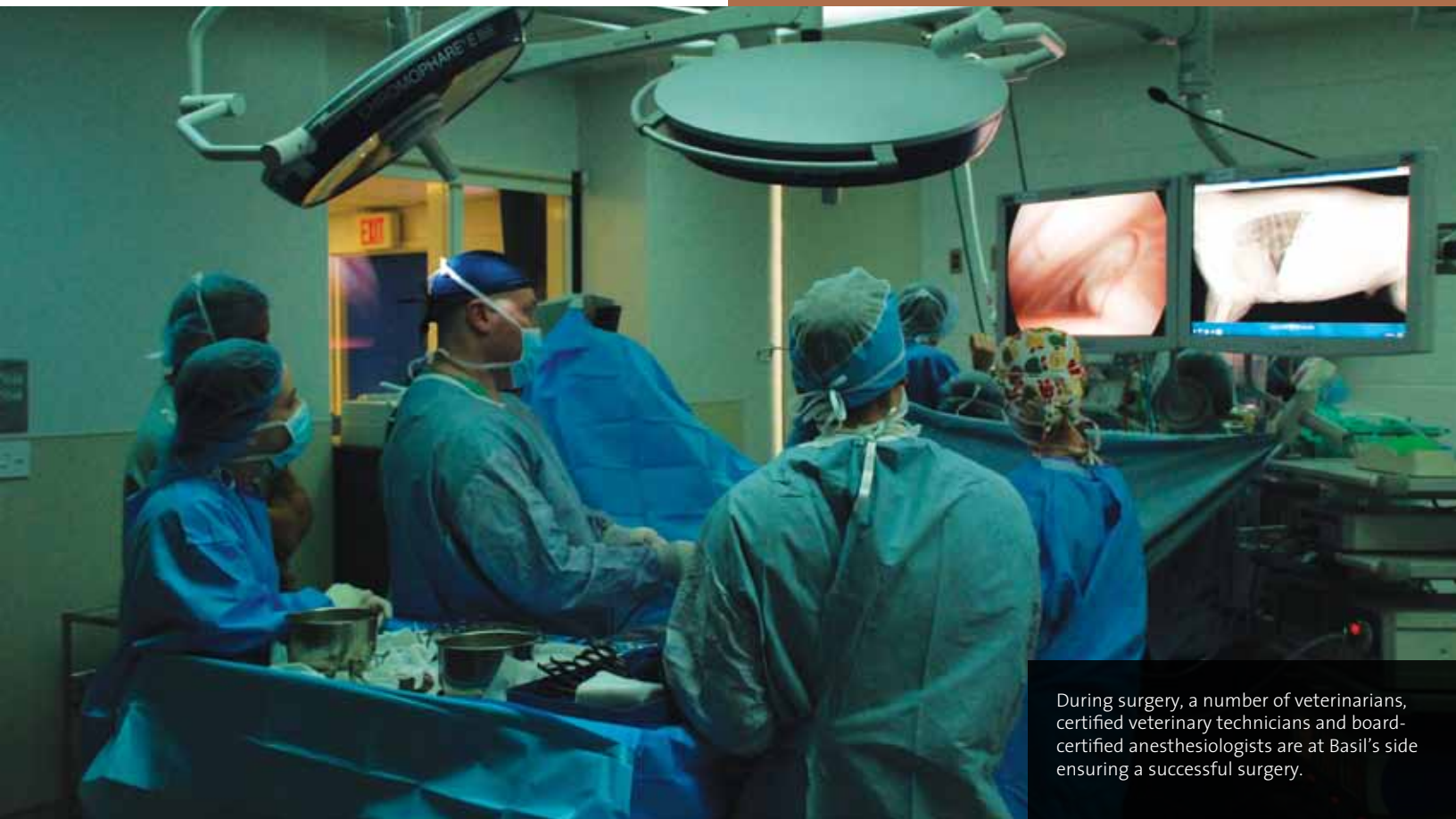
In addition to providing an option to clients, the School’s Shelter Animal Medicine Program will benefit from having access to these advanced tools so that minimally invasive spays of shelter animals can be provided.

Thanks to the following donors who made this suite a reality:

Nancy Brouger
Alan H. Buerger
Connie M. Buerger
Jeffrey W. Griffiths

Amy Schimmel Kramer
Andrew M. Kramer
Mark E. Rubenstein
Robin Rubenstein

thank you



During surgery, a number of veterinarians, certified veterinary technicians and board-certified anesthesiologists are at Basil’s side ensuring a successful surgery.

Post-surgery, Basil recovers in Ryan Hospital's ICU where he gets plenty of attention from certified veterinary technicians, including Jessica Coughlan. Here, Basil has just finished a meal and is being held vertically by Jessica to ensure the food passes to his stomach.



provide our clients an option for less-invasive, less painful surgeries for their beloved pets.”

Basil's Big Day

On Monday, October 24, Basil underwent a thoracoscopic surgery, which required a team comprised of board-certified anesthesiologists, certified veterinary technicians and veterinary surgeons, including Dr. Runge and Julie Callahan Clark, DVM, DACVIM, internal medicine lecturer at Penn Vet.

To make the challenging surgery and access to Basil's heart a bit easier, anesthesiologists and Dr. Callahan Clark performed an advanced technique called “one-lung ventilation,” which allows one lung to collapse while keeping the other ventilated. This method allows surgeons to work with an unobstructed view.

In addition to this assistance, Dr. Callahan Clark executed diagnostic esophagoscopy with a flexible camera while Basil's thoracoscopic surgery was underway. While viewing inside the esophagus, the light emitted from her scope highlighted the area of the stricture for Dr. Runge. For the thoracoscopic

Continued on page 35

The KARL STORZ OR1® system is the foundation of the integration solution used at Ryan Hospital's minimally invasive surgery suite and gives the surgical team control of endoscopy and other devices, as well as video cameras, monitors and other key systems.

Integration equipment in the suite transmits information from various video and data sources and routes it to multiple locations both inside and outside the operating room. Images and network data can be sent to any of the six displays within the suite, as well as to a display in an observation area outside the suite. Linked with hospital information systems, radiology and pathology lab systems, the system provides access to critical patient information and medical images.

The new suite is equipped with the latest KARL STORZ telescopes and instruments for performing a broad array of minimally invasive surgical procedures on animals of various sizes. For example, a new smaller-sized pediatric telescope enables surgeons to perform delicate procedures on small or young patients, like Basil, while still minimizing trauma.

Complete with video conferencing capability, surgical images can be sent anywhere, allowing true telemedicine for real-time collaboration with referring veterinarians, sharing information with colleagues on either of Penn Vet's campuses, or for use in the classroom. Images can be recorded as video or still images. This is achieved with the KARL STORZ AIDA® VET, which allows digital pictures and videos to be archived on CD, USB storage device and hard disk. Still images can also be immediately sent from the device to a printer for hard-copy records.

“We are proud to be leading the charge in these specialized procedures,” said Lillian R. Aronson, VMD, chief of surgery at Ryan Hospital. “Not only will the tools and equipment in this amazing facility allow us to better prepare the next generation of vets with these specialized skills, we can now

And as for Basil's future?

“Well, Gidget went to a family down the road, but Basil — oh, gosh, yeah, he's staying with me,” said Brent. “He's my buddy on the farm.”

Brent with Basil at home on the farm.





UNDERSTANDING EQUINE

infertility

*NBC experts offer solutions
to complex fertility issues*

BY SALLY SILVERMAN

When it comes to producing a healthy foal, it's not always as simple as the birds and the bees. It can take a team to produce a viable neonate. The expertise and talents of five

board-certified specialists in reproduction and behavior, collaborating with specialists throughout Penn Vet's New Bolton Center, are what make the Section of Reproduction and Behavior so exceptional.

"Capitalizing on the expertise of each clinician gives us a tremendous amount of collective synergy allowing us to provide the highest level of reproductive care for our patients," said Dirk Vanderwall, DVM, PhD, chief of the Section of Reproduction and Behavior. "We have veterinarians who are specialized in reproductive issues with mares as well as those who focus on stallions. Ours is one of the few veterinary programs to have a board-certified animal behaviorist [Sue McDonnell, PhD] integrally involved in our clinical program. And when non-reproductive medical or surgical issues adversely impact reproductive performance, we utilize the expertise of our colleagues who are specialists in other disciplines at New Bolton Center. We also have a superb intensive care unit that cares for mares at-risk during gestation along with the neonatal intensive care unit for foals once they are born."

So What's His Problem?

It is elementary biology: for a mare to get pregnant, sperm must fertilize an egg. Difficulties often begin with the stallion's inability to deliver viable sperm. The problem can be mechanical, reduced libido or poor sperm quality.



Above left, the semi-feral pony herd provides a valuable resource for studying reproductive behavior. Above right, a newborn foal in the NICU. Below, Dr. Vanderwall doing an embryo search in the lab.



At the Georgia and Philip Hofmann Research Center for Animal Reproduction at New Bolton Center, veterinarians work closely with behaviorist Sue McDonnell, PhD, founding director of the Havemeyer Equine Behavior Program at Penn Vet, as well as specialists from other areas of the hospital, to offer a comprehensive approach to the treatment of stallions with a variety of fertility problems. Ejaculatory problems might be the result of an irregularity in the stallion's reproductive organs, or an orthopedic problem that leaves him unable to mount a mare. The

Sports Medicine and Imaging Section, with advanced imaging diagnostics including nuclear scintigraphy, MRI and ultrasonography, is onsite to help evaluate these issues. Recently, back issues prevented a prized show stallion from breeding. Using positive reinforcement, Dr. McDonnell trained him to ejaculate while just standing in a stall. Dr. McDonnell has also developed protocols for pharmacologically enhancing and inducing ejaculation.

Oh, Do Behave!

A 1,200-pound stallion in a state of arousal makes live breeding and semen collection for artificial insemination potentially dangerous activities.

The Penn Started Stallion Program involves highly skilled professional stallion handlers using positive-reinforcement methods, either at New Bolton Center or the owner's farm, to introduce the stallion to an organized, safe breeding routine. Session-by-session progress is charted using a scoring system for a number of specific handling goals and procedures.

"With our skilled handlers even an overly aggressive stallion can learn that we have a protocol, and, if he follows it, he will get to the goal," explained Dr. McDonnell. Stallion schooling is all done with positive guidance. "This is why the Penn Started Stallion program is so successful," said McDonnell. "Because we can bring them around in a positive way."

In addition to the Penn Started Stallion program, a two-day short course on stallion handling is offered twice yearly by the Havemeyer Equine Behavior Lab.

Improving Results

Poor semen quality is often the cause of unsuccessful breeding. Since 2010, Penn Vet has been enjoying notable success with semen optimization processing techniques. According to Regina Turner, VMD, PhD, associate professor, "We are applying and tailoring different techniques to meet the needs of individual stallions. The success that we have seen using this approach with a growing number of stallions has made a huge difference in the breeding careers of these animals."

Sperm motility issues, for example, can be due to "toxic" seminal plasma. By carefully separating sperm from the seminal plasma, then mixing them with a commercially available semen extender, Dr. Turner has seen pregnancy rates increase more than 70 percent.

Freezing semen for artificial insemination is an increasingly important part of the equine breeding business, and Dr. Turner, with clinical resident Candace Jacobson, DVM

and Maria Schnobrich, VMD, has also successfully applied processing techniques, such as filtering out abnormal sperm, to improve the quality of frozen semen for stallions classified as “problem freezers.”

In 2011 the expertise of the clinicians was augmented with the addition of a state-of-the-art computer-assisted sperm analyzer, and a new fluorescent-based system for determining sperm concentration and viability. The new equipment allows for some of the most current and objective semen analysis services in the country.

Management for a Better Mom

The stallion is only half of the equation. Proper management of the mare is also required to produce a healthy foal. As the Director of New Bolton Center’s Equine Endometrial Biopsy Service and a consultant for the high-risk pregnancy program, Patricia L. Sertich, MS, VMD says that a good breeding plan begins with a Breeding Soundness Exam (BSE). The exam provides information for optimal breeding management to give a mare the best chance of establishing pregnancy and delivering a healthy, normal foal. It involves a complete medical history of the mare; a thorough examination of the external genitalia; internal examination of the reproductive organs through palpation and ultrasound; culture of an endometrial swab; and histological evaluation of an endometrial biopsy sample. First developed at New Bolton Center, the technique used for histological evaluation of the endometrial tissue samples is used worldwide to evaluate the quality of a mare’s uterus. Biopsy samples from across North America are submitted to the New Bolton Center lab for analysis.

In addition to these standard diagnostic procedures, when faced with challenging cases of mare infertility the clinicians at Penn Vet now also utilize procedures such as low-volume diagnostic uterine lavage, which enhances their ability to accurately determine whether a uterine infection is the underlying cause of the mare’s infertility.

“While any pathologist can detect changes,” explained Dr. Sertich, “a reproductive specialist is able to interpret the abnormalities in terms of the mare’s reproductive status. I have the luxury of reading each mare’s uterine biopsy sample myself which gives me an even more thorough understanding of the individual mare.”

Specialists at the Hofmann Center also can provide state-of-the-art mare breeding management, including low-dose artificial insemination and intensive mare monitoring to ensure that breedings occur when the mare is at just the right stage of the cycle.

A recent case highlights the benefit of Penn Vet’s team approach. A mare, unable to get pregnant for more than two

years despite a variety of treatments, was referred to New Bolton Center as a last resort. She was found to have blocked oviducts, an uncommon condition. Using a minimally invasive laparoscopic technique, one of New Bolton Center’s board-certified surgeons, Eric Parente, DVM, was able to gain access to the offending oviducts allowing Dr. Sertich to administer the specialized treatment that was needed to restore normal function to the oviducts. After the procedure the mare became pregnant following her next breeding.

The Newest Thing

In the 1980s embryo transfer was *the* cutting-edge assisted reproductive technology for mares, and the clinicians at Penn Vet led by Dr. Sertich, were instrumental both in developing the technique and introducing it into the horse breeding industry. Currently, embryo transfer remains the centerpiece of the assisted reproductive technologies offered, though newer, more advanced procedures such as oocyte transfer and intracytoplasmic sperm injection (ICSI) are being integrated into the expanding repertoire of assisted reproductive technology available.

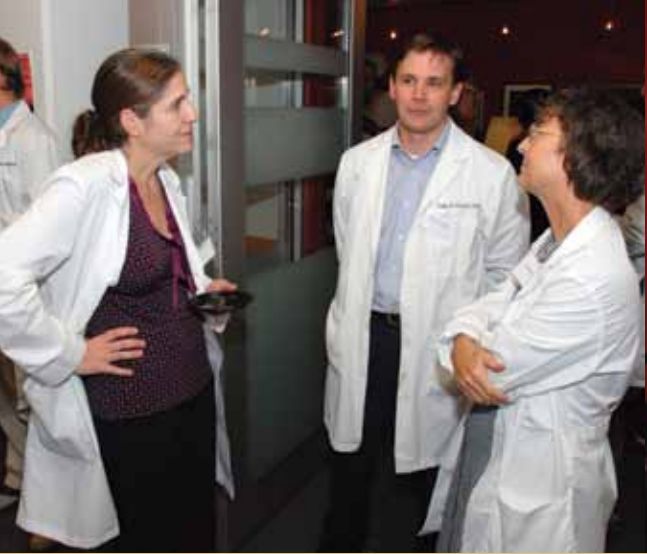
As with embryo transfer in the 1980s, the clinicians at Penn Vet are at the forefront of the development and application of these new technologies. Oocyte transfer and ICSI are used in mares with pathological problems of the reproductive tract that prevent them from successfully donating embryos. Although these mares can’t donate embryos, they can serve as oocyte (egg) donors, which involves collecting an oocyte directly from the mare’s ovarian follicle. The oocyte must then be fertilized by transferring it to a recipient mare previously inseminated with the desired semen, or it can be fertilized in the laboratory using the ICSI procedure and then transferred to a recipient mare.

Stallions with poor semen quality can also benefit from these procedures, particularly ICSI, since it allows fertilization of an oocyte via microinjection of a single sperm cell. The ICSI procedure is also valuable when there is an extremely limited amount of irreplaceable frozen semen (e.g., stallion is deceased), since one “regular” breeding dose of frozen semen can be partitioned into potentially thousands of “ICSI” breeding doses. Collectively, these new technologies are ushering in a new era of high-tech horse breeding and the clinicians at Penn Vet are helping to lead the charge.

Pink...or Blue?

Once the breeding has taken place and a pregnancy confirmed, the gender of the fetus can be determined. For breeding managers, this is often an integral part of the business, influencing a variety of financial decisions. The process, which uses transrectal ultrasonography, is quick,

continued on page 27



events



Clockwise from top left of opposite page, Ryan Hospital held two receptions to launch its “We Speak” marketing campaign. The first was for internal faculty and staff at PennVet, while the second welcomed colleagues from across Penn’s campus and provided an insider’s look at ad design and access to faculty and staff veterinarians.

Every year the Student Chapter of the American Veterinary Medical Association (SCAVMA) holds an auction to raise money for the student organization. Students, faculty, staff, donors, alumni and parents donate a variety of items for the silent and live auctions. Many of the student clubs are represented, selling raffle tickets and food. Proceeds from the auction allow SCAVMA members to attend conferences and symposia throughout the year. This year’s auction raised more than \$28,000. Pictured here: Bidders check out the silent auction items; Drs. Rose Nolen-Walston, Mark Haskins and Pat Sertich were the evening’s live auction callers; student clubs sell a variety of sweet and savory foods.

The Class of 2013 held their White Coat Ceremony in November 2011, marking the end of their core curriculum and beginning of clinical rotations. Pictured here: A group of students pose after the ceremony; Dr. Mark Cofone, representing the Dean’s Alumni Council and his veterinary class of 1985, led the pinning of the PennVet Alumni Society pin, which signifies the students’ roles as future members; Dr. Peter Dodson speaks about the students’ basic science years in a heartfelt speech; and Class President Daniel Lantz addresses his classmates and the audience.



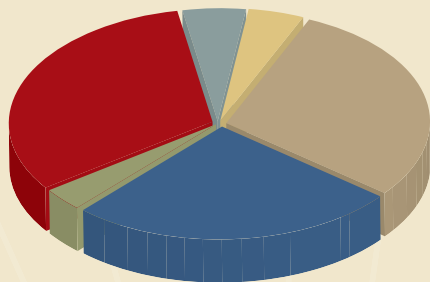
MAKING HISTORY

THE CAMPAIGN FOR PENN

25

PERCENT OF VETERINARY HERITAGE CIRCLE MEMBERS WHO ARE PENN VET ALUMNI

Planned giving is an important component to Penn Vet's fundraising initiatives and allows us to successfully fill our mission of teaching, healing and research. Since the launch of the Making History Campaign, Penn Vet friends have designated nearly \$43 million as part of their gift planning, placing the school among the top tier of schools at Penn receiving planned gift commitments.



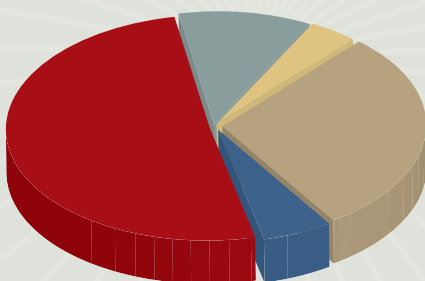
ESTATE GIFTS

- \$1,343,892 Professorships
- \$13,703,325 Capital
- \$2,261,611 Financial Aid
- \$1,900,245 Research
- \$12,469,320 Unrestricted
- \$11,277,461 Special Programs



\$13.7

TOTAL ESTATE GIFTS (IN MILLIONS) DESIGNATED FOR CAPITAL IMPROVEMENT PROJECTS



CAMPAIGN TO DATE

- 50% Capital
- 11% Supporting Students
- 4% Professorships
- 29% Frontiers of Research
- 6% Annual Giving

“

As I think about my legacy and what I believe in, as well as the incredible joy my animals bring to me, it is without hesitation that I include Penn Vet in my estate planning. My bequest to Penn Vet will help secure the continued research for the wellness of dogs and horses. Over the years, my animals have received amazing care at Ryan Hospital, as well as from the George Widener Hospital at Penn's New Bolton Center. I can rest well at night knowing that virtually all of my primary and specialty care veterinarians have trained at Penn Vet and that the Penn facilities are so close to home and their doors are always open to help an animal in need. We are truly blessed and I can't think of anything more personally rewarding than to give back and ensure that my love and dedication for animals is my legacy.”

– Stephanie, Chester Co., PA



CAMPAIGN UPDATE

200

TOTAL NUMBER OF MEMBERS IN THE VETERINARY HERITAGE CIRCLE, WHICH IS COMPRISED OF INDIVIDUALS WHO HAVE INCLUDED PENN VET IN THEIR ESTATE PLANS.

\$12.5

TOTAL ESTATE GIFTS (IN MILLIONS) DESIGNATED AS UNRESTRICTED

THE VETERINARY HERITAGE CIRCLE

Are You a Member?

We are thankful to those that have made the ultimate commitment to Penn Vet as members of the Veterinary Heritage Circle of the Harrison Society, a program that allows friends and supporters to include Penn Vet in their estate plans.

It is, of course, through the generosity of alumni, supporters and friends that the University of Pennsylvania School of Veterinary Medicine is able to meet our mission of teaching, healing and research while leading the field in new treatment advances, ground-breaking research discoveries and educating the brightest young minds in the profession.

Veterinary Heritage Circle Members have made a commitment to helping Penn Vet reach our mission by including us in their estate plans through bequests, trusts, charitable gift annuities, retirement plans, life insurance and other arrangements. In doing so they have created a legacy that will have a lasting impact on the future of veterinary medicine.

To join the Veterinary Heritage Circle, or to learn more about the benefits of membership, please contact Jillian Marcussen, director of stewardship and special projects, at:

University of Pennsylvania
School of Veterinary Medicine
215.898.4235
jillian2@vet.upenn.edu



Realizing — and Supporting — Potential

Through their personal experience, Connie and Alan Buerger choose to support minimally invasive surgery at Ryan Hospital

BY HELEN RADENKOVIC

In October of 2010 Connie Buerger brought her beloved 11-year-old Portuguese water dog, Max, to Penn Vet's Ryan Hospital to have a group of masses growing on his left shoulder evaluated. One of the reasons Connie brought Max to Ryan Hospital was because her daughter-in-law, and Penn Vet Overseer, Krista Buerger, had shared with her the excellent care her own Portuguese water dog, Kobe, had received just a year before.

Connie and her husband, Alan, founded Coventry, the creator and leader of the secondary life insurance market. Their son, Reid, and daughter-in-law, Krista, both work in the family business. Connie and Alan live in the Philadelphia suburbs, dividing their time between their business, philanthropy and their growing family — Krista just gave birth to their second grandchild. Connie and Alan are both true animal lovers. When he was a young boy, Alan's family raised and showed collies. While Connie did not grow up with dogs, she always wanted one, so as soon as it was possible, she and Alan took in three beautiful Portuguese water dogs: Max, Chance and Dash.

That October visit at Ryan Hospital revealed that Max had myxofibrosarcoma, an aggressive soft-tissue cancer. After receiving this tough news, Connie placed her confidence — and Max's life — into the expert hands of Ryan Hospital's surgery and oncology teams. With David Holt, BVSc, professor of surgery, and Lili Duda, VMD, Dipl. ACVR, adjunct associate professor of radiation oncology, on his team, Max had the best chance at fighting and defeating his cancer. Max's surgery to remove three cancerous masses from his shoulder was a success, but he still required a full course of radiation therapy. Between March and August of 2011 Max and Connie became daily visitors to Ryan Hospital's Rosenthal Imaging and Treatment Center (RITC) where he received the ongoing treatments he needed. His friendly, playful disposition quickly made Max one of Ryan Hospital's favorite patients, and to everyone's great relief and delight on September 13, 2011 he received a clean bill of health — no small feat for an 11-year-old dog.

During her many hours in the RITC waiting room, Connie had an opportunity to get to know Ryan



Connie Buerger pictured with Max, her 11-year-old Portuguese water dog.

PHOTO BY WILLOW STREET PICTURES (WWW.WILLOWSTREETPICTURES.COM)

Hospital well and was immediately impressed by the expertise, compassion and dedication of each clinician and staff member to improve the health and quality of life of pets. She even found that parking attendant Sly was always ready to help find Connie and Max a parking spot close to the RITC entrance so that Max would not have to walk too far to receive his treatment.

And what really made Connie start to think about veterinary medicine and its role in preserving the human-animal bond was learning about Ryan Hospital's construction of a new minimally invasive surgery suite.

This minimally invasive surgery suite would be the first of its kind at any veterinary teaching hospital and offer an impressive variety of minimally invasive surgery techniques, such as arthroscopy, endoscopy, laparoscopy, thoracoscopy, minimally invasive fracture repair and interventional radiology. It would be the next leap in the care available to pets — the benefits of minimally invasive surgery were very clear to Connie and Alan — less chance of infection, a significantly shorter recovery time and significantly less pain for pets. An important component to Ryan Hospital's plans for the minimally invasive surgery suite that resonated with Connie and Alan was that Ryan Hospital clinicians also hoped to offer these benefits of less infections, shorter recovery

Continued on page 36

The Success of Neville Bardos: A Testament to Teamwork

In the aftermath of a tragic barn fire, Neville heals and goes on to compete with the best

BY SALLY SILVERMAN

When Neville Bardos was admitted to the George D. Widener Hospital for Large Animals on Penn Vet's New Bolton Center Campus in the early morning hours of May 31, 2011, the prognosis was poor. The 12-year-old, 16.1-hand chestnut gelding had been caught in a horrific barn fire. The last horse to make it out, he was rescued just before the building's roof collapsed. Neville was one of five surviving horses, and the most severely injured of the four admitted to Widener Hospital.

While Neville presented a bright and alert horse, his physical examination revealed an elevated heart rate, thick black nasal discharge due to smoke inhalation, and blood work changes consistent with dehydration.

When Neville and his three stablemates arrived, Samantha Hart, DVM and Megan Burke, DVM jumped into action.

"The initial work-up went as smoothly as it possibly could," said Dr. Hart. "I had nurses, nursing assistants and veterinary students with every case. Dr. Burke and I went around and triaged the cases."

The emergency team's initial goal was to stabilize Neville by placing the horse on intravenous fluids to address his dehydration, administering supplemental oxygen for the smoke inhalation and delivering broad-spectrum antibiotics to help avoid infection.

"I arrived at the barn at 4:00 AM," said Boyd Martin, Neville's trainer, rider and one of his owners. "Dr. Hart told me that Neville's blood results were terrible, but he was eating hay and wind-sucking on the stall, and that those signs were more important than the lab results. She told me that he looks like a horse that wants to fight on."

Neville had evidence of mild burns over his face, and generalized edema across his topline due to exposure to high temperatures. The fire had also inhibited Neville's normal lung function. His initial blood work indicated that his lungs were not able to absorb adequate amounts of oxygen without supplementation, and he remained on oxygen for several days. Endoscopic examination of Neville's upper airway showed significant thermal injury, with widespread sloughing of dead tissue resulting from that injury.

During his stay, numerous veterinarians teamed together to care for Neville, with constant support from the nursing team of certified veterinary technicians, and trained, experienced nursing assistants. He received treatment to help improve clearance of ash and other particles from his lungs, to support kidney and gastrointestinal tract function and to provide relief from the extremely painful burns.

On day one and throughout his eight-day hospitalization, Neville remained bright and attentive, with an excellent appetite.

"He is an extraordinary horse with an amazing attitude and a wonderful patient with whom to work," said Dr. Hart, board-certified in both veterinary surgery and emergency critical care, and a lecturer in large animal emergency and critical care at New Bolton Center. The intensive 24-hour monitoring and management provided by New Bolton Center's dedicated team of veterinarians, nurses and students gave Neville the best chance of recovering from his injuries.

"The service provided was flawless," said Boyd. "The doctors were diligent about updating all of those involved on the status of the horses, and they went far beyond the course of duty to research treatments for smoke inhalation."

Neville did his part, too. Boyd said of his attitude in the hospital and throughout his recovery, "This is a horse with plenty of passion left in him. He is an enthusiastic, spirited guy who really loves life."

Neville was discharged from New Bolton Center on June 7.


Just eight weeks after the fire, Neville Bardos showed just how big a heart he has. He and Martin travelled to England to compete in one of the most grueling three-day competitions in the world, the four-star international Burghley Horse Trials. In fourth place after a clean cross-country round, Neville Bardos finished the competition seventh. He is currently ranked as the number-one event horse in the US, and Boyd thinks a trip to the London Olympic Games could be in both of their futures. 



PHOTO BY LISA THOMAS BOYDANDSILVAMARTIN.COM

Equi-Assist: The Homecare Nursing Program for Equine Patients

BY SALLY SILVERMAN

On December 7, 2011, Equi-Assist celebrated its one-year anniversary. While this innovative program has felt the challenges of any newborn entity, the vision and personal experience of Margaret Hamilton Duprey and the passion, skill and commitment behind the equine homecare nursing program remain as clear and as strong as ever.

The program was borne of the realization that the level of nursing care needed by ill or post-surgical horses that have returned home often falls somewhere between the capabilities of the horse owner and what is provided by a veterinarian. Equi-Assist was created to fill that gap, providing compassionate care at home. The program links the primary care veterinarian, owner, trainer, farm manager, New Bolton Center clinicians and farriers together and is the first of its kind in the nation, and possibly the world.

Margaret, a well respected, lifelong equestrian in Chester County, played a pivotal role in the creation of the program. It was through personal experience with her own horses, at home, that she recognized the need for a service offering qualified, experienced professional care to bridge the gap between hospital and home care. Once the idea was born, she was instrumental in guiding the design of the program, and made a generous gift to see it realized.

“Equi-Assist is going to get even better with several new smart technologies being introduced in year two of the program, and plans for a skilled nursing center on New Bolton Center’s campus duplicating a home-like setting for horses that still need special care,” said Margaret. “Those that have used Equi-Assist have been amazed at what a difference it makes in their horses’ recovery and lifestyle.”

James Orsini, DVM, director of Equi-Assist, said, “Despite the universal hurdles of launching any new program, year one of Equi-Assist has many important successes to celebrate. Veterinarians and owners quickly endorsed the business model. We quickly recognized



other opportunities to help owners and primary care veterinarians, including well patient care, massage therapy and nutritional consultation.”

Year two, Dr. Orsini promises, will see the implementation of smart technologies to make monitoring patients easier and more objective.

Patricia Welch is the associate director of Equi-Assist, overseeing the day-to-day operations of the program. “It has been a challenging and exciting year,” said Patty. “We started with one full-time nurse, Jenn Wrigley, and have added two part-time nurses, Ashley Lester and Ashley Watson. All of our nurses are certified veterinary technicians, bringing unequaled training and professional experience to our clients. And we can now provide our clients with 24-hour service, seven days a week — that’s huge.”

While follow-up care to patient hospitalization, including wound management and administration of medications, is a natural mainstay of the program, Welch

says it has been fascinating and fulfilling to see the many unexpected ways in which the program can really make a difference in the lives of those it helps.

“Nutritional consultation has become a significant part of our care,” said Patty.

Before starting with the Equi-Assist program, Jenn trained with a New Bolton Center nutritionist. She continues to broaden her expertise by attending equine nutrition seminars and consults with a nutritionist on every case. She also received training in equine massage.

“The massage service has become a very valuable part of the care that Jenn provides for recovery as well as the healthy horse,” said Patty.

SUCCESS STORIES

The caseload, said Jenn, is varied and the successes have been gratifying. There was, for example, a pregnant mare. She was apprehensive, did not like to be handled, and was even reluctant to come into the barn. Her owners were concerned that the mare might have problems accepting normal foal behavior. Jenn began a program of regular massage, visiting with her twice a week, mimicking foal habits.

“She was standoffish at first,” Jenn said. “Little by little, though, she became more receptive. By the end of a month, she would allow me to tie her safely. She eventually relaxed to the point of falling asleep.”

The mare delivered a healthy, full-term foal, and was a model mom.

Another foal, from out of state, underwent major surgery for a cleft palate and stayed at a nearby farm after the surgery, receiving care from Equi-Assist nurses. Today she is a normal, full-sized rambunctious youngster who has become the leader of her yearling herd.

A stallion recovering from an infectious disease benefitted from regular diagnostic testing, monitoring and care by Equi-Assist nurses. Today he is the picture of health, gaining weight and thriving.

“We’ve gotten such great feedback,” said Patty. “The people that use the Equi-Assist service absolutely love it. They instill a huge amount of trust in our team.”

Jenn says that she keeps in touch with the clients she has worked with, and they send her updates on the patients’ progress and successes.

“They even send photos,” said Jenn. “It’s heartwarming to know how close we’ve become.”



JAMES A. ORSINI, DVM, ACVS

Director of Equi-Assist

In addition to his international reputation as author, editor, board-certified surgeon, researcher and teacher, Dr. Orsini is associate professor of surgery at Penn Vet and serves as director of the Laminitis Institute. Dr. Orsini founded and directed five International Equine Conferences on Laminitis and Diseases of the Foot, a biennial conference and is co-director of the Laminitis West Conference. In addition to his more than 30 years of surgical experience, Dr. Orsini is co-editor of *Equine Emergencies: Treatment and Procedures* and is preparing the fourth edition of this best-selling book. Dr. Orsini leads the multiple research, clinical and educational components of the Laminitis Institute, crucial to conquering laminitis.



PATRICIA D. WELCH, BS

Associate Director, Equi-Assist

Patty has assisted in the development and leadership of the Laminitis Institute’s core missions of research, education and clinical service since its inception in 2007. Patty has played a key role in the running of the International Equine Conference on Laminitis and Diseases of the Foot and the Laminitis West Conference, and, as associate director of Equi-Assist oversees the day-to-day operation of the business plan.



JENN A. WRIGLEY, CVT

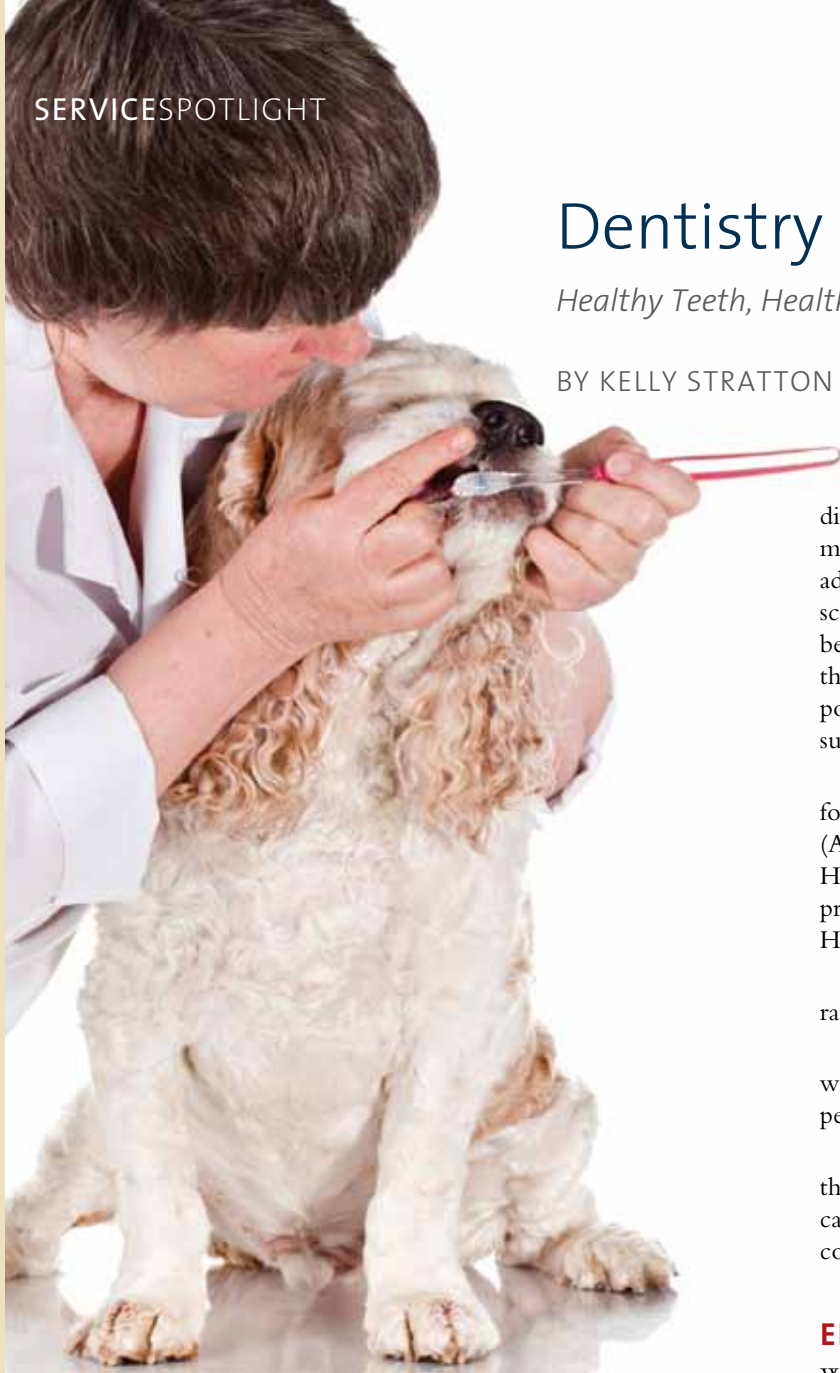
Nursing Supervisor, Equi-Assist

Jenn is the premier equine home care nurse at New Bolton Center. Having earned her associate in science degree from Harcum College in 1996, she is a licensed certified veterinary technician with special interests and nursing skills in caring for horses with laminitis, equine nutrition, neonates and topics relating to caring for the post-hospitalized equine patient. She is a 2010 certificate holder in Equine Sports Massage Therapy by Equissage[®] and has more than 14 years of experience in treating large and small animals, seven of which she spent in the adult and neonatal intensive care units. She is coauthor of a book chapter entitled “Homecare for the Chronic Laminitis Case” in *Veterinary Clinics of North America: Equine Practice*. Jenn is a member of AAETV.

Dentistry and Oral Surgery

Healthy Teeth, Healthy Pets

BY KELLY STRATTON



According to the American Veterinary Dental Society (AVDS), up to 80 percent of dogs and 70 percent of cats show signs of oral disease. The most common oral disease, periodontal disease, begins as a buildup of plaque in a pet's mouth and is the most frequently diagnosed health problem in dogs and cats.

Periodontal disease appears to have effects on human health, and we suspect there are similarities to its impact on our pets, including effects on heart, kidney and liver health, lack of diabetes control, and low infant birth rate due to effects of plaque bacteria and toxins on the body that are released into the bloodstream.

Plaque is formed by food particles, saliva, bacteria and their toxins. When not brushed off, plaque hardens to form calculus (tartar). While calculus is not the bad actor that plaque is when it comes to causing periodontal

disease, it provides a rough surface where plaque can more easily accumulate. Once large amounts of calculus adhere to the teeth, hand instruments and ultrasonic scalers become necessary to clean the teeth above and below the gumline. After thorough supragingival (above the gumline) and subgingival (below the gumline) scaling, polishing of the teeth is necessary to restore smooth surfaces to the scaled teeth.

To emphasize the importance of routine oral care for pets, the American Veterinary Medical Association (AVMA) has claimed February as National Pet Dental Health Month. But John R. Lewis, VMD, assistant professor of dentistry and oral surgery at Penn Vet's Ryan Hospital, wants to make something clear:

"Dental health is a not a month-long proposition, but rather a life-long effort," he said.

Still, in his day-to-day appointments and interactions with clients, Dr. Lewis is surprised by the number of people who never considered brushing their pet's teeth.

"Make no mistake," said Dr. Lewis, "daily brushing is the single most important and least expensive thing clients can do for their pet to maintain dental health and perhaps contribute to overall health."

EFFECTIVE BRUSHING

While daily brushing with a soft-bristled brush is ideal, Dr. Lewis understands that for owners with busy schedules, this addition to their daily schedule may be a challenge. If possible, however, Dr. Lewis recommends brushing at least every other day.

"A soft-bristled brush, in a circular motion at a 45-degree angle to the gumline is a powerful tool against plaque and gingivitis," he said. "The mechanical effect of the bristles is more important than what is placed on the brush. Human toothpaste is not recommended since it contains fluoride and shouldn't be swallowed."

ADDITIONAL HOME ORAL HYGIENE MEASURES

The phrase "home oral hygiene" refers to measures taken by pet owners to control or prevent plaque and calculus accumulation. These measures include special diets, chew toys, treats, rinses and water additives.

Special diets use the cleansing action of specially engineered kibble, and/or additives, such as sodium hexametaphosphate, that prevent calculus formation. Dental treats may also use similar mechanisms of action.

Toys may provide a cleansing effect while chewed on by pets, but care should be taken to avoid toys that are hard enough to cause tooth fractures. Dogs can generate large amounts of force with their jaws, and chewing on a real bone or other hard object can result in inappropriate tooth wear or painful tooth fractures.

Rinses, gels and pet toothpastes can be applied to a toothbrush or directly to the teeth and gingiva as an adjunct preventive measure. Home oral hygiene, when performed properly, may allow for longer intervals between professional dental cleanings.

In addition, owners should start when pets are young.

“When they’re still puppies and kittens, they can learn that it’s okay for their owner to open their mouth, lift their tongue and feel around,” said Alexander M. Reiter, Dr. med. vet., head of the Dentistry and Oral Surgery Service. “Starting brushing early is important – and the earlier something different is noticed, the more treatable it is.”

GETTING A PROFESSIONAL’S HELP

Just like in human dentistry and oral health, even the most dedicated brusher needs to see a specially trained professional for regular checkups and cleanings as needed.

So, just as people get their teeth professionally cleaned, so should pets.

The specialists of the American Veterinary Dental College (AVDC) have defined the phrase “professional dental cleaning” as scaling (supragingival and subgingival plaque and calculus removal) and polishing of the teeth with power/hand instrumentation performed by a trained veterinary health care provider under general anesthesia.

This is in contrast to “non-professional dental scaling,” which refers to dental scaling procedures performed on pets without anesthesia, often done by individuals untrained in veterinary dental techniques.

“Non-professional dental scaling, while it may be cosmetically pleasing, provides a false sense of security,” said Dr. Lewis. “Even though the crowns of the teeth look like new again, this kind of cleaning neglects the most important part of the teeth — the subgingival areas.”

Owners should be wary of practices that tout anesthesia-free dental cleanings as a professional cleaning. Unless the dog or cat is placed under general anesthesia so that the subgingival area can be cleaned properly, Dr. Lewis warns this type of cleaning is not effective treatment for established periodontal disease. Even the most tolerant dog or cat will not let you clean well under

HISTORY OF THE SERVICE

Penn Vet was the first veterinary school in North America to offer an organized program in veterinary dentistry and oral surgery in the 1970s. Borne out of collaboration between Penn Vet and Penn’s Dental School, clinical and educational programs developed from discussions and case interactions. Dental and oral surgical cases were managed by various surgeons until it became a particular topic of interest to Professor of Surgery Colin Harvey, BVSc, and the caseload increased as a result.

The Veterinary Dentistry and Oral Surgery Service was established as a separate clinical entity within the Section of Small Animal Surgery in the mid-1980s, offering a full range of endodontic, periodontal and restorative procedures as well as involved oral and maxillofacial surgery procedures. An elective educational program for Penn Vet students was first offered in the early 1980s, the first in the world.

From the early 1980s onwards, sponsored veterinary dental and oral surgical research projects have been conducted at Penn, with funding provided by foundations and commercial sponsors.


In 1994, a symposium hosted by the University of Pennsylvania focused on the awareness and importance of oral hygiene in veterinary patients led to the formation of the Veterinary Oral Health Council (VOHC), which was established three years later in 1997. This organization, of which Dr. Harvey serves as director, exists to recognize products that reach pre-set standards in retarding accumulation of dental plaque or tartar in dogs or cats.

the gumline when awake, and it is impossible to take dental X-rays when the patient is awake.

PICKING THE RIGHT PRODUCTS

The Veterinary Oral Health Council (VOHC) places its seal of acceptance on products that meet pre-set standards of slowing development of plaque and calculus (tartar) in dogs and cats. Products are awarded the VOHC Seal of Acceptance following data review from trials conducted according to VOHC protocols. For more information on VOHC-accepted products, visit www.vohc.org.

Providing dental care for companion animals requires effort that continues throughout the patient’s life. However, this effort is likely to be rewarded.

“More and more evidence exists that attention to dental health may result in more comfortable, healthier, and longer lives for our beloved pets,” said Dr. Lewis. 

About the Dentistry and Oral Surgery Service

While clinicians and technicians in the Dentistry and Oral Surgery Service see their share of dental cleaning patients, most of their caseload is comprised of animals needing specialized care.

“Primary care veterinarians send us all kinds of rare cases,” said Dr. Lewis. “On a day-to-day basis we see oncology cases, jaw fracture fixations, palate defect repairs.”

Dr. Lewis and Dr. Reiter are the experts called upon when something is complicated.

“We are very good at complicated periodontal surgery; palate surgery; severe head trauma with jaw fractures; maxillofacial cancer with reconstructive surgery of the face or lips; and endodontic therapy with prosthetic dentistry,” said Dr. Reiter.

Splitting the duties of supervising the clinical caseload 50/50, Dr. Reiter and Dr. Lewis also share on-call duties with dentistry and oral surgery residents (Drs. Rice, Menzies, Soltero-Rivera and Jennings) during weekends and holidays.

In addition to their clinical responsibilities, Drs. Lewis and Reiter are also involved in furthering the field of veterinary dentistry through research and clinical trials. One area of current focus is Dr. Lewis’ studies on squamous cell carcinoma. Two clinical trials, led



Ryan Hospital Dentistry and Oral Surgery Service team during a recent procedure.

through Penn Vet’s Veterinary Clinical Investigations Center (VCIC), have just wrapped up and are awaiting publication.

THE TEAM

COLIN HARVEY, BVSC



Dr. Colin Harvey is professor of surgery and dentistry at Penn Vet. He graduated BVSc from the University of Bristol (UK) in 1966 and then completed an internship and residency in surgery at Penn Vet after which he became assistant professor in 1969. In 1980 Dr. Harvey became a professor and six years later was awarded a Fellowship of the Royal College of Veterinary Surgeons (RCVS) for his thesis on “Laryngeal Surgery in the Dog.” In recognition of having received training in dental procedures from colleagues at Penn’s School of Dental Medicine and his charter membership in the AVDC, his academic appointment was renamed professor of surgery and dentistry in 1990.

Dr. Harvey is a Diplomate of the American College of Veterinary Surgeons; member of the Organizing Committee and charter Diplomate of the American Veterinary Dental College and of the European Veterinary Dental College. He is also a charter Diplomate of the European College of Veterinary Surgeons.

He was section chief of Small Animal Surgery (1974–80) and vice chair of the Department of Clinical Studies (1996–2002) and was the founding head of the Dentistry and Oral Surgery Service at the University of Pennsylvania.

Dr. Harvey was editor of the journal *Veterinary Surgery* from 1982–87 and editor of *The Journal of Veterinary Dentistry* from 1994–2000 and has been a reviewer or review board member for numerous other journals. His publications include approximately 70 chapters in textbooks, 130 papers in peer-reviewed journals and 100 abstracts and other papers on surgical or dental topics. Dr. Harvey has written, edited or co-edited five books on small animal surgery and dentistry.

His research interests include veterinary and comparative periodontal disease (including comparative microbiology, standardization of periodontal scoring, plus prevention and treatment), the interaction of infectious oral diseases, particularly periodontal disease, with the rest of the body, specifically distant organ and systemic effects, and the utility and effectiveness of antimicrobial drugs in the management of patients with oral diseases.

JOHN LEWIS, VMD

Originally from Wilkes-Barre, PA, Dr. John Lewis decided early in life that he wanted to become a veterinarian.



After earning a biology degree from Bucknell University in Pennsylvania, Dr. Lewis applied to Penn Vet. It was during his time on rotations that he got his first taste of clinical veterinary dentistry. After earning his VMD in 1997, Dr. Lewis joined a general practice in Raleigh, NC.

“I had only a one-week rotation in dentistry during my time at Penn Vet,” said Dr. Lewis, “but because the vets I worked with in general practice had no training in dentistry or oral surgery, I became the expert by default. Today, Penn Vet students have more opportunities for learning dentistry than any other vet school, including a two-week rotation, third-year elective course and the Student Chapter of the AVDS.”

His interest in dentistry and oral surgery grew so he applied for a residency at Penn Vet, which he began in 2002. In 2006, he was appointed assistant professor.

At present, in addition to his clinical interests, Dr. Lewis teaches students, interns and residents, and is heavily involved in making strides in understanding squamous cell carcinoma, a common oral cancer in cats, dogs and humans.

ALEXANDER REITER, DIPL. TZT., DR. MED. VET.

Dr. Alexander Reiter is a Diplomate of the American Veterinary Dental College (AVDC) and the European Veterinary Dental College (EVDC). He is the recipient of the 2004 European Veterinary Dental College/European Veterinary Dental Society Award and the 2006 AVDS/Hill’s Research and Education Award.



Always having an appreciation for animal documentaries as a child and teenager, Dr. Reiter knew he wanted to do something with animals. After spending a year in the Austrian army, where he also worked with the dogs and horses of the mountain unit, Dr. Reiter graduated from the University of Veterinary Medicine in Vienna in 1996.

The day after he graduated, Dr. Reiter moved to the US — to Mesa, AZ — where his interest in dentistry and oral surgery developed. Dr. Reiter completed a two-year residency at Penn Vet in 2000. After staying on as lecturer for three years and completion of a postgraduate


thesis study on “Tooth Resorption in Domestic Cats,” Dr. Reiter became standing faculty at Penn Vet in 2003 and today is an associate professor and the head of the Dentistry and Oral Surgery Service.

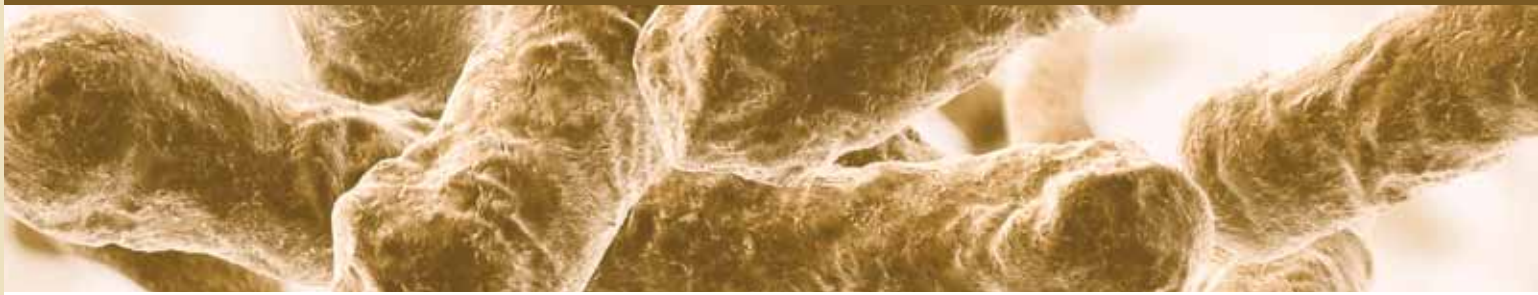
Dr. Reiter focuses his research on causes and pathogenesis of multiple tooth resorption; impact of periodontal disease on renal function; evaluation of techniques for periodontal surgery, jaw fracture healing and palate defect repair; microsurgery and maxillofacial reconstruction; and development of new treatment strategies for the oral and maxillofacial cancer patient.



RESIDENTS, TECHNICIANS AND DENTAL HYGIENISTS

A full-time veterinary dentistry and oral surgery residency training program, the first in the world, was established at Penn Vet in 1989. This program has trained far more board-certified veterinary dentists and oral surgeons than any other program, and these veterinary dental Diplomates are now practicing in the USA, Canada, Europe, South America and Japan. Our current residents demonstrates that international influence: Dr. Robert Menzies hails from Australia, Dr. Soltero-Rivera is originally from Puerto Rico, and Dr. Michael Jennings, originally from Michigan, is closer to home.

Hygienists and specialized technicians have played a huge role in the teaching, research and clinical missions of the service. Bonnie Miller, BS, RDH, has provided her expertise at Penn Vet for 21 years. Jeanette Hernandez, RDH, CVT, spends half her week at a human dental practice and the other half at Penn Vet. Amy Kressler, CVT, is the service’s newest addition. Both she and Jeanette are working toward specialization in veterinary dentistry offered by the Academy of Veterinary Dental Technicians (AVDT). 



GRANTS

David Artis, PhD, associate professor, has received three grants totaling more than \$4 million, including a \$225,000 National Institutes of Health grant for “Regulation of protective immunity following enteric viral infection;” a \$2 million, five-year grant to study the “Regulation of protective immunity following enteric viral infection;” and a \$1.8 million grant to study “Regulation and function of innate lymphoid cells in the gut.”

Ashley Boyle, DVM, assistant professor of medicine in field service, was recently awarded two grants. The first was awarded by the American Quarter Horse Foundation for a one-year investigation into the “Verification of a *Streptococcus equi* detection assay for equine nasopharyngeal and guttural pouch wash samples.” The second is to study the “Prevalence and strain characterization of methicillin resistant *Staphylococcus aureus* (MRSA) from equine nasopharyngeal and guttural pouch wash samples” and was awarded by the Equine Research Endowment Grants, Department of Clinical Studies New Bolton Center.

Ralph Brinster, VMD, PhD, Richard King Mellon Professor of Reproductive Physiology, has been awarded a three-year, \$156,000 grant from the St. Baldricks Foundation for his work on “Translating the Science of Testicular Tissue Cryopreservation.”

Serge Fuchs, PhD, professor of cell biology, has been awarded a five-year, \$1.29 million National Institutes of Health grant to study the “Role of HOS in Cell Transformation and Apoptosis.”

Brett A. Kaufman, PhD, assistant professor, has been awarded a \$100,000 grant from the Trustees of the W.W. Smith Charitable Trust for “Mitochondrial DNA Damage and the Progression Toward Heart Failure.”

Cynthia Otto, DVM, PhD, associate professor of critical care and director of the Penn Vet Working Dog Center, has received a \$100,000 grant from the American Kennel Club AKC Companion Animal Recovery Detection Dog DNA Bank.

Nicola Mason, PhD, assistant professor, has received a two-year, \$108,527 grant from the Morris Animal Foundation to study “Development of a CD20-specific antibody fragment for targeted therapy of canine B cell lymphoma.”

RECENT PUBLICATIONS

Bish LT, Sleeper MM, Forbes SC, Morine KJ, Reynolds C, Singletary GE, Trafny D, Pham J, Bogan J, Kornegay JN, Vandendorpe K, Walter GA, Sweeney HL. Long-Term Systemic Myostatin Inhibition via Liver-Targeted Gene Transfer in Golden Retriever Muscular Dystrophy. (2011) *Hum Gene Ther.*, Aug 30. [Epub ahead of print].

Guziewicz KE, Slavik J, Lindauer SJ, Aguirre GD, Zangerl B. Molecular consequences of BEST1 gene mutations in canine multifocal retinopathy predict functional implications for human bestrophinopathies. *Invest Ophthalmol Vis Sci.* 2011 Jun 23;52(7):4497-505.

John B, Ricart B., Harris TH, Tait ED, Randall L, Weninger W, Hammer DA, Hunter CA. 2011. Analysis of behaviour and trafficking of dendritic cells within the brain during Toxo-plasmicencephalitis. (2011) *PLoS Pathogens.* 7(9):e1002246.

Littman MP. A Matter of Opinion: Should we treat asymptomatic, nonproteinuric Lyme-seropositive dogs with antibiotics? *Clinician's Brief* 2011;9:13-16.

Lopez C, Tamar Hermesh (2011). Systemic responses during local viral infections: type I IFNs sound the alarm. *Current Opinion in Immunology* 23(4): 495-499.

Monticelli, LA, Sonnenberg, GF, Abt, MC, Alenghat, T, Ziegler, CGK, Doering, TA, Angelosanto, JM, Laidlaw, BJ, Yang, CY, Sathaliyawala, T, Kubota, M, Turner, D, Diamond, JM, Goldrath, AW, Farber, DL, Collman, RG, Wherry, EJ, Artis, D (2011). Innate lymphoid cells promote lung-tissue homeostasis after infection with influenza virus. *Nat Immunol* doi:10.1038.ni.2131.

Siracusa, MC, Comeau, MR, Artis D (2011). New insights into basophil biology: initiators, regulators, and effectors of type 2 inflammation. *Ann N Y Acad Sci.* 1217:166-77. PMID: 21276006.

Slade DJ, Lees GE, Berridge BR, Clubb FJ, Kuczynski LA, Littman MP. Resolution of a proteinuric nephropathy associated with *Babesia gibsoni* infection in a dog. *J Am Anim Hosp Assoc* 2011;47:e138-e144.


Sonnenberg, GF, Fouser LA, Artis D (2011). Border patrol: regulation of immunity, inflammation and tissue homeostasis at barrier surfaces by IL-22. *Nat Immunol.* 12(5):383-90. PMID: 21502992.



Sorenmo, KU, Krick E, Coughlin CM, Overley B, Gregor TP, Vonderheide RH, Mason, NJ. CD40-activated B cell cancer vaccine improves second clinical remission and survival in privately owned dogs with Non-Hodgkin's Lymphoma. (2011) *PLoS one* 6(8): 1-8.

Vite CH, Wang P, Patel RT, Walton RM, Walkley SU, Sellers RS, Ellinwood NM, Cheng AS, White JT, O'Neill CA, Haskins M. Bio-distribution and pharmaco-

ynamics of recombinant human alpha-L-iduronidase (rhIDU) in mucopolysaccharidosis type I- affected cats following multiple intrathecal administrations. (2011) *Mol Genet Metab.* 103(3):268-74.

R J. Whitmarsh, CM. Gray, B Gregg¹, DA Christian, M J May, PJ. Murray, and CA Hunter. A critical role for SOCS3 in innate resistance to *Toxoplasma gondii*. (2011) *Cell Host Microbe*, 10(3):224-36. 

Continued from page 13

causes the mare little stress and, for a clinician with extensive fetal sexing experience, such as Tamara Dobbie, DVM, is very accurate, as high as 98 percent when performed between 60 and 75 days of pregnancy.

As an example, during the 2011 breeding season three embryos from a single donor mare were transferred into three different New Bolton Center recipient mares and the resulting pregnancies were fetal sexed by Dr. Dobbie before the mares departed allowing Dr. Dobbie to inform the mare owner that, much to her delight, she could plan for the birth of two colts and one filly this spring.

Pregnancies at Risk, Foals in Danger

The majority of mares that are successfully bred will go through the 11 months of pregnancy without event. For the small percentage with a history of pregnancy loss in late gestation, or mares that have developed a serious medical condition that places the pregnancy at great risk, there is the high-risk pregnancy program. Housed in the Graham French Neonatal Section of the Connelly Intensive Care Unit (NICU), the mares are carefully evaluated to determine the status of the pregnancy and potential problems they face during gestation, delivery and early care of the foal. Mares are monitored daily by perinatologists and reproduction clinicians. Weekly transabdominal ultrasound exams and nightly fetal heart rate monitoring are


performed to evaluate the well-being of the fetus. A team of veterinarians including perinatal-neonatal, reproductive, anesthesia and surgery specialists are on standby 24 hours a day to provide emergency care for delivery of the foal and to address any crisis situation the mare may encounter.

Once the foal is delivered the NICU is an integral part of the successful reproduction program. Stalls are designed for mare and foal comfort and safety, and the tools to provide sophisticated care including plasma transfer, parenteral nutrition delivery, ventilation and cardiovascular support are readily available.

"The specialists in this unit are experienced in fetal monitoring, birth and neonatal resuscitation and are experts in treating the large variety of diseases which may occur in the newborn secondary to a problem pregnancy," said Jonathan E. Palmer, VMD, director of perinatal/neonatal programs and chief of the Neonatal Intensive Care Service.

Conclusion

From stallion handling and behavior to breeding, mare management and delivery of a healthy, viable foal, the collective capabilities of the reproductive team, and the support of a full range of specialists allows New Bolton Center to provide an unparalleled level of expertise and service in equine reproduction.

Said Dr. Vanderwall, "It's essentially a comprehensive, start-to-finish approach to reproduction." 

All in the Family

A Penn Vet alumna follows in her father's footsteps... while her son follows in hers

BY JILLIAN MARCUSSEN

While many students know early on that they want to pursue veterinary medicine, this was not the case for **Nancy Brown, V'73**.

The daughter of Penn Vet alum William J. Brown, V'42, Nancy grew up in a house situated on top of her father's practice and kennel (the site known as Mt. Airy Veterinary Hospital). Now known as Pennsylvania Veterinary Specialty and Emergency Associates at Hickory Veterinary Hospital, located in Plymouth Meeting, the original facility (built by her father) was completely revamped by Nancy and her husband William James Kay, DVM, Diplomate ACVIM Neurology, Diplomate ABVP.

Although surrounded by animals, she chose occupational therapy (OT) as her career, receiving a master's of science degree from the University of Southern California. It wasn't until after she had worked in the OT field for two years that she decided to pursue her veterinary degree.

As one of only 18 females in the class of V'73, and with a different professional background than many of her classmates, Nancy found her education to be tough — but rewarding. Interning at the Animal Medical Center (AMC) in New York following graduation, she realized how much her education had prepared her for life outside the classroom and she gained valuable exposure to surgery, oncology and research. It was also where she met Bill and both worked there for many years.

Ultimately, however, Nancy returned to Philadelphia to transform what had once been her father's rural practice into the modern facility that now exists. Before taking over the practice she served as an adjunct professor at Penn Vet. While she enjoyed the experience, it reinforced what she had sensed all along — that her primary passion was neither teaching nor research, but rather the hands-on, clinical practice that now occupies much of her time. A Diplomate of ACVS and ACVIM, Oncology, Nancy enjoys the many facets of advanced clinical care.

Most recently, Nancy's connection to Penn Vet has also taken on a new significance through both her involvement with the Dean's Alumni Council (DAC) and her new role as a Penn Vet parent to **Will, V'14**. The two are linked in Nancy's mind, since a primary purpose of the DAC is to serve as a critical link between students and the broader alumni community.

“If we can introduce students to the veterinary profession in a positive, meaningful way, we can have a huge impact on their lives and on the profession as a whole,” Nancy said.

She also advises students to take every opportunity to be exposed to the many different areas of veterinary medicine — research, clinical service and work with both large and small animals, among others — before setting on their career path.

Ultimately, Nancy credits Penn Vet with giving her the tools to be successful in her veterinary career and hopes that she — and other members of the DAC — can now give back to students like Will, providing connections that will allow them to lead the profession in years to come. ♥

If we can introduce students to the veterinary profession in a positive, meaningful way, we can have a huge impact on their lives and on the profession as a whole

— Nancy Brown, V'73



WE SPEAK DUKE

WE ALSO SPEAK GASTRIC DILATATION VOLVULUS



When he's trying to tell you something, you'll do whatever it takes to translate. Our board-certified vets are particularly in tune with four-legged and feathered friends, with a connection that's equal parts unconditional love and unparalleled expertise.

And when it comes to something urgent, our critical care veterinarians are available 24/7, armed with all the life-saving discoveries we've pioneered right here.

Find our **ER** and easy parking at **39th & Spruce** Streets in Philadelphia.



BEECH



GALANTINO-HOMER



GARBER



GIGER

David Artis, PhD, associate professor has earned the Lady Barbara Colyton Prize for Autoimmune Research, which recognizes outstanding research in the field of autoimmune diseases.

Jill Beech, VMD, a recently retired professor of medicine at Penn Vet's New Bolton Center, received the American Association of Equine Practitioners (AAEP) Distinguished Educator Award, which is awarded to an individual (educator, mentor, or CE provider) who by his or her actions and commitment has demonstrated a significant impact on the development and training of equine practitioners. Nominations are not limited to academicians, but are open to individuals who, through their ability, dedication, character and leadership have played an important role in the educational and career development of others.

Cara Blake, DVM joined the Penn Vet team as lecturer of surgery.

Julie Callahan Clark, DVM, DACVIM was promoted to lecturer of internal medicine.

William Crumley, DVM has joined the Ryan Hospital ophthalmology team as a board-certified staff ophthalmologist. Dr. Crumley's clinical and research interests include glaucoma and fluorophotometry.

Elizabeth Davidson, DVM was promoted to associate professor of sports medicine, clinician educator.

Peter Dodson, PhD gave a keynote talk entitled "Evolutionary History of the Spine: Episodes and Insights" to the Philadelphia Spinal Research Society on November 17, 2011. More recently, Dr. Dodson was a guest of Marty Moss-Coane on her *Radio Times* show, which aired on Philadelphia's WHYY-FM on December 19, 2011. During the interview, Dr. Dodson discussed dinosaur biology in connection with the new exhibit at the Franklin Institute.

Hannah Galantino-Homer, VMD, PhD, senior research investigator, is serving as a member on the AAEP Laminitis Research Working Group, which recently launched an epidemiologic study of pasture- and endocrinopathy-associated laminitis (PEAL). The group will meet in Houston in March to develop a research plan for a second study of supporting limb laminitis. For more information on the PEAL study: www.vetmed.tamu.edu/laminitis.

Tammy Gantz, MS joined the office of student and curricular affairs as curriculum coordinator. In this role,

Gantz will schedule and modify early-entry and senior year clinical rotations as well as schedule specialty duty, holiday shifts, externs and offshore students.

Jonathan Garber, VMD was promoted to lecturer of field service and successfully passed the certifying examination of the American Board of Veterinary Practitioners (ABVP) and is now a Diplomate certified in the dairy practice category. Dr. Garber also presented lectures at the 6th Keystone Veterinary Conference in Hershey, PA. The three-day seminar was for veterinary technicians. In addition, Dr. Garber recently had a case report published in *The Bovine Practitioner*. The report is entitled "Tetanus in Cattle: Review and Case Description of Clinical Tetanus in a Holstein Heifer."

Janik Gasiorowski, DVM was promoted to lecturer of surgery at New Bolton Center.

Giacomo Gianotti, DVM joined Ryan Hospital's anesthesia service as a lecturer.

Urs Giger, DVM, PD, MS, director of the Metabolic Genetics Screening Laboratory, is an invited speaker for a two-day symposium on clinical hematology for veterinary clinicians and for a one-day seminar on hereditary diseases for breeders in Tel Aviv, Israel in November 2012. Recently, Dr. Giger was also invited to speak on clinical genetics at the World Small Veterinary Association in Jeju South Korea in October 2011.

Hilary Goff, BS has transitioned from a 10-year position in nursing at New Bolton Center to fill the research barn manager position within the Soma lab.

Samantha Hart, DVM was promoted to lecturer of emergency medicine and critical care at New Bolton Center.

Joan C. Hendricks, VMD, PhD, The Gilbert S. Kahn Dean of Veterinary Medicine, was named a Woman of Distinction by the *Philadelphia Business Journal*. According to the *Business Journal*, a panel of 12 independent judges selected 26 women from more than 300 nominations based on their accomplishments, community involvement and professional successes.

Michaela A. Kristula, DVM, MS, section chief of field service at New Bolton Center, recently had a case report published in *The Bovine Practitioner*, titled "Case Report: Veterinary Farm Specific Employee Training to Manage Dairy Cows at Calving Time."



ALTHOUSE

**GARY C. ALTHOUSE
DVM, MS, PHD, DIPL. ACT**

Gary C. Althouse, DVM, MS, PhD, Dipl. ACT, professor and chair of the Department of Clinical Studies at Penn Vet's New Bolton Center, was recently named to the Marion Dilley and David George Jones Endowed Chair in Animal Reproduction.

"The ability to both honor and reward the most important contributors to Penn Vet is a powerful tool for the Dean," said Joan C. Hendricks, VMD, PhD, The Gilbert S. Kahn Dean of Veterinary Medicine at Penn Vet. "An endowed chair is the highest honor available in academia, and the Jones Chair is a wonderful gift. With the naming of Dr. Althouse to this chair, we are able to highlight his contributions in research to improve reproduction in many species, his extensive service to food producers globally, and — perhaps most important to the Penn Vet community — enable him to continue his crucial service to the School as a department chair without sacrificing his ongoing laboratory research."

Dr. Althouse has served as chairman of the Department of Clinical Studies at Penn Vet's New Bolton Center since 2007. A professor of reproduction and swine herd health, his primary areas of interest include comparative theriogenology; swine production medicine; andrology; spermatology; and semen analysis. He is widely published in these fields and his expertise is sought internationally.

A member of numerous professional, honor and scientific societies, Dr. Althouse is also the lead scientific advisor for the National Association of Animal Breeders-Certified Semen Service. A native of Pennsylvania, Dr. Althouse received his bachelor of science from Sul Ross State University; his master of science from Texas A&M University; and then completed a combined program leading to both DVM and PhD degrees at Iowa State University. Dr. Althouse is a Diplomate in the American College of Theriogenologists.

Said Lawrence R. Soma, VMD, DACVA, professor of anesthesia and the Marilyn M. Simpson Professor of Veterinary Medicine, "As chairman of the New Bolton Center Endowed Chair Committee, it was my pleasure to recommend to the Dean the committee's unanimous choice of Dr. Althouse as the Marion Dilley and David George Jones Endowed Chair in Animal Reproduction. Dr. Althouse will continue the distinguished tradition of previous stewards of this Chair."



LOMBARDI



MCDONNELL

Meryl Littman, VMD, associate professor of medicine, spoke recently at a number of venues, including at the Atlantic Coast Veterinary Conference in Atlantic City, NJ on various Lyme disease and parasite topics including Lyme arthritis; Lyme nephritis; co-infections; blood parasites; and non-blood parasites.

Rosemary Lombardi, CVT has been named director of nursing at Penn Vet's Ryan Hospital. Previously, she filled the role of head nurse in Ryan Hospital's Intensive Care Unit. In her new role, Lombardi is responsible for staffing, standard of care and recruitment and retention.

Ashra Pearl Markowitz, MS, assistant dean for student affairs, was recently awarded the Pennsylvania Veterinary Medical Association (PVMA) "President's Award" in recognition of her longstanding commitment to Penn Vet and dedicated service to generations of veterinarians.

Kasey McCafferty, CVT has rejoined the Penn Vet team as a temporary veterinary technician and will be filling in as needed at New Bolton Center.

Sue McDonnell, PhD recently received the 2011 American Association of Equine Practitioners (AAEP) George Stubbs Award, which recognizes the contributions made to equine veterinary medicine by individuals other than veterinarians. The award is named for George Stubbs, the artist and teacher who played a vital role in veterinary education. While the individuals honored are not veterinarians, they have been directly responsible for performing an act or acts to benefit equine veterinary medicine in any or all of the following areas: leadership, public service, volunteer service, research findings, product development, public policy development, animal advocacy or humane education.

Cynthia M. Otto, DVM, PhD, associate professor of critical care at Ryan Hospital and director of the Penn Vet Working Dog Center, has achieved Champion Trick Dog status for her dog, Dolce, and Advanced Trick status for her cat, Zucca.

Dipti Pitta, MVSc, PhD joined the Penn Vet team as assistant professor of ruminant nutrition.

Ashley Reimel, CVT has joined Penn Vet's New Bolton Center team.

In October, **Ines Rodriguez, VMD, MS**, director of swine health and welfare at New Bolton Center, welcomed a baby girl, Amalia Belén to her family. Amalia weighed in at 5lbs., 13 oz. at 5:35 PM on Oct. 13, 2011.



MORRISON

ADRIAN R. MORRISON, DVM, MS, PHD

After five decades of research in the Animal Biology Department, Adrian R. Morrison, DVM, MS, PhD, is closing his sleep research center. During his tenure, Dr. Morrison has taught hundreds of students – including Joan C. Hendricks, The Gilbert S. Kahn Dean of Penn Vet – and has greatly impacted the field of sleep and wakefulness. In addition to his groundbreaking discoveries, Dr. Morrison has worked tirelessly to ensure humane care in animal research. In 2009, Dr. Morrison published *An Odyssey with Animals*, which highlights his personal experience in studying the complex relationship between animals and humans.

“As Adrian’s student and later colleague in sleep research, I have always been impressed by his creativity, thoughtfulness, and thoroughness,” said Dean Hendricks. “He has also been a courageous voice advocating for the unique value that studying animals brings to complex areas of science, even when his own personal career and even his safety were threatened by extremists. While we are sad his research center will be closing, his discoveries, post-retirement commitment to teaching the next generation and publishing the thoughts gained through his decades of experience provide a legacy that is a foundation for generations of scientists to come.”



SMITH



ZAID

Hiroki Sano, DVM joined the team as lecturer of anesthesiology.

Robert J. Schieri, MBA, CPA has joined the Penn Vet team as executive director of finance and administration.

Michael Schlicksup, DVM was promoted to lecturer of surgery.

Billy I. Smith, DVM, MS, associate professor of medicine and part of New Bolton Center’s Section of Field Service, presented lectures at the 2011 DAIRY Summit Health Science and Innovation meeting in Pocono, PA. The two-day seminar was sponsored by Boehringer Ingelheim. Dr. Smith also recently assisted the Bronx Zoo veterinarians and caretakers on corrective trimming of Margaret, a 29-year-old giraffe.

Karin Sorenmo, DVM, Dipl. ACVIM, Dipl. ECVIM-CA (oncology), chief, Section of Oncology at Ryan Hospital, was an invited speaker on oncology at the World Small Animal Veterinary Association in Jeju, South Korea in October 2011.

Matthew Stock, VMD was promoted to lecturer of field service.

Oriol Sunyer, PhD was promoted to professor of microbiology and immunology.

Jantra Suran, DVM was promoted to lecturer of radiology.

Kathryn Wotman, DVM, DACVIM was promoted to clinical associate.

Michael Zaid, VMD, DACVIM was promoted to lecturer of internal medicine.



Penn Vet’s Veterinary Clinical Investigations Center is currently recruiting dogs and cats for a number of clinical studies.

Some of these trials include:

- > A potential new treatment for canine lymphoma
- > Studying protein-losing enteropathy/nephropathy, Addison’s disease and renal disease in dogs
- > Studying weight loss in cats with cancer
- > Measuring Vitamin B12 and MMA levels in cats diagnosed with lymphoma

If you have a dog or a cat that may be eligible, or if you are a primary care veterinarian with a patient suffering from any of the above, please call 215-573-0302 or email VCIC@vet.upenn.edu for more information.

To see what other ongoing studies are available, please visit www.PennVCIC.org.

Penn Vet Adds Three to Board of Overseers

Penn Vet has added three individuals to its Board of Overseers. Each of them will serve renewable, three-year terms.

New members include:

AMY ATTAS, G'83, V'87

Amy Attas, G'83, V'87 of New York, NY. Dr. Attas is the founder of City Pets, a veterinary house-call practice in Manhattan. A graduate of Barnard College, Dr. Attas earned her graduate and veterinary degree from Penn Vet and then completed an internship at the Animal Medical Center in Manhattan. After four years in private practice at an Upper East Side animal hospital, Dr. Attas established City Pets 1992 in order to provide convenience and top-tier care to her clients. Since its inception, City Pets has provided care to more than 10,000 pets.

Dr. Attas is an executive board member of the Veterinary Medical Association of the City of New York, during which time she served as chair of its Animal Health Committee and as the Society's official liaison to government agencies and other veterinary organizations, as well as serving as its spokesperson. She has received the Society's Merit Award and its Award for Outstanding Service to Veterinary Medicine. In addition, Dr. Attas has served as a member of the President's Science Advisory Board for the president of Barnard College and is an active fundraiser for the Global Health Program of the Wildlife Conservation Society and other animal welfare related charities.

She enjoys cooking, reading, hiking and traveling. Dr. Attas and her husband Stephen live with two rescued pugs, Winston and Cleopatra.


MARGARET HAMILTON DUPREY

Margaret Hamilton Duprey of West Grove, PA. Mrs. Duprey is a lifelong equestrian enthusiast with a passion for dressage. In 2010 Mrs. Duprey's horse, Otto, a Danish Warmblood, competed on the World Equestrian team for dressage. A committed horse owner who believes in providing the best possible care, Mrs. Duprey worked with veterinarians at Penn Vet's New Bolton Center to establish a home-care nursing program for horses, called Equi-Assist, which provides post-hospital and continued care at a horse's home barn. She and her husband own Cherry Knoll Farm in Chester County, PA, where they breed, raise, show and sell Black Angus cattle.

Mrs. Duprey has served on the Board of Cabrini College for more than 27 years, spending seven of those years as chair. Having graduated from Cabrini, Mrs. Duprey also received a Doctor of Humane Letters from that institution. Currently, Mrs. Duprey serves on the Board of Trustees for The Hamilton Family Foundation, SVF Foundation, the US Equestrian Team Foundation and Treasurer for Community Clothes Charity.

MARK D. SPITZER, W'71

Mark D. Spitzer, W'71 of New York, NY. Mr. Spitzer is a graduate of University of Pennsylvania, Wharton School. A co-founder and principal of the Clinton Companies (a holding company engaged in real estate investment), Mr. Spitzer also co-founded and served as chief financial officer of International Telecommunication Data Systems, Inc., until its sale in 1999.

Mr. Spitzer is a former member of the Wharton Entrepreneurial Advisory Board and the College House Advisory Board and has, over the years, demonstrated his philanthropic support and volunteer leadership, initially by establishing an endowed scholarship in memory of his sister. In addition, Mr. Spitzer, who has been a client at New Bolton Center since 2001, owns MDS Farms in Pine Plains, NY where he breeds and races thoroughbreds. 



In March 2011, Penn Vet Dean Joan C. Hendricks established a new working group for Penn Vet alumni. Fittingly called the Dean's Alumni Council, this group works closely with the Gilbert S. Kahn Dean of Veterinary Medicine and Office of Alumni Relations, Advancement and Communication on various projects to connect alumni, students and the public to the Penn Vet community for the purpose of alumni engagement and stewardship, community ambassadorship and student interactions.

Here, we've included messages from two DAC members on why they choose to be involved and what's currently underway.

LOOKING TOWARD THE FUTURE

I always knew I wanted to attend Penn Vet. I remember writing to the School and receiving a brochure – I was so impressed by the veterinary school's long history and heritage.

Going into School, I had an interest in equine medicine, especially given New Bolton Center's reputation as one of the best equine facilities in the country. After graduation, however, I practiced at a small animal hospital instead and today, 11 years after graduating, I am a consulting veterinarian for Hill's Pet Nutrition.

I knew how well Penn Vet prepared me for my career in veterinary medicine and I wanted to make sure many others were able to benefit from the School and its alumni network, so several years ago I joined the VMAS Executive Board, which, in 2011, was replaced by the Dean's Alumni Council.

As a result of my involvement with the DAC, I am more aware of all the amazing work that Penn Vet accomplishes. Along with the innovative research and clinical medicine, I am really impressed with Penn Vet's involvement with the One Health Initiative to unite human and veterinary medicine. I believe this is truly the way veterinary medicine needs to work in the future to benefit society.

The DAC also provides opportunities for alumni stewardship and engagement, community ambassadorship and student involvement. In particular, I am working with several members to enhance communication with alumni via the website and social networking, and we are in the early stages of planning for an alumni survey to identify preferences for keeping in touch.

It is a rewarding experience to give back to Penn Vet and to meet other alumni who are also committed to the future of the School. I can't wait to see what the future holds for us!

—HEATHER BERST, V'00

BRIDGING THE GAP

It was half-way through last year's Penn Annual Conference in Philadelphia that we had our first meeting of the Dean's Alumni Council. There were more than 40 VMDs who were taken under the Dean's wing to help the veterinary school. It was a very congenial group who were willing to hold up placards saying "Will work for chicken dinner!"

The common bond of the DAC is the dedication of its graduates who love Penn Vet and want to serve as a bridge between the School and the nearly 5,000 VMDs around the world.

There are several DAC project groups currently addressing the following areas of interest and concern, including:

- ▶ Alumni awards program
- ▶ Class agent program
- ▶ National conference representation
- ▶ Opportunity Scholarship Program
- ▶ Speakers bureau
- ▶ Student events and interactions

Most recently, members gathered for a retreat prior to the White Coat Ceremony, a newer tradition for third-year students. The retreat included lunch with current student leadership, which demonstrated to all the value of and interest in increased student-alumni interactions. It was fittingly followed by just such an opportunity, as several DAC members handed out alumni pins to the students about to enter clinics and to officially welcome them to the alumni community and veterinary profession.

—CHARLIE KOENIG V'57

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surgical portion, three small ports were placed between Basil's ribs, allowing tiny instruments and cameras to access to his chest, the latter of which transmitted images to the displays in the operating room, allowing Dr. Runge to perform the delicate and precise dissection correcting the vascular ring.

After the successful surgery, Basil was transferred to the Intensive Care Unit where he received round-the-clock care from board-certified critical care doctors and veterinary technicians until his discharge.

Recovery

"Basil's symptoms were relatively mild," said Dr. Runge. "Complications are still certainly possible just like with any surgical procedure, so we still need to be vigilant and take the necessary precautions to reduce the chance of them occurring, but one thing that we do know for sure is that since this surgery was done in a minimally invasive manner, he will be in a lot less pain, and he will have a much faster recovery."

One day post-surgery, Basil was up walking around and trying to play.

Two days post-surgery, Basil went home.

Upon discharge, Brent got detailed instructions on what to expect, including feeding instructions. Basil needed to be on a soft-food diet for the next few weeks to reduce the chance of regurgitation.

"I pureed his food until it was almost liquid," said Brent. "We did that for about a month. Now I feed him moist food with a couple of crunchies mixed up and he stands on his hind legs to eat. It's been three months [since surgery] and he's doing great."

Brent has also had follow up appointments and rechecks with the vets at Airpark Animal Hospital and so far, Basil is exceeding expectations.

"This was a very rewarding case for us," said Dr. Kable. "Basil has done very, very well and he's growing at a normal rate. His prognosis is what it would be for any normal puppy now."

And as for Basil's future?

"Well, Gidget went to a family down the road, but Basil — oh, gosh, yeah, he's staying with me," said Brent. "He's my buddy on the farm." ♥

112th Penn Annual Conference

EMERGENCY & CRITICAL CARE

March 7, 2012 through March 9, 2012

Full Conference – Wednesday and Thursday,
March 7 and 8, 2012

Wet Labs – Friday, March 9, 2012

FULL CONFERENCE AT

**Sheraton Philadelphia
Downtown Hotel, Philadelphia, PA**

Come be a part of Penn Vet's annual continuing education conference with access to more than 1,000 practicing animal health care providers of all specialties, in addition to veterinary technicians and students. Enjoy a variety of sponsorships and exhibitor opportunities to allow optimal time and marketing with our participants.

Register Now

www.vet.upenn.edu/PAC2012



Penn Vet

Continued from page 7

thorough, determined and dedicated to his research as Ralph.”

“Of course, my primary interest remains to understand the biology of the mammalian germ line, and secondarily, to determine how the germ line can be manipulated to improve the health and life of animals and man,” said Dr. Brinster. Major questions remain and of course always will. “How can we use transgenesis, stem cells, and the germ line to cure human disease? How does an animal develop from a single cell? This is an amazing process. If we can alter the process to cure disease, that would be a powerful and wonderful outcome.”

“I am incredibly proud of Ralph,” said Joan C. Hendricks, the Gilbert S. Kahn Dean of Veterinary Medicine. “He is undoubtedly the top veterinary scientist in the world, especially if you consider his sustained excellence and demonstrated brilliance over at least five decades, and he is one of the top biomedical scientists anywhere. Penn Vet is thrilled that we are able to count Dr. Brinster as one of our own brilliant scientists.”

Still, Dr. Brinster remains humble.

“The actual advance in science is immortal. When I am gone, the information and science will remain and continue to be important to the future of mankind,” said Dr. Brinster. “Throughout the years I have worked with many talented students, colleagues and collaborators who have been both brilliant and hard-working. I have just been around and kept the focus on germ cells, the germ line and genes. And of course, luck has been on our side.”

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times and less pain to members of the shelter animal medicine community. They would provide spays for those animals still looking for their forever homes, but needed a fund from which to subsidize these procedures.

Having seen what advanced medical technology combined with the best clinical expertise can accomplish, Connie and Alan decided to give a naming gift to complete the construction of the minimally invasive surgery suite, and also to start an endowment that would enable Ryan Hospital clinicians to perform minimally invasive spays on some of the most deserving patients, shelter animals. Seven years in the planning, this dream for what better care would be available for pets became a reality because of Connie and Alan’s generosity and love of animals.

Since its opening on October 3, 2011 – a year after Max’s first visit to Ryan Hospital – The Buerger Family Foundation Minimally Invasive Surgery Suite has served many routine and some extremely challenging cases. The suite has also become a hub for exchanging knowledge and advancing current veterinary medicine procedures and its teleconferencing capabilities permit remote consultations and broader teaching opportunities as far away as the Veterinary School in Azabu, Japan, among others.

When Connie, Alan, Reid and Krista came to visit The Buerger Family Surgery Suite after its opening, they experienced first-hand the gratitude and excitement of all Ryan Hospital communities. Alan remarked that Penn Vet’s Ryan Hospital has always been there to make sure that their dogs, which they deem members of their family, received the best, compassionate care and that they were thrilled to support such a prodigious institution.

Krista and Reid’s own philanthropy to support the oncology section at Ryan Hospital, and Krista’s leadership on the Penn Vet Board of Overseers, have contributed immensely to Penn Vet. Ryan Hospital is fortunate to have friends like Connie, Alan, Reid and Krista – they help to ensure Penn Vet’s leadership position in the field of veterinary medicine.



Looking for the opportunity to learn more about veterinary medicine?

Here's your chance...



VETS

SUMMER PROGRAM

© THE UNIVERSITY OF PENNSYLVANIA SCHOOL OF VETERINARY MEDICINE

Penn Vet offers an exciting summer day program for both college and high school students (11th and 12th graders) that provides an inside look at what it takes to earn a graduate degree in veterinary medicine. The **V**eterinary **E**xploration **T**hrough **S**cience (**VETS**) is a week-long day program comprised of sessions designed specifically for college and high school students.

If you are interested in a career in veterinary medicine, this program will provide you with an understanding of the challenges and rewards of the profession. You will also have the opportunity to interact with other students who have a similar passion and begin forging future relationships with those who care about science and medicine for animals.

SESSIONS

COLLEGE

| | |
|--------|-------------------------------|
| Week 1 | May 21, 2012 – May 25, 2012 |
| Week 2 | June 4, 2012 – June 8, 2012 |
| Week 3 | June 11, 2012 – June 15, 2012 |

HIGH SCHOOL

| | |
|--------|-------------------------------|
| Week 4 | July 9, 2012 – July 13, 2012 |
| Week 5 | July 23, 2012 – July 27, 2012 |

FOR ADDITIONAL INFORMATION, PLEASE VISIT:

<http://www.vet.upenn.edu/EducationandTraining/StudentAdmissions/SummerVETSProgram/tabid/1506/Default.aspx>

You may also call 215-898-5434 or e-mail to summervets@vet.upenn.edu



1940s

The American College of Veterinary Surgeons has selected **Robert Leighton (V'41)**, professor emeritus at UC Davis School of Veterinary Medicine, to receive the 2011 Foundation Legends Award. The award is presented to an ACVS Diplomate who has developed a surgical or diagnostic procedure of significant value, which has become the treatment or test of choice for a given condition. Leighton specialized in small animal orthopedic surgery. He placed a metal pin into bone to connect each side of a broken bone; this intramedullary pinning procedure stabilized the fracture until bone could regrow around it. Along with the technique, he invented the Leighton Shuttle Pin and the Leighton Pin Introducer, which veterinary surgeons used to repair fractures for more than 20 years. He is associated with novel repairs of ruptured anterior cruciate ligaments in dogs. Leighton also collaborated with a veterinarian, physician and an engineer who together developed one of the first practical canine total hip replacements.

1970s

Jessica Dimuzio (V'78) has published her first book, *Bark! Bark! Bark for My Park!* (Nature Tales and Trails, LLC), which tells the story of a grassroots campaign to save a local park from development with the help of best friend Johnny Angel, a Papillion. For more information, visit www.naturetalesandtrails.com. A portion of the sales proceeds will go to the Farm Park Preservation Association.

Linda Rhodes (V'78) recently accepted the position of CEO of Aratana Therapeutics, a start-up company developing innovative new medicines for dogs and cats. Dr. Rhodes travels between the company's Kansas City and New York City offices on a regular basis and in her personal time has learned to sea kayak. She writes, "Now if only I could hang out with a few cows now and then, I would be totally content!"

In October 2011, **Louise Wechsler (V'79)** was awarded the second of two grants from the Rhode Island Foundation to produce a follow-up edition to her 2010 DVD, *Are You Ready for a Cat?* The first grant facilitated the creation of DVDs, which include a Spanish version, *Estas Listo para un Gato?* More than 500 copies of the first run have been distributed to animal refuge facilities, mainly through the Placing Paws Animal Shelter, which sponsored Dr. Wechsler in applications to the foundation. The second grant will permit a new production in Portuguese. DVDs are available at www.louisewechsler.com.

1980s

Kenneth A. Harkewicz (V'81) was elected to serve as president of the Association of Reptilian and Amphibian Veterinarians (ARAV) at the 2011 ARAV Conference.

1990s

Denise McAloose (V'93), chief pathologist at the Wildlife Conservation Society (WCS), led a team of investigators in studying the threat of distemper to wild Amur tigers of Siberia. Working with Primorskaya State Agricultural Academy and Moscow Zoo, Dr. McAloose and her team are collaborating to understand the role of distemper in the disappearance of these tigers. Said Dr. McAloose, "This is a great example of what international collaboration can achieve. Without our Russian associates there on the spot, knowing what samples to collect and how to preserve these specimens, samples would never have made it to our lab, and the cause of death would remain unknown."

Donatella Hecht (V'99) has been added to the animal health care team at the Central Animal Hospital in Scarsdale, NY. Central Animal Hospital is a full-service veterinary clinic providing wellness care, spay and neuter procedures, emergency care, dog and cat surgery, pet boarding and exotic veterinary services to the Westchester pet communities.

Christine Polaneczky (V'99) opened her own practice in September 2011. The Village Veterinarian, located in Fairless Hills, PA, cares for small animals including cats, dogs and many small mammals. For more information about the practice, visit www.villagevetpa.net.

2000s

Benjamin Brainard (V'00), DACVA, ACVECC was recently promoted to associate professor of critical care at the College of Veterinary Medicine at the University of Georgia. Dr. Brainard also won the UGA clinical research award in 2009 and the UGA hospital service award in 2010.

Vincent Carroll (V'02) recently passed the ACVP board certification exam (anatomic pathology) in September 2011.

2010s

Sarah (Gaydos) Pontillo (V'10) was married to Jason Pontillo on October 8, 2011 in Brownsville, PA. The couple is residing in Brackney, PA with their cat Clyde and German shorthaired pointer Ellie. Dr. Pontillo is an associate veterinarian working with small animals at Southern Tier Veterinary Associates in Vestal, NY.

Matt Montresor (V'11) has been named to Mayor Michael Nutter's Animal Care and Control Team (ACCT) board in the City of Philadelphia. ACCT will assume Philadelphia's animal control services, including the operations of the City's animal shelter, from the Pennsylvania Society for the Prevention of Cruelty to Animals (PSPCA) when its current contract expires. Dr. Montresor is a staff veterinarian at the Philadelphia Animal Welfare Society (PAWS).

DEATHS

1945 **Manuel "Doc" Gilman** on November 25, 2011.

1948 **Richard Detwiler** on January 7, 2012.

1956 **Charles D. Knecht** on September 20, 2011.

1972 **Mary Alice Brown** on November 4, 2011.

1981 **Timothy J. Donovan** on September 30, 2011.

CONTACTUS

Have you received a promotion, gotten married, had a baby or received an award? Have you volunteered somewhere special, moved into a new building, ventured into a new business or discovered the cure for avian flu? Please share with us all of your good news to include in the CLASS NOTES section of the *Bellwether* and the vet.upenn.edu website. All residents, interns and fellows are also invited to share!

Forward all alumni news to Jillian Marcussen, interim director of alumni relations, at jillian2@vet.upenn.edu or write Office of Alumni Relations, 3800 Spruce Street, Suite 172 E, Philadelphia, PA 19104.



Last year, a large, flat package arrived at the Dean's Office, containing a carefully packed vintage photo album. Sent by Doris (Mrs. William B.) Boucher, the album held superb photos that Bill Boucher, class of 1940, had taken of his classmates, the faculty and happenings at the Veterinary School.

Bill had a lifelong fascination with photography and served as a natural photographer for the Penn Vet yearbook. Until 1940, *The Scalpel* contained only professionally taken, group photos of the classes and clubs and individual portraits of the graduating seniors.

But the class of 1940 was different. While *The Scalpel* retained its name, the content changed, thanks to Bill's ability to capture candid photos of student life. Here is just one example of his work.

— Elaine Hamel, V'60

The Class of 1940. Students congregate in the Quadrangle (Courtyard) waiting for class to begin. Left to right: Stewart Elting, Jonathan Hall, John Lippincot and George Fleck. Photo by Bill Boucher. Thanks to Dr. Elaine Hamel (V'60), Margy Lindem and Karen Lane for initiating an archiving project to preserve the history of Penn Vet. This image is just one of their findings.



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FEBRUARY 2012

February 12, 2012

Animal Lovers Lecture Series, a free educational lecture series for small animal owners

“DENTAL AND ORAL HEALTH FOR YOUR PET”

Dog Training Club of Chester County, Exton, PA – 2:00pm
Presented by Penn Vet Dentistry and Oral Surgery Staff
A training demonstration will be provided by DTCCC after the lecture.

February 15, 2012

Wednesday Exchange, a bi-monthly interactive professional education opportunity for primary care veterinarians

“INTERVENTIONAL RADIOLOGY – NEW APPROACHES TO OLD PROBLEMS”

Ryan Hospital, Philadelphia, PA
Presented by Dr. Dana Clarke, DACVECC

MARCH 2012

March 6, 2012

First Tuesdays Lecture Series, a free educational lecture series for horse owners and horse enthusiasts

“SUSPENSORY LIGAMENT DISEASE IN THE PERFORMANCE HORSE”

New Bolton Center, Kennett Square, PA – 6:30pm
Presented by Dr. Suzanne Stewart, Surgery

March 7-8, 2012

112TH PENN ANNUAL CONFERENCE

(Lectures and Exhibit Hall)
Sheraton City Center Hotel, Philadelphia, PA

March 9, 2012

112TH PENN ANNUAL CONFERENCE

(Wet Labs)
Ryan Hospital, Philadelphia, PA and New Bolton Center, Kennett Square, PA

March 22, 2012

PHI ZETA STUDENT RESEARCH DAY

Keynote speaker: Paul McKellips, “Animal Rights Extremism and Public Opinion About Lab Animal Research”
Hill Pavilion, Philadelphia, PA – 12noon – 6pm

APRIL 2012

April 3, 2012

First Tuesdays Lecture Series, a free educational lecture series for horse owners and horse enthusiasts

“IT’S 10 P.M. AND MY HORSE ISN’T RIGHT: WHEN IS IT AN EMERGENCY?”

New Bolton Center, Kennett Square, PA
Presented by Dr. Louise Southwood, Emergency & Critical Care

April 18, 2012

Wednesday Exchange, a bi-monthly interactive professional education opportunity for primary care veterinarians

“FLUID THERAPY, TRAUMA AND RESPIRATORY COMPLICATIONS OF TRAUMA”

Ryan Hospital, Philadelphia, PA
Presented by Dr. Lori Waddell, DACVECC

MAY 2012

May 3, 2012

Animal Lovers Lecture Series, a free educational lecture series presented by faculty and staff of Penn Vet about important issues and topics regarding animals and our pets

SKIN AND ALLERGY CONDITIONS IN PETS

New Bolton Center – Kennett Square, PA – 7:00pm
Presented by Dr. Greg Griffeth, Dermatology

JUNE 2012

June 13, 2012

Wednesday Exchange, a bi-monthly interactive professional education opportunity for primary care veterinarians

“STAPHYLOCOCCAL PYODERMA, RESISTANCE PROBLEMS AND ZONOTIC CONCERNS IN DERMATOLOGY”

Ryan Hospital, Philadelphia, PA
Presented by Dr. Dan Morris, MPH

For more information on any of these events, please contact Darleen Coles, special events coordinator, at coles@vet.upenn.edu or 215-746-2421.